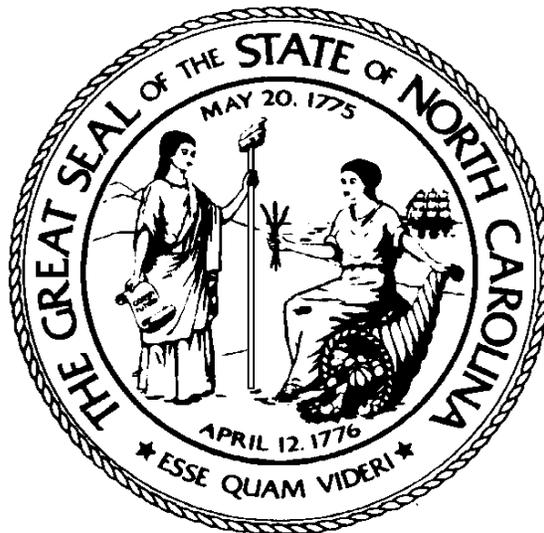


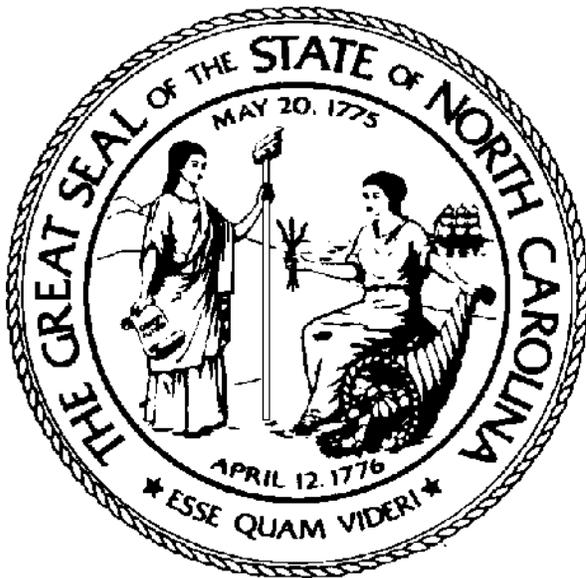
**Basic Information
Expert Reporting
Training Course**



State of North Carolina

NC Accounting System

North Carolina Accounting System
Basic Information Expert
Reporting
Training Course
3rd Edition



Office of the State Controller
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This training was prepared by:
The Office of the State Controller
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Course Overview

Overview

The North Carolina Accounting System (NCAS) provides a complete information access environment.

- The NCAS allows direct access to the status of a document or transaction using inquiry screens.
- The Report Management System (X/PTR, pronounced “exporter”) distributes images of over 250 groups of NCAS reports.
- SmartStream Decision Support System (DSS) is a client-server based analytical tool for NCAS users.
- Information Expert (IE) is the primary mainframe reporting tool in NCAS and the subject of this course.

Information Expert is a software tool used for reporting. Most of the standard daily and monthly NCAS reports are produced using Information Expert. Information Expert is a flexible menu driven reporting tool used to create simple to complex reports. IE also has the capability to customize reports using a 4th generation language. Programmers or non-programmers can easily produce reports by using Information Expert. This course provides a practical, hands-on approach to using the Information Expert language.

Audience

Primary NCAS IE users

Length

2 days

Objectives

Upon successful completion of this course, participants will be able to:

- Understand how the eight NCAS business applications are coordinated during the nightly production process.
- Understand basic Information Expert terms.
- Create an IE report using Expert Reporting to solve an informational need.
- Use the Source Management Facility to create a report series.

NOTES

- Learn the Expert Language commands used to create tailored reports.
- Edit source code to enhance the data appearing in a report.
- Submit a request to the mainframe to produce the report.
- View and navigate through the resulting report.
- Maintain the user library.
- Identify problems and resolve them.

Sections

The *Basic Information Expert Reporting* course is organized into the following sections:

- Business Process Overview
- The NCAS Environment
- Information Expert Basics
- Information Expert Terms and Concepts
- Expert Reporting
- Expert Language Commands
- Work Items and Calculations
- Conditional Processing
- Report Formatting Commands
- Relating Additional Information
- Run Time Options

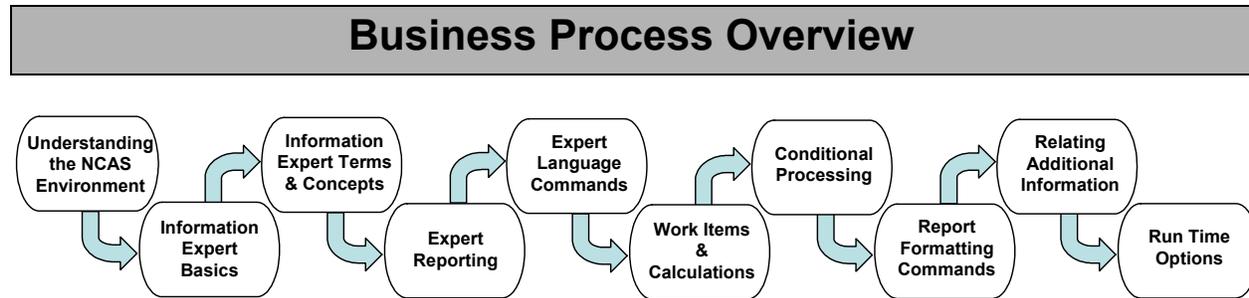
The following two sections provide additional useful information.

Procedures

Procedures are the detailed process steps that describe how to complete the tasks involved in a participant's job. These can be used after training as a reference on how to use the NCAS to perform job functions.

Quick Reference Guides (QRGs)

QRGs are job aids that will help participants complete the tasks involved with their jobs. They are referenced throughout the walkthroughs and activities.



Overview

Information Expert (IE) is the primary mainframe reporting tool used to access data in the NCAS. Most of the standard NCAS daily and monthly reports are generated using IE. The OSC provides user versions of these standard reports in libraries accessible by agencies. These familiar reports can be generated with broadened or narrowed data ranges to meet particular needs. The OSC also provides formats for dozens of additional analytical reports developed to support NCAS users. IE can produce reports from data no longer available with online inquiry or X/PTR. This course is designed to teach IE users the Expert Language to produce the reports they need. The above graphic, known as a course map, lists each of the course's sections. Each of these sections is described below.

Understanding the NCAS Environment

The NCAS uses eight major business applications to conduct the the state's business. These business applications interact with each other to maintain data integrity, accuracy, and internal control. This section of the course defines the relationships among these applications. The nightly NCAS production process that coordinates these systems is also explained. NCAS is a mainframe based accounting and materials management system, and Information Expert is a mainframe reporting tool.

Information Expert Basics

The Information Expert reporting tool contains an online support facility that lets you create reports using menus that lead you through the report definition step by step. There is also an editing facility that can be used to tailor Expert Language commands used to produce reports. This section of the course explains the screen basics and how to maneuver in the Support Facility.

NOTES

Information Expert Terms and Concepts

IE reports are created by English-like commands that tell the mainframe computer to produce the needed report. Using these instructions, IE assembles all the other resources necessary to produce a report. This section of the course explains the basic IE terms and concepts necessary to understand the Expert Language.

Expert Reporting

The Online Support Facility contains a menu driven system used to define a report. This section steps you through the Expert Reporting module to create your first Expert Language report.

Expert Language Commands

In this section you will study the actual Expert Language commands used to create the report. This section begins to review some of the Expert Language commands and how to use them.

Work Fields and Calculations

There are times during report creation that you will need to create a temporary field to hold results from calculations or a literal used in your report. The section explains how to create these temporary fields and how to use them in a report.

Conditional Processing

Conditional processing is used to tell IE when to execute commands based on a simple or complex condition being true or false. There are three types of conditional processing available in the Expert language. This section explains how to use these conditional processing commands.

Report Formatting Commands

Some reports can be created using the auto format command for printing a report. Other reports will need very specific printing commands to give detailed instructions when the information is to print on the page. This section explains how to use these specific printing commands.

Relating Additional Information

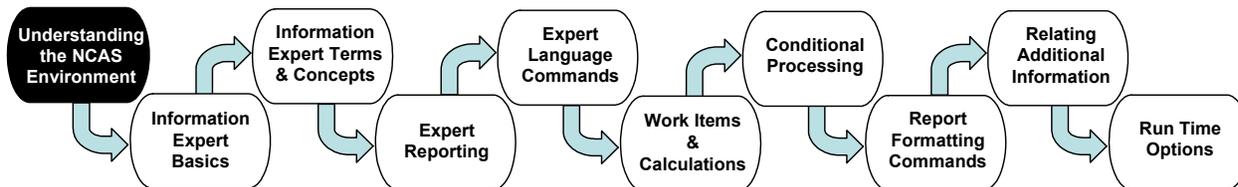
NOTES

The report definition selects information from a primary source. There are cases when you need to supplement this information with data from other sources. This section explains how to use the commands to access additional information.

Run-Time Options

There are times when you want to decide the selection or exclusion criteria at the time the report is executed. This section explains how to use run time criteria. Run time variables are also discussed. Run time criteria is located in RUN members. This section explains how to create RUN members.

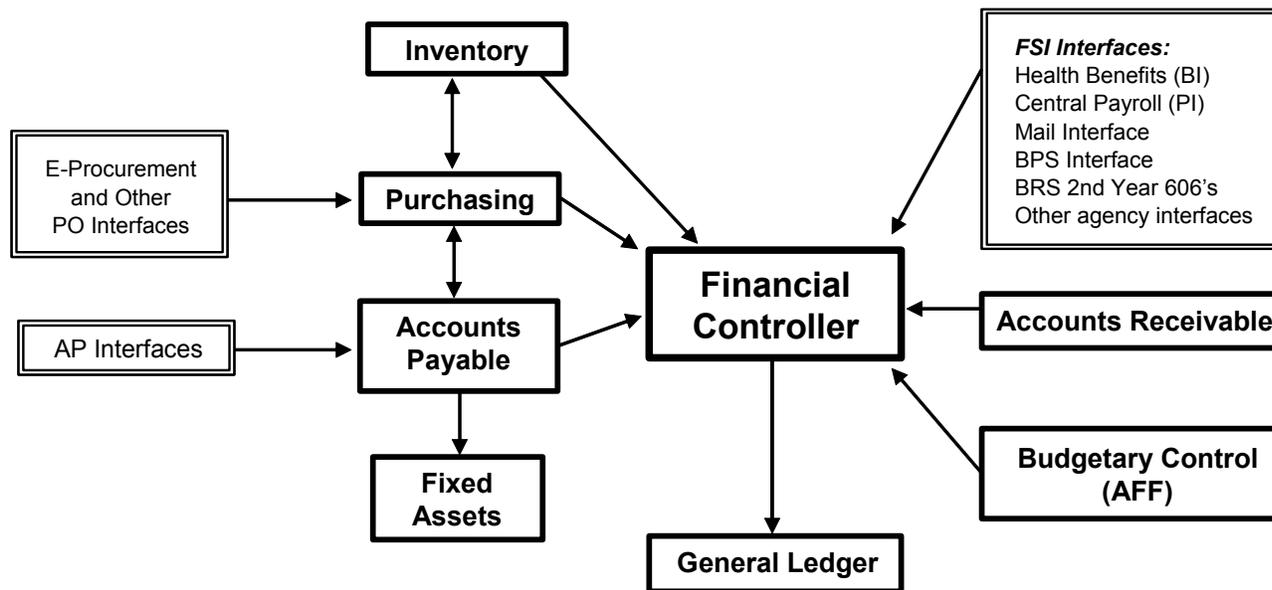
Understanding the NCAS Environment



Overview

The NCAS is the central financial system for the State of North Carolina. It provides business applications to support common business functions, while accommodating many unique agency business requirements. It provides the necessary integrated business activities. The business applications of the NCAS are shown in the following figure:

NCAS Module Integration



The NCAS Environment

The NCAS provides four methods of information access. Each method offers advantages for particular purposes. The best method depends on the amount of data to be examined, the periods involved, the NCAS business applications (for example, Accounts Payable or Purchasing), and how frequently the data will be needed. The following is a brief discussion of the advantages of each method.

NOTES

Inquiry

Many questions can be answered using the online inquiry process. Using computer screens is the direct approach to viewing limited amounts of data. Inquiry is a useful tool for determining the status of a particular transaction or data item. Inquiry is most useful when the user knows a piece of information with which to start inquiring (a purchase order number, etc.).

Report Management and Distribution (X/PTR)

The report management and distribution system (X/PTR) delivers viewable images of the NCAS reports executed during the nightly production process. X/PTR offers fast access to available reports and includes report navigational commands, including a very helpful FIND command. It also allows selective printing of report pages. X/PTR delivers additional capabilities besides viewing and printing, which can be used to extract information from report pages.

Decision Support System (DSS)

The Decision Support System (DSS) offers timely, direct access from the PC desktop to the NCAS data using flexible queries. NCAS information is downloaded each day from the mainframe and stored in relational databases on agency local area networks. Most data is not available at the same level of detail as on the mainframe due to the analytical purpose of the DSS environment. The DSS provides tools to explore the NCAS information and to develop custom reports. Retained reports are refreshed with new information each day. Financial Management and Materials Management data are presently available.

Information Expert (IE)

Information Expert (IE) is the mainframe reporting tool used to produce most of the NCAS reports viewable in X/PTR. IE is also a powerful analytical tool. IE can produce reports in the familiar production formats but with data ranges broadened or narrowed to suit a particular need. The OSC provides dozens of analytical reports that have been developed to support NCAS users. Reports can be produced for periods that are no longer available by online inquiry or in X/PTR. All NCAS business applications can be accessed using IE. IE provides a simple way for non-technical users to produce reports.

The NCAS Production

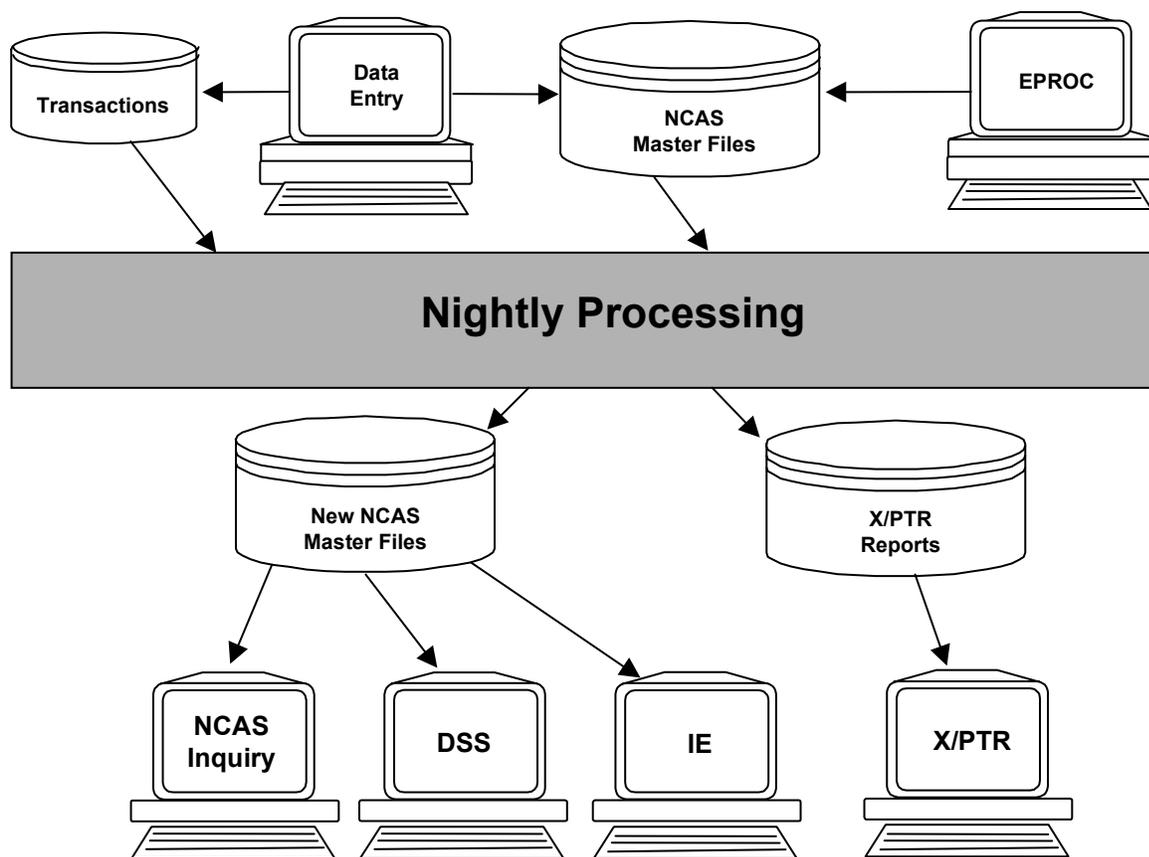
The NCAS uses information from many sources to transact the state's business. Certain NCAS data elements are centrally maintained by the OSC to ensure uniformity. For example, account numbers are validated against the general ledger master chart of accounts. Purchase orders refer to vendors found in the statewide trade vendor file and purchased items are found in the statewide item files. These checks make the NCAS data consistent and statewide reporting uniform.

NOTES

In addition, improved efficiency and internal control result from bringing data forward from related transactions. For example, information entered on purchase requisitions is carried forward to the purchase order, which in turn provides information necessary to record the receipt of goods. Purchase orders, receipts, and vendor invoices taken together provide the basis for payment to the vendor. All this cross checking is made possible by the work performed in the NCAS production process. The NCAS production process runs overnight each Monday through Friday.

During the production process, the system completes processes that were requested by an end user during the day. The production process also includes many standard processes that execute nightly, such as interfaces from other systems and check production runs. At the end of the production process, NCAS files reflect the nightly activity and can be used in the generation of IE reports.

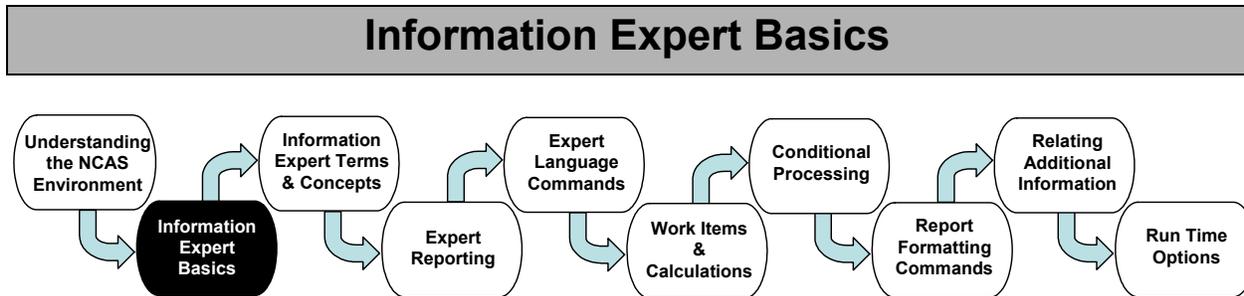
The following diagram illustrates the relationship between daily data entry (input), nightly processing and NCAS reporting (output).



Some information entered into the NCAS during the day is queued to temporary locations and can be viewed through online inquiry screens. During the nightly processing, the temporary files are removed and the data added to the regular NCAS master files.

NOTES

As illustrated previously, NCAS Inquiry and IE both refer to the same data. X/PTR and the DSS reflect the transactions and data as processed the previous night. In most cases, exactly the same values can be viewed from all four NCAS Information Access sources.



Overview

Certain navigational tools are important for a user to understand in order to acquire a basic understanding of IE. These concepts include an understanding of IE basic navigational commands and primary options within IE. This chapter explains these basics.

IE Screen Basics

IE screens contain common functions. Basic characteristics of IE screens include the following:

- Control fields
- Function keys (PF or F)

Control Fields

Control fields are used to perform special functions while navigating in IE.

- The ACTION field is used to fastpath through IE, to simulate function keys and to log off.
 - 📁 **Fastpath** is a short-cut way to directly access a screen without going through menus and submenus.

NOTES

```

D B S INFORMATION EXPERT ----- PRIMARY OPTION MENU PM

      ENTER SELECTION BELOW:

      ER - EXPERT REPORTING
      SM - SOURCE MANAGEMENT
      JS - JOB PREPARATION & SUBMISSION
      RV - REPORT VIEWING
      SA - SYSTEM ADMINISTRATION
      MR - EXPERT MANAGEMENT REPORTING
      EN - END THE SESSION

      SELECTION ==> _____
      LIBRARY ==> USERXX

ACTION: _____

PRESS:      ENTER Process          PF1 Help      PF3 End Session
    
```

- The SELECTION field can be found on menus and submenus. After determining the selection from the list, type the corresponding code in the SELECTION field.
- The LIBRARY field displays the library in which you are currently working.

```

EDIT REPORT SERIES: AXX-FIRST-QUARTER-REPORT      COLUMNS 001 072
COMMAND INPUT ==> )                               SCROLL ==> HALF
-----1-----2-----3-----4-----5-----6-----7-----
***** ***** TOP OF DATA *****
000100 INPUT          GLCURRYR
000200
000300 REPORT          QTRRPT   WIDTH          150
000400
000500 SELECT
000600   GL-COMPANY-ID
000700   '1401'
000800
000900 SELECT
001000   GL-ACCOUNT-ID
001100   ( '5300'
001200   '5399999999' )
001300

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd
    
```

- The COMMAND INPUT = = = > field provides a place to enter edit commands. These commands will be discussed in the *Source Member Editing* section.
- SCROLL = = = > HALF indicates the amount of text that will be moved up or down when pressing the **F7** to scroll backward or **F8** to scroll forward. The amount of the screen that is moved forward and backward is shown in this area. Normally the scroll is set to HALF to move the screen 9 lines each time. You may change it to PAGE to move the screen 18 lines each time.

NOTES

```

D B S  INFORMATION EXPERT  ----- SOURCE MANAGEMENT DIRECTORY LISTING  SMLS
(LIBRARY: GLPUBLIC)          NUMBER OF MEMBERS: 0128  MAXIMUM: 0225
  FIND: _____

MEMBER NAME                    TYPE                    NOTES:
-----
AAA-LIBRARY-NEWS              MISC TEXT             Enter an S next to the
A0A-HOUSING-FINANCE-FSI      RPT SERIES            member to be edited.
C-ALPHA-NUMERIC-2            SUBROUTINE
C-CONVERT-CENTER-MASK        SUBROUTINE            To change libraries,
C-CONVERT-DATE-2             SUBROUTINE            enter the name of the
C-CONVERT-DATE-3             SUBROUTINE            new library & press
C-GL-BD701-AUTH-REPORT-UNI-RUN  RUN STATEMTS         the ENTER key.
C-GL-BD701-AUTH-REPORT-UNIV    RPT SERIES
C-GL-BD702-REPORT-CV1-UNIV    RPT SERIES
C-GL-BD702-REPORT-CV1-UNIV-RUN  RUN STATEMTS
C-GL-BD725-CI-REPORT-UNIV     RPT SERIES
C-GL-BD725-CI-REPORT-UNIV-RUN  RUN STATEMTS
C-GL-BUDG-CODE-TRIAL-BL-UN-RUN  RUN STATEMTS
C-GL-BUDG-CODE-TRIAL-BL-UNIV   RPT SERIES
C-GL-CNTR-TRIAL-BALANCE-UN-RUN  RUN STATEMTS

ACTION: _____  PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd

```

- Numbers at the bottom of the screen correspond to the PF keys.
- The FIND field is used to find a specific member name in the member list. If you type the member name (or the first several characters of the name) in the FIND field and press **Enter**, the screen will scroll to the report name or the closest match. The FIND field eliminates the need to scroll through screens to locate a library member.
- The ACTION field appears on all screens in the lower left corner.



Some fields display only on certain screens: **SELECTION**, **LIBRARY**, **COMMAND INPUT**, and **FIND**.

Function Keys

In addition to alphabetic and numeric keys, control keys and function keys can be used. On the keyboard, function keys are commonly along the top and are labeled either PF or F.

| Function Key | Function | Command |
|--------------|---|---------------|
| F1 | Online Help. | HELP (?) |
| F3 | Return to previous screen. Exits a split screen. | END |
| F4 | Move to the Top of the next report. (Applies to Report Viewing) | NEXTRPT NR |
| F5 | Find the occurrence of a character string. | None |
| F6 | Move to the beginning of the current report. Repeats change. | TOP |
| F7 | Page backward. (Scroll up) | PB |
| F8 | Page forward. (Scroll down) | PF |
| F9 | Move to the first line of the last page of the current report. | BOTTOM |
| F10 | Scrolls screen to the left. | None |
| F11 | Scrolls screen to the right. | None |
| F12 | Return to the Primary Option menu. | None |
| None | Find the first occurrence of a string. | FIND F |

 If your keyboard does not have function keys, you can use the ACTION field to simulate them. For example, if you do not have an F12 key, you can enter 12 in the ACTION field instead. Not all PF keys are valid on all screens. The PF keys that are valid for the current screen are displayed across the bottom of that screen.

Additional basic keys are used to navigate in IE:

| | |
|-----------|--|
| Tab | Moves cursor to the next field. |
| Enter | Records the information you have typed. |
| Home | Moves the cursor to the first field on the screen. |
| Shift+Tab | Moves the cursor to the previous field. |

Some keyboards have two additional keys that also help in navigation:

| | |
|-------|---|
| Pause | Erases the current screen. Allows you to return to the CICS screen. |
| End | Removes any extra or invisible characters from a field. |

Online Support Facility

NOTES

The Online Support Facility (OSF) is an interactive product that assists users in creating reports using the Expert Language. It is also used to maintain libraries.

The *Primary Option Menu (PM)* screen is the main menu screen of the OSF. This menu is organized into sections based on functionality. Each section can be selected from the primary menu. Each section has its own set of menus and screens to allow processing of particular library members.

```
D B S  INFORMATION EXPERT  -----  PRIMARY OPTION MENU  PM
ENTER SELECTION BELOW:

ER - EXPERT REPORTING
SM - SOURCE MANAGEMENT
JS - JOB PREPARATION & SUBMISSION
RV - REPORT VIEWING
SA - SYSTEM ADMINISTRATION
MR - EXPERT MANAGEMENT REPORTING
EN - END THE SESSION

SELECTION ==> 00
LIBRARY ==> 000026

ACTION: _____

PRESS:  ENTER Process      PF1 Help      PF3 End Session
```

Expert Reporting

Expert Reporting Facility (ER) provides a “10-Step” method to aid in the creation of reports. ER presents a series of screens with options that allow the user to select the options that meet the reporting needs. ER will create a source member containing the Expert Language used to create the report.

Source Management

Source Management Facility (SM) provides a way to enter, store, and process Expert Language commands through a full screen editor. Source members are viewed, edited, and processed using the Source Management menus and screens.

Job Preparation and Submission

Job Preparation and Submission (JS) provides a set of online screens that can be used to prepare or run a report series. JS also has online screens that will allow run time variables and selection criteria to be entered.

NOTES

Report Viewing

Report Viewing (RV) provides a way to view preparation listings and reports online. Reports no longer needed for viewing can be deleted using the Report Viewing Utility.

System Administration

System Administration (SA) contains functions used to maintain the IE system. There are also functions to inquire on dataframes and to delete the prepared version of a report series.

Management Reporting

Not used at this time.

In this next section, we will be reviewing each of these functions and learning how to use their facilities.

Source Management

The Source Management menu can be accessed from the *Primary Option* menu screen by typing **SM** in the ACTION field.

```
D B S  INFORMATION EXPERT  -----  SOURCE MANAGEMENT FACILITY  SM
      ENTER SELECTION BELOW:
      LS - DISPLAY MEMBER LIST
      CR - CREATE A NEW MEMBER
      CH - CHANGE A MEMBER
      UT - COPY/DELETE/RENAME/MERGE MEMBERS
      RE - RETURN TO PRIMARY OPTION MENU
      SELECTION   ===>  ___
      MEMBER NAME ===>  _____
      LIBRARY NAME ===>  GLPUBLIC
      ACTION:  _____
      PRESS: ENTER Process  PF1 Help  PF3 Return to Primary Option Menu
```

From the Source Management Facility menu, you can choose a number of source management functions. You can list members (LS), create members (CR), change members (CH), or perform utilities on members (UT), such as copying one member to another, deleting, or renaming members.

 The ACTION field is used to Fastpath through IE. Enter the two or four character name of the screen in the ACTION field to go directly to the screen, bypassing menus. For example, SMLS moves directly to the Source Management Member List.

Source Management Directory Listing (SMLS)

NOTES

The Source Management Directory Listing (SMLS) screen is available from the SM menu screen. The SMLS screen provides a list of source members available for processing. Several types of source members are available as illustrated in the following example:

```

D B S INFORMATION EXPERT ----- SOURCE MANAGEMENT DIRECTORY LISTING SMLS
LIBRARY: USERXX                      NUMBER OF MEMBERS: 0018 MAXIMUM: 0225
FIND: _____

MEMBER NAME                TYPE                LAST UPDATE INFO        NBR RECDS
-----
A-TEST                     RPT SERIES         05/12/00   MSAUSER                1
A-TEST-RUN                 RUN STATEMTS      05/11/00   MSAUSER                1
C-CONVERT-CENTER          SUBROUTINE        10/17/97   MSAUSER                2
DATAFRAME-LIST            MISC TEXT         05/01/00   MSAUSER                1
PREPARATION-JCL           MISC TEXT         05/01/00   MSAUSER                1
PRINT-JCL                  MISC TEXT         05/01/00   MSAUSER                1
RUN-JCL                    MISC TEXT         05/01/00   MSAUSER                1

NOTES: Enter S to select member.  Change library by entering new library name
ACTION: _____  PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
    
```

Source Member Types

Source members contain information used by IE to perform reporting tasks. There are four types of source members:

- **Run Statements** **RUN STATEMTS**

Members that are run statements contain instructions for IE to produce a report and provide a method for specifying selection or exclusion criteria at run time for a report. Run members can also accept variable input at run time.

 An IE report is created by submitting a run statement to the mainframe.
- **Report Series** **RPT SERIES**

The report series members contain the actual Expert Language commands that are used to create a report.
- **Subroutines** **SUBROUTINE**

Subroutine members contain Expert Language routines that contain common code that can be used by any report series. Subroutines can accept data from a report and pass back results.
- **Miscellaneous Text** **MISC TEXT**

Miscellaneous text members are used to contain Job Control Language (JCL) or other information needed by IE for processing. JCL is used by IE to submit source members for execution. There are four special members that are used by IE.

NOTES

- DATAFRAME-LIST
The source member DATAFRAME-LIST contains a list of dataframes available in IE.
- PREPARATION-JCL
When the SUBMIT command is issued from a report series or subroutine member, the PREPARATION-JCL member is used to communicate the request to the computer. The report series is checked for errors and “prepared”.

The results of a preparation are documented and placed on a “preparation listing.” This listing is an edited version of the Expert Language, including any error messages. This listing can be placed in the REPORT VIEWING file in your library.

If the preparation was “clean” – containing no errors, the prepared version of the report series or subroutine is placed in the REPORT REQUEST file in your library. Members in the REPORT REQUEST file are eligible for execution.
- RUN-JCL
When the SUBMIT command is issued from a run statement member, the RUN-JCL is used to communicate the request to the computer. The Expert Language is executed to create the report(s) defined in the report series. The RUN-JCL member contains all data files needed by the report series.
- PRINT-JCL
After a report series has been viewed in RVLS, the user may decide to print the report. PRINT-JCL is used in printing from Report Viewing.

Source Management Create (SMCR)

The *Source Management Create (SMCR)* screen is used to create a new source member. The *SMCR* screen can be accessed from the Source Management menu by entering CR in the SELECTION field. The new member will be created in the library displayed. The library can be changed on the *SM* screen or on the *SMCR* screen.

Before we perform a walkthrough using the *SMCR* screen, log on to the Information Expert Report Facility.

Logging On

Accessing IE requires logging on to the mainframe computer using a terminal emulation program such as IRMA or !Extra. When this program is executed, access to the Information Technology Services (ITS) should result. The following screen should display. If this screen does not appear, contact your agency technical support staff for assistance.

NOTES

```
149.168.91.243 VIA TCP/IP TO THE NORTH CAROLINA STATE NETWORK --  
-- HELP: (919) 872-8841 / 1-800-722-3946 --  
  
* UNAUTHORIZED OR PERSONAL USE OF COMPUTER INFORMATION AND/OR EQUIPMENT *  
* IS A VIOLATION OF STATE AND FEDERAL LAWS. *  
  
APPLICATION:
```

WALKTHROUGH: Logging on to IE

SCENARIO

A request has been made to design an agency report using Information Expert. First you must log on to IE. The following walkthrough will allow you to become familiar with the LOGON process and access the CICS training region SCCO.

```
149.168.91.243 VIA TCP/IP TO THE NORTH CAROLINA STATE NETWORK --  
-- HELP: (919) 872-8841 / 1-800-722-3946 --  
  
* UNAUTHORIZED OR PERSONAL USE OF COMPUTER INFORMATION AND/OR EQUIPMENT *  
* IS A VIOLATION OF STATE AND FEDERAL LAWS. *  
  
APPLICATION: ①
```

1. Type **CICSSCCO** at the APPLICATION line on the State Sign-On Banner and press **Enter**. This will access the training region data.



When you return to your office, your agency data will be accessed by typing **CICSSCCP** or **CICSNC23**, whichever region has been specified for your agency.

NOTES

```

WELCOME TO ZSAP CICS 4.1.0. PRODUCTION REGION FOR O.S.C. (NCAS)

      cccccccccccc\      IIIIIIIIIIIII\      cccccccccccc\      sssssssssssss\
      cccccccccccc\      IIIIIIIIIIIII\      cccccccccccc\      sssssssssssss\
      cccc\\////////\      \\\\III\\////////\      cccc\\////////\      ssss\\////////\
      cccc\              III\              cccc\              ssss\
      cccc\              iii\              cccc\              ssss\ 4.1.0.
      ccc c\             iii\             cccc\             ssss\
      cccc\             iii\             cccc\             ssss\
      cccccccccccc\      IIIIIIIIIIIIIi\      cccccccccccc\      sssssssssss\
      cccccccccccc\      IIIIIIIIIIIIIi\      cccccccccccc\      sssssssssss\
      \\////////\        \\////////\        \\////////\        \\////////\
                                                                    PF 1 Help
                                                                    PF 3 Exit
      ..fill in bill-code (as:bbb-ddd).

      Userid   ==> 2          bill-cde ==> 3
      Password ==> 4          New Pswd ==>
      Please fill in your Userid and Password and press ENTER

News ----- PF 2 Zoom
| ** A SPECIAL SIG RELEASE HAS BEEN ISSUED WHICH CONTAINS MEMO# NCAS-98-0004* |
| ** THIS MEMO REFERNCES CHANGES IN NCAS TO SALES TAX REPORTING. TO VIEW * |
| ** THE MEMO, GO TO WHAT'S NEW IN THE SIG. PF2 FOR MORE INFORMATION. * |
| ***** |
+-----+
Wed Oct 13 10/13/97 10:22:30 term=$487/ZDA05516 sys=CICSSCCP cpu=SYSE USER
    
```

2. Type the **USER ID** assigned to your workstation in the USER ID field and press the **Tab** key. The USER ID can be found on your workstation.
3. Type **FAA-OSC** in the BILL-CDE field. (This bill code is only used during your training class.)
4. Type the **password** in the PASSWORD field and press **Enter**. (The instructor will give you the password for the class.) Wait until a blank screen is displayed.



5. Type **IEOL** at the cursor location and press **Enter**.

NOTES

```
DBS SIGNON                MSA.SIGNON
===>                      10/13/97    10:24:25

-----
DDDDDD  BBBB  SSSS  OOOO  FFFF  TTTTTT  WW  WW  AAAA  RRRR  EEEEE
DD DD  BB  BB  SS  OO  OO  FF  TT  WW  WW  AA  AA  RR  RR  EE
DD DD & BBBB  SSS  OO  OO  FFFF  TT  WW  W  WW  AAAAAA  RRRR  EEEE
DD DD  BB  BB  SS  OO  OO  FF  TT  WWW  WWW  AA  AA  RR  RR  EE
DDDDDD  BBBB  SSSS  OOOO  FF  TT  WW  WW  AA  AA  RR  RR  EEEEE

      Worldwide leadership in innovative business solutions
      through quality software and services ...with a personal touch

      User ID  6          Password  6          Group ID

      New Password          New Password Verify

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material or the information contained herein is prohibited. Release 92.01
```

6. Type the **IE USER-ID** and **PASSWORD** in the fields on this screen. (Your instructor will give you the user id and password for this class.) The IE main menu is displayed.



If you have trouble logging on to IE when you return to your agency, contact your agency's NCAS Security Administrator.

```
INFORMATION EXPERT MENU    MSA.MENU
===> 7                      07/11/98    13:33:54

-----
-

      Select  Menu

      1      Information Access Facility

      2      User Profile Maintenance

      3      System Administration
```

7. Type **1** at the cursor position and press **Enter** to select the *Information Access Facility* screen.

NOTES

```
INFORMATION ACCESS FACILITY MENU      IE.MENU
====> 8                               07/11/98   13:34:34
-----
                Select  Menu
                -----
                1      Expert Reporting Support Facility
                2      Expert Ad Hoc Reporting
                3      Expert Query
                4      ExpertLink
                5      Utilities
```

8. Type **1** and press **Enter** to select the *Expert Reporting Support Facility* screen.

```
D B S  INFORMATION EXPERT  -----  PRIMARY OPTION MENU  PM

      ENTER SELECTION BELOW:

      ER - EXPERT REPORTING
      SM - SOURCE MANAGEMENT
      JS - JOB PREPARATION & SUBMISSION
      RV - REPORT VIEWING
      SA - SYSTEM ADMINISTRATION
      MR - EXPERT MANAGEMENT REPORTING
      EN - END THE SESSION

      SELECTION ==> _____
      LIBRARY  ==> FINANXX

      ACTION: _____

      PRESS:      ENTER Process          PF1 Help      PF3 End Session
```

This is the Primary Option Menu for the Online Support Facility.



Fastpath: Access the *Primary Option* menu screen by typing **OSF.PM** in the ==> field on the *MSA.menu* screen.

WALKTHROUGH: Creating a Source Management Member

SCENARIO

You will learn how to create a Source Management member used for reporting. You will add an Expert Language command and save the report series.

NOTES

1. Type **SM** in the ACTION field and press **Enter** to return to the *Source Management Facility Menu* screen.

```
D B S  INFORMATION EXPERT  -----  SOURCE MANAGEMENT FACILITY  SM

      ENTER SELECTION BELOW:

      LS - DISPLAY MEMBER LIST
      CR - CREATE A NEW MEMBER
      CH - CHANGE A MEMBER
      UT - COPY/DELETE/RENAME/MERGE MEMBERS
      RE - RETURN TO PRIMARY OPTION MENU

      SELECTION   ===> 2
      MEMBER NAME ===>
      LIBRARY NAME ===> USERXX

ACTION: _____

PRESS:  ENTER Process  PF1 Help  PF3 Return to Primary Option Menu
```

2. Type **CR** in the SELECTION field and press **Enter**.



Fastpath: Access the *Source Management Create* screen by typing **SMCR** in the ACTION field.

```
D B S  INFORMATION EXPERT  -----  DEFINE TYPE OF SOURCE MEMBER  SMCR

      ENTER MEMBER TYPE BELOW:

      1 - REPORT SERIES          5 - RUN STATEMENTS
      2 - PRINT-SERIES          6 - DICTIONARY MAINTENANCE
      3 - SUBROUTINES           7 - UTILITY STATEMENTS
      4 - MISCELLANEOUS

      MEMBER TYPE   ===> 3
      MEMBER NAME   ===> 4
      LIBRARY NAME  ===> USERXX

ACTION: _____

PRESS:  ENTER Process  PF1 Help  PF3 Cancel Create
```

3. Type **1** in the MEMBER TYPE field.
4. Type **My-First-Report-Series** in the MEMBER NAME field and press **Enter**.

The member type tells IE what kind of information will be stored in the source member. If the member will contain an Expert Language report series, select 1 for the member type. If the member will contain statements used to execute a report series, select member type 5.

NOTES

```
EDIT REPORT SERIES: MY-FIRST-REPORT-SERIES          COLUMNS 001 072
COMMAND INPUT ==> 6                                SCROLL ==> HALF
-----1-----2-----3-----4-----5-----6-----7-
***** ***** TOP OF DATA *****
000100 INPUT GLOPENYR
***** ***** BOTTOM OF DATA *****

ACTION: _____ 1 Help  3 End  5 Find  6 Change  7 Pg Bwd  8 Pg Fwd
```

6. Type **SAVE** in the COMMAND INPUT field and press **Enter**.
7. Press **F3** to exit from the member and redisplay the *SM menu* screen.

You must type **Save** or **Cancel** in the COMMAND INPUT field when you are finished. Press **F3** to exit from the member. The *SM menu* screen is redisplayed.

Source Management Utilities (SMUT)

Source Management Utilities is used to maintain your IE library. Functions to copy, delete, and rename members are available.

WALKTHROUGH: SMUT Exercises

SCENARIO

This activity will familiarize you with the features of the Source Management Utility. You will learn to copy, delete, and rename members in your library.

1. Type **SM** in the ACTION field to return to the *Source Management* menu screen.

NOTES

```
D B S  INFORMATION EXPERT  -----  SOURCE MANAGEMENT FACILITY  SM

      ENTER SELECTION BELOW:

      LS - DISPLAY MEMBER LIST
      CR - CREATE A NEW MEMBER
      CH - CHANGE A MEMBER
      UT - COPY/DELETE/RENAME/MERGE MEMBERS
      RE - RETURN TO PRIMARY OPTION MENU

      SELECTION   ==>  2
      MEMBER NAME ==> _____
      LIBRARY NAME ==> USERXX

ACTION: _____

PRESS:  ENTER Process  PF1 Help  PF3 Return to Primary Option Menu
```

2. Type **UT** in the SELECTION field and press **Enter**.



Fastpath: Access the *Source Management Utilities* screen by typing **SMUT** in the ACTION field.

```
D B S  INFORMATION EXPERT  -----  SOURCE MANAGEMENT UTILITIES  SMUT

SELECTION OPTION == __

C - COPY MEMBER          BLANK - DISPLAY MEMBER LIST
D - DELETE MEMBER       PF3  - RETURN TO PREVIOUS MENU
R - RENAME MEMBER       PF1  - HELP
M - MERGE MEMBERS

INFORMATION EXPERT LIBRARY:

MEMBER   NAME ==> _____
NEW MEMBER NAME ==> _____
LIBRARY  NAME ==> USERXX

IF COPYING TO ANOTHER LIBRARY:  NOTE: Library entered here will be used
NEW LIBRARY NAME ==> _____  as the default target library in
                                  copying members if the DISPLAY MEMBER
                                  LIST option is selected above.

ACTION: _____
```

3. Press **Enter**. A list of all members in the library is displayed.

NOTES

```
D B S  INFORMATION EXPERT ----- SOURCE MANAGEMENT UTILITIES  JSMLDU
LIBRARY: USERXX                      NUMBER OF MEMBERS: 0007 MAXIMUM: 0225
FIND: _____                      DEFAULT "COPY TO" LIBRARY: USERXX
                                     RENAME/COPY TO          COPY TO
MEMBER NAME                          MEMBER NAME          LIBRARY
-----
DATAFRAME-LIST
4 DELETE-THIS-MEMBER
  MY-FIRST-REPORT-SERIES
  RENAME-THIS-MEMBER
  RUN-JCL
****  END OF DIRECTORY  ****

ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

4. Type **D** in front of the member DELETE-THIS-MEMBER and press **Enter**. Confirmation of the delete should be displayed.

```
D B S  INFORMATION EXPERT ----- SOURCE MANAGEMENT UTILITIES  JSMLDU
LIBRARY: USERXX                      NUMBER OF MEMBERS: 0006 MAXIMUM: 0225
FIND: _____                      DEFAULT "COPY TO" LIBRARY: USERXX
                                     RENAME/COPY TO          COPY TO
MEMBER NAME                          MEMBER NAME          LIBRARY
-----
DATAFRAME-LIST
DELETE-THIS-MEMBER                    ** DELETED **
MY-FIRST-REPORT-SERIES
5 RENAME-THIS-MEMBER                  6
  RUN-JCL
****  END OF DIRECTORY  ****

ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

5. Type **R** in front of the member RENAME-THIS-MEMBER.
6. Type **new-name-for-this-member** under the RENAME/COPY TO column and press **Enter**. Confirmation that the member was renamed should be displayed.

NOTES

```
D B S  INFORMATION EXPERT ----- SOURCE MANAGEMENT UTILITIES  JSMLDU

LIBRARY: 7RXX                                NUMBER OF MEMBERS: 0006 MAXIMUM: 0225
FIND: _____ DEFAULT "COPY TO" LIBRARY: USERXX
                                RENAME/COPY TO          COPY TO
MEMBER NAME                      MEMBER NAME          LIBRARY
-----
DATAFRAME-LIST
DELETE-THIS-MEMBER                ** DELETED **
MY-FIRST-REPORT-SERIES
RENAME-THIS-MEMBER                ** RENAMED **
RUN-JCL
****  END OF DIRECTORY  ****

ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

7. Type **IE03** over your default library **USERXX** in the **LIBRARY** field and press **Enter**.

```
D B S  INFORMATION EXPERT ----- SOURCE MANAGEMENT UTILITIES  JSMLDU

LIBRARY: IE03                                NUMBER OF MEMBERS: 0003 MAXIMUM: 0225
FIND: _____ DEFAULT "COPY TO" LIBRARY: IE03
                                RENAME/COPY TO          COPY TO
MEMBER NAME                      MEMBER NAME          LIBRARY
-----
EDITING-WALKTHROUGH-EXAMPLES
8 PREPARATION-JCL                                9
PRINT-JCL
****  END OF DIRECTORY  ****

ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

8. Type **C** before the member **PREPARATION-JCL**.
9. Tab over to the column labeled **COPY TO LIBRARY**. Type your default library **USERXX** in the field.
10. Repeat this procedure for the members **EDITING-WALK-THROUGH-EXAMPLES** and **PRINT-JCL** members and press **Enter**.

A confirmation that the three members were copied should display.

NOTES

```

D B S  INFORMATION EXPERT ----- SOURCE MANAGEMENT UTILITIES  JSMLDU

LIBRARY: 11                                NUMBER OF MEMBERS: 0003 MAXIMUM: 0225
FIND: _____ DEFAULT "COPY TO" LIBRARY: IE03
                                RENAME/COPY TO          COPY TO
MEMBER NAME                      MEMBER NAME          LIBRARY
-----
EDITING-WALKTHROUGH-EXAMPLES    ** COPIED **
PREPARATION-JCL                  ** COPIED **
PRINT-JCL                         ** COPIED **
****  END OF DIRECTORY  ****

ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
    
```

11. Type your library name **USERXX** in the LIBRARY field and press **Enter**.

```

D B S  INFORMATION EXPERT ----- SOURCE MANAGEMENT UTILITIES  JSMLDU

LIBRARY: USERXX                            NUMBER OF MEMBERS: 0007 MAXIMUM: 0225
FIND: _____ DEFAULT "COPY TO" LIBRARY: USERXX
                                RENAME/COPY TO          COPY TO
MEMBER NAME                      MEMBER NAME          LIBRARY
-----
DATAFRAME-LIST
EDITING-WALKTHROUGH-EXAMPLES
MY-FIRST-REPORT-SERIES
PREPARATION-JCL
PRINT-JCL
NEW-NAME-FOR-THIS-MEMBER
RUN-JCL
****  END OF DIRECTORY  ****

ACTION: 12 _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
    
```

There should be seven members in your library.

12. Type **PM** in the ACTION field and press **Enter** to return to the *Primary Option Menu* screen.

Source Management Directory Listing

Source Management Directory Listing is used to edit members. It can also be used to submit a report series member to prepare, or submit a run member to execute a report.

NOTES

```
D B S INFORMATION EXPERT ----- SOURCE MANAGEMENT DIRECTORY LISTING SMLS
LIBRARY: USERXX                      NUMBER OF MEMBERS: 0007 MAXIMUM: 0225
FIND: _____

MEMBER NAME                          TYPE          LAST UPDATE INFO    NBR RECDS
-----
DATAFRAME-LIST                       MISC TEXT    08/31/00   000026         1
EDITING-WALKTHROUGH-EXAMPLES        RPT SERIES   08/29/00   000026         1
MY-FIRST-REPORT-SERIES              RPT SERIES   08/29/00   000026         1
NEW-NAME-FOR-THIS-MEMBER            RPT SERIES   08/28/00   MSAUSER        1
PREPARATION-JCL                     MISC TEXT    08/30/00   000026         1
PRINT-JCL                            MISC TEXT    08/29/00   000026         1
RUN-JCL                              MISC TEXT    08/30/00   000026         1
**** END OF DIRECTORY ****

NOTES: Enter S to select member.  Change library by entering new library name
ACTION: _____ PF1 Help PF3 End PF6 Top PF7 Pg Bwd PF8 Pg Fwd
```

Source Member Editing

If a member is selected on the SMLS screen, it appears in a full screen editor. There are two types of edit commands – line commands and edit commands. Edit commands are entered from the COMMAND INPUT field. The following commands are available:

- **FIND or F**
Locate an occurrence of a character or group of characters.
- **CHANGE or C**
Change an occurrence of a character or group of characters to a different character or group of characters.
- **LOCATE or L**
Find a particular line number in a source member.
- **MAX or M**
Go to the top of the source member when used with **F7**. Go to the bottom of the source member when used with **F8**.
- **RENUM or REN**
Renumber the source member.
- **RESET or RES**
Reset the source member. Removes any intensified messages.
- **SAVE or S**
Save the source member. Any updates will be made permanent.

NOTES

- **CANCEL or CAN**

Cancel any updates made to the source member since the last SAVE command. The source member will not be updated with the changes.

-  If changes have been made to a source member, SAVE or CANCEL are the only two commands that allow you to exit the source member.

- **CHECK**

Examine source member for syntax errors in the Expert Language commands. If errors are found, an appropriate message is displayed after the command in error.

- **SUBMIT or SUB**

Submit the source member to the mainframe for processing.

Line commands are entered over the line numbers on the left side of the screen. The following line commands are available:

- **C COPY**

Copy one line.

- **CC COPY RANGE**

Copy a set of lines. Type CC on the first line to copy. Type another CC on the last line to copy. This command is used in conjunction with the ADD AFTER command (A).

- **M MOVE**

Move one line.

- **MM MOVE RANGE**

Move a set of lines. Type MM on the first line to move. Type another MM on the last line to move. This command is used in conjunction with the ADD AFTER command (A).

- **A ADD AFTER**

Copy or move a set of lines AFTER the line that contains the ADD AFTER command (A). Used in conjunction with the COPY RANGE command (CC) and the MOVE RANGE command (MM). If a specific number is added after the insert (you cannot see the "i" on insert).

- **D DELETE**

Delete one line. If a specific number is added after the delete command, the specific number of lines will be deleted. For example D3 will delete three lines from where the command was placed.

NOTES

- **DD** **DELETE RANGE**
Delete a set of lines. Type DD on the first line to be deleted. Type another DD on the last line to be deleted. All lines within the DELETE RANGE command will be deleted.
- **R** **REPEAT**
Repeat one line. If a specific number is added after the REPEAT command, the line will be repeated the specific number of times. For example, R3 will repeat a single line 3 times.
- **RR** **REPEAT RANGE**
Repeat a set of lines. Type RR on the first line to be repeated. Type another RR on the last line to be repeated. The lines will be repeated after the last line with the REPEAT RANGE command.
- **I** **INSERT**
Insert a blank line after the line containing the INSERT command. Blank lines will continue to be displayed until **Enter** is pressed without entering something on the line. If a specific number is added after the INSERT command, the specific number of lines will be inserted. For example, I3 will insert 3 blank lines.

WALKTHROUGH: Edit Commands

SCENARIO

This exercise is to familiarize you with the editing features in Source Management. You will use the different editing commands to reinforce this lesson.

```
D B S  INFORMATION EXPERT  -----  PRIMARY OPTION MENU  PM

ENTER SELECTION BELOW:

ER - EXPERT REPORTING
SM - SOURCE MANAGEMENT
JS - JOB PREPARATION & SUBMISSION
RV - REPORT VIEWING
SA - SYSTEM ADMINISTRATION
MR - EXPERT MANAGEMENT REPORTING
EN - END THE SESSION

SELECTION ==>  __
LIBRARY  ==>  USERXX

ACTION:  ①  _____

PRESS:   ENTER Process           PF1 Help       PF3 End Session
```

NOTES

1. Type **SMLS** in the ACTION field and press **Enter** to access the *Source Management Directory Listing* screen.

```

D B S  INFORMATION EXPERT  ----- SOURCE MANAGEMENT DIRECTORY LISTING  SMLS
LIBRARY: USERXX                      NUMBER OF MEMBERS: 0008 MAXIMUM: 0225
FIND: _____

MEMBER NAME                          TYPE          LAST UPDATE INFO  NBR RECDS
-----
DATAFRAME-LIST                       MISC TEXT    05/23/00   MSAUSER        1
DELETE-THIS-MEMBER                   RPT SERIES   05/23/00   MSAUSER        1
2 EDITING-WALKTHROUGH-EXAMPLES       RPT SERIES   05/24/00   MSAUSER        1
MY-FIRST-REPORT-SERIES               RPT SERIES   05/23/00   MSAUSER        1
PREPARATION-JCL                      MISC TEXT    05/24/00   MSAUSER        1
PRINT-JCL                             MISC TEXT    05/24/00   MSAUSER        1
NEW-NAME-FOR-THIS-MEMBER             RPT SERIES   05/23/00   MSAUSER        1
RUN-JCL                               MISC TEXT    05/24/00   MSAUSER        1
****  END OF DIRECTORY  ****

NOTES: Enter S to select member.  Change library by entering new library name
ACTION: _____  PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
    
```

2. Type **S** before the member EDITING-WALKTHROUGH-EXAMPLES and press **Enter**.

```

EDIT REPORT SERIES: EDITING-WALKTHROUGH-EXAMPLES          COLUMNS 001 072
COMMAND INPUT ==> 3 SCROLL ==> HALF
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-----
***** ***** TOP OF DATA *****
000100 TODAY IS XX/XX/XXXX
000200
000300 IE IS VERY EASY TO USE, YET VERY POWERFUL .
000400
000500 PLAN YOUR REPORT BEFORE USING IE TO PRODUCE IT.
000600
000700 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000800
000900 THE EXPERT LANGUAGE REFERENCE GUIDE HAS A COMPLETE SYNTAX AND RULES FOR
001000 EACH COMMAND.
001100
001200 INSERT YOUR NAME AND ADDRESS BELOW:
***** ***** BOTTOM OF DATA *****

ACTION: _____  1 Help  3 End  5 Find  6 Change  7 Pg Bwd  8 Pg Fwd
    
```

3. Type **FIND 'IE'** in the COMMAND INPUT field and press **Enter**. The cursor should move to the first occurrence of the character IE on line 300.
4. Press **F5**. The cursor moves to the next occurrence of the characters IE on line 500.
5. Press **F5**. The cursor moves back to the COMMAND INPUT field with a message displayed in the upper right of the screen: **BOTTOM OF DATA REACHED**. This indicates there are no other occurrences.

NOTES

The format of the edit command FIND is:

FIND 'string1' or F 'string1'

The FIND command will locate the first occurrence of string1. Use the **F5** key to find the next occurrence of the string1.

String1 must be the exact characters you want to locate. If there are blanks in the string1, you must enclose string1 in apostrophes.

```
EDIT REPORT SERIES: EDITING-WALKTHROUGH-EXAMPLES          COLUMNS 001 072
COMMAND INPUT ==> 6 SCROLL ==> HALF
-----1-----2-----3-----4-----5-----6-----7--
***** ***** TOP OF DATA *****
000100 TODAY IS XX/XX/XXXX
000200
000300 IE IS VERY EASY TO USE, YET VERY POWERFUL .
000400
000500 PLAN YOUR REPORT BEFORE USING IE TO PRODUCE IT.
000600
000700 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000800
000900 THE EXPERT LANGUAGE REFERENCE GUIDE HAS A COMPLETE SYNTAX AND RULES FOR
001000 EACH COMMAND.
001100
001200 INSERT YOUR NAME AND ADDRESS BELOW:
***** ***** BOTTOM OF DATA *****

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd
```

6. Type **CHANGE 'IE' 'INFORMATION EXPERT'** in the COMMAND INPUT field and press **Enter**. The first occurrence of the characters IE on line 300 should change to INFORMATION EXPERT. Line 300 should have displayed ==CHG> to reflect the line changed.
7. Press **F5**. The cursor moves to the next occurrence of the characters IE on line 500.
8. Press **F6**. The occurrence of IE on line 500 should change to INFORMATION EXPERT. Line 500 should have displayed ==CHG> to reflect the line changed.

NOTES

The format of the edit command CHANGE is:

CHANGE 'string1' 'string2' C 'string1' 'string2'

CHANGE 'string1' 'string2' ALL C 'string1' 'string2' ALL

The CHANGE command will change the first occurrence of string1 to string2. Use the **F5** key to FIND the next occurrence of the string1. Use the **F6** key to CHANGE the occurrence of string1. If the ALL option is used, all occurrences of string1 will change to string2.

String1 must be the exact characters you want to change. If there are blanks in string1 or string2, you must enclose string1 **and** string2 in apostrophes.

```
EDIT REPORT SERIES: EDITING-WALKTHROUGH-EXAMPLES                    COLUMNS 001 072
COMMAND INPUT ==>                                                        SCROLL ==> HALF
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7--
*****                                                                    TOP OF DATA                                                                    *****
000100 TODAY IS XX/XX/XXXX
000200
==CHG> INFORMATION EXPERT IS VERY EASY TO USE, YET VERY POWERFUL .
000400
==CHG> PLAN YOUR REPORT BEFORE USING INFORMATION EXPERT TO PRODUCE IT.
000600
000700 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000800
000900 THE EXPERT LANGUAGE REFERENCE GUIDE HAS A COMPLETE SYNTAX AND RULES FOR
001000 EACH COMMAND.
001100
9 1200 INSERT YOUR NAME AND ADDRESS BELOW:
10
*****                                                                    BOTTOM OF DATA                                                                    *****

ACTION: _____ 1 Help    3 End    5 Find    6 Change    7 Pg Bwd    8 Pg Fwd
```

9. Type **I** on line 001200 and press **Enter**.
10. Enter your **name** on the first line and press **Enter**. Enter your **address** on the second line and press **Enter**. Enter your **city, state and zip code** on the third line and press **Enter**. Press **Enter** again.

NOTES

```
EDIT REPORT SERIES: EDITING-WALKTHROUGH-EXAMPLES          COLUMNS 001 072
COMMAND INPUT ==>                                         SCROLL ==> HALF
-----1-----2-----3-----4-----5-----6-----7--
***** ***** TOP OF DATA *****
11 0100 TODAY IS XX/XX/XXXX
000200
==CHG> INFORMATION EXPERT IS VERY EASY TO USE, YET VERY POWERFUL.
000400
==CHG> PLAN YOUR REPORT BEFORE USING INFORMATION EXPERT TO PRODUCE IT.
000600
000700 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000800
000900 THE EXPERT LANGUAGE REFERENCE GUIDE HAS A COMPLETE SYNTAX AND RULES FOR
001000 EACH COMMAND.
001100
001200 INSERT YOUR NAME AND ADDRESS BELOW:
11 1300 FRED FLINTSTONE
001400 1 BEDROCK LANE
11 1500 BOULDER, CO 11122
***** ***** BOTTOM OF DATA *****
ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd
```

- 11. Type **MM** on line 001300. Type **MM** on line 001500. Type **A** on line 000100 and press **Enter**. Three lines with your name and address should be at the top of the member.

```
EDIT REPORT SERIES: EDITING-WALKTHROUGH-EXAMPLES          COLUMNS 001 072
COMMAND INPUT ==>                                         SCROLL ==> HALF
-----1-----2-----3-----4-----5-----6-----7--
***** ***** TOP OF DATA *****
000100 TODAY IS XX/XX/XXXX
000110 FRED FLINTSTONE
000120 1 BEDROCK LANE
000130 BOULDER, CO 11122
000200
==CHG> INFORMATION EXPERT IS VERY EASY TO USE, YET VERY POWERFUL.
000400
==CHG> PLAN YOUR REPORT BEFORE USING INFORMATION EXPERT TO PRODUCE IT.
000600
000700 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000800
000900 THE EXPERT LANGUAGE REFERENCE GUIDE HAS A COMPLETE SYNTAX AND RULES FOR
001000 EACH COMMAND.
001100
12 1200 INSERT YOUR NAME AND ADDRESS BELOW:
***** ***** BOTTOM OF DATA *****
ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd
```

- 12. Type **D** on line 001200 and press **Enter**.

NOTES

```
EDIT REPORT SERIES: EDITING-WALKTHROUGH-EXAMPLES          COLUMNS 001 072
COMMAND INPUT ==>                                         SCROLL ==> HALF
-----1-----2-----3-----4-----5-----6-----7--
***** ***** TOP OF DATA *****
000100 TODAY IS XX/XX/XXXX
000110 FRED FLINTSTONE
000120 1 BEDROCK LANE
000130 BOULDER, CO 11122
000200
==CHG> INFORMATION EXPERT IS VERY EASY TO USE, YET VERY POWERFUL.
000400
==CHG> PLAN YOUR REPORT BEFORE USING INFORMATION EXPERT TO PRODUCE IT.
000600
13 0700 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000800
000900 THE EXPERT LANGUAGE REFERENCE GUIDE HAS A COMPLETE SYNTAX AND RULES FOR
001000 EACH COMMAND.
001100
***** ***** BOTTOM OF DATA *****

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd
```

13. Type **R4** on line 000700 and press **Enter**.

```
EDIT REPORT SERIES: EDITING-WALKTHROUGH-EXAMPLES          COLUMNS 001 072
COMMAND INPUT ==> 14 SCROLL ==> HALF
-----1-----2-----3-----4-----5-----6-----7--
***** ***** TOP OF DATA *****
000100 TODAY IS XX/XX/XXXX
000110 FRED FLINTSTONE
000120 1 BEDROCK LANE
000130 BOUDLER, CO 11122
000200
==CHG> INFORMATION EXPERT IS VERY EASY TO USE, YET VERY POWERFUL.
000400
==CHG> PLAN YOUR REPORT BEFORE USING INFORMATION EXPERT TO PRODUCE IT.
000600
000700 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000710 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000720 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000730 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000740 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000800
000900 THE EXPERT LANGUAGE REFERENCE GUIDE HAS A COMPLETE SYNTAX AND RULES FOR
001000 EACH COMMAND.
001100

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd
```

14. Type **RESET** in the COMMAND INPUT field and press **Enter**.

NOTES

```
EDIT REPORT SERIES: EDITING-WALKTHROUGH-EXAMPLES          COLUMNS 001 072
COMMAND INPUT ==> 15                                     SCROLL ==> HALF
-----1-----2-----3-----4-----5-----6-----7--
***** ***** TOP OF DATA *****
000100 TODAY IS XX/XX/XXXX
000110 FRED FLINTSTONE
000120 1 BEDROCK LANE
000130 BOULDER, CO 11122
000200
000300 INFORMATION EXPERT IS VERY EASY TO USE, YET VERY POWERFUL .
000400
000500 PLAN YOUR REPORT BEFORE USING INFORMATION EXPERT TO PRODUCE IT.
000600
000700 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000710 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000720 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000730 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000740 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
000800
000900 THE EXPERT LANGUAGE REFERENCE GUIDE HAS A COMPLETE SYNTAX AND RULES FOR
001000 EACH COMMAND.
001100

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd
```

15. Type **RENUM** in the COMMAND INPUT field and press **Enter**.

```
EDIT REPORT SERIES: EDITING-WALKTHROUGH-EXAMPLES          COLUMNS 001 072
COMMAND INPUT ==>                                       SCROLL ==> HALF
-----1-----2-----3-----4-----5-----6-----7--
-
***** ***** TOP OF DATA *****
000100 TODAY IS XX/XX/XXXX
000200 FRED FLINTSTONE
000300 1 BEDROCK LANE
000400 BOULDER, CO 111222
000500
000600 INFORMATION EXPERT IS VERY EASY TO USE, YET VERY POWERFUL.
000700
000800 PLAN YOUR REPORT BEFORE USING INFORMATION EXPERT TO PRODUCE IT.
000900
001000 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
001100 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
001200 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
001300 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
001400 USUALLY THERE ARE MANY WAYS TO ACCOMPLISH A REPORTING TASK.
001500
001600 THE EXPERT LANGUAGE REFERENCE GUIDE HAS A COMPLETE SYNTAX AND RULES FOR
001700 EACH COMMAND.

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd
```

16. Press the **F3** key. Type **SAVE** or **CANCEL** in the COMMAND INPUT field and press **Enter**.

Job Preparation and Submission

Job Preparation and Submission (JS) provides a set of online screens that can be used to prepare or run a report series. The *Job Preparation and Submission (JS)* main menu screen can be accessed from the *Primary Option* menu by typing **JS** in the SELECTION field.

NOTES

```

D B S  INFORMATION EXPERT  -----  JOB SUBMISSION FACILITY  JS

      ENTER SELECTION BELOW:

      PR - LIST SERIES TO BE PREPARED
      RU - LIST SERIES TO BE RUN
      AP - LIST APPLICATION JOBS
      RT - ENTER RUN-TIME OPTIONS
      RE - RETURN TO PRIMARY OPTION MENU

      (-----)
      SELECTION  ==> JS
      SERIES   NAME ==>
      LIBRARY  NAME ==> USERXX

ACTION: _____

PRESS:      ENTER Process   PF1 Help   PF3 Return to Primary Option Menu
    
```

List Series to be Prepared (JSPR)

The *List Series to be Prepared (JSPR)* screen is available from the *JS* menu screen. This screen displays all report series and subroutines residing in the Source Management library. Type an **S** beside the member name and press to submit the member for preparation.

```

D B S  INFORMATION EXPERT  -----  PREPARE SERIES/SUBROUTINE  JSPR

LIBRARY: USERXX

SERIES / SUBROUTINE NAME          TYPE          ACTION
-----
S AXX-FIRST-QUARTER-REPORT        RPT SERIES
  AXX-QUARTERLY-BALANCES          RPT SERIES
  AXX-QUARTERLY-BALANCES-COND     RPT SERIES
  DELETE-THIS-MEMBER              RPT SERIES
  EDITING-WALKTHROUGH-EXAMPLES    RPT SERIES
  MY-FIRST-REPORT-SERIES          RPT SERIES
  RENAME-THIS-MEMBER              RPT SERIES
  **** END OF DIRECTORY          ****

Key an 's' beside the series to be prepared and press ENTER to submit.

ACTION: _____ PF1 Help   PF3 End   PF7 Pg Bwd   PF8 Pg Fwd   PF9 Reset
    
```

List Series to be Run (JSRU)

The *List Series to be Run (JSRU)* screen is available from the *JS* menu screen. This screen displays all report series residing in the Report Request library. Only report series that have successfully been prepared will be displayed. You can submit the member for execution by typing an **S** beside the member name and pressing .

NOTES

```

D B S  INFORMATION EXPERT  -----  RUN A REPORT SERIES  JSRU

LIBRARY: USERXX

REPORT SERIES NAME          ACTION          NOTES:
-----
AXX-FIRST-QUARTER-REPORT
S AXX-QUARTERLY-BALANCES
  AXX-QUARTERLY-BALANCES-COND
  ****  END OF DIRECTORY  ****

To submit a job to run a
Report Series enter an S
next to the name & press
the ENTER key.

To change libraries enter
the new library name and
press the ENTER key.

ACTION: _____  PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd

```

Enter Run-Time Options (JSRT)

The *Enter Run-Time Options (JSRT)* screen is available from the *JS* menu screen. This screen lists all report series residing in the Report Request library that have successfully been prepared. This screen steps the user through a series of screens allowing values for run time criteria to be entered. A RUN STATEMNT type member will be created and can be saved in the user's Source Management Library. Run time options and use of the *JSRT* screen will be reviewed in a later chapter.

Report Viewing

The Report Viewing facility is used to view or print report output. The Report Viewing main menu can be accessed from the *Primary Option* screen by typing **RV** in the SELECTION field.

```

D B S  INFORMATION EXPERT  -----  REPORT VIEWING MENU  RV

ENTER SELECTION BELOW:

LS - LIST THE SERIES
VW - VIEW  A SERIES
UT - DELETE A SERIES
RE - RETURN TO PRIMARY OPTION MENU

(-----)
SELECTION  ==>  RV
SERIES NAME ==>
LIBRARY NAME ==> 000026

ACTION: _____

PRESS:      ENTER Process  PF1 Help  PF3 Return to Primary Option Menu

```



Fastpath: Type **RVLS** in the ACTION field to move directly to the *Report Viewing Series List* screen.

Report Viewing Directory Listing (RVLS)

NOTES

The *Report Viewing Directory Listing (RVLS)* screen is available from the *RV* menu screen. The *RVLS* screen provides a list of report outputs available for viewing or printing. There are two types of report views. Both can be seen in the following illustration.

```
D B S  INFORMATION EXPERT  -----  REPORT VIEWING DIRECTORY  RVLS
LIBRARY: FINANXX          NUMBER OF MEMBERS: 0002  MAXIMUM: 0225
FIND:
SERIES NAME                TYPE                NOTES:
-----
C-U-GL-DETAIL-LEDGER-DAPG67  RPT SERIES        Place an S beside the
C-U-PS-RECYCLED-PAPER        PREP LIST          series to be viewed &
                               press the ENTER key.
****  END OF DIRECTORY  ****
                               Place a P beside the
                               series to be printed &
                               press the ENTER key.
                               To change libraries,
                               enter the name of the
                               new library & press
                               the ENTER key.
ACTION: _____  PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

The diagram shows two boxes: 'RPT SERIES' on the left and 'PREP LIST' on the right. An arrow points from the 'RPT SERIES' box to the 'RPT SERIES' entry in the table. Another arrow points from the 'PREP LIST' box to the 'PREP LIST' entry in the table.

Report Viewing Types

Report Viewing contains the output of IE processes. There are two types of these members.

- **Rpt Series** **Report Series**
The reports are the results of executing Expert Language programs. These reports can be viewed or printed.
- **Prep List** **Preparation Listing**
The prep lists are generated when IE Language is submitted for syntax checking. IE produces a prep list that communicates the results of this process.

Once a report series is selected from Report Viewing, *the Report Request Directory* screen appears. A report series can contain multiple reports. A report may be selected for examination or printing from the following screen.

NOTES

```

D B S INFORMATION EXPERT ----- REPORT REQUEST DIRECTORY JSVRDI

REPORT SERIES C-U-GL-DETAIL-LEDGER-DAPG67          LIBRARY:  FINANXX
DATE PREPARED: 10/05/98 13:11:42                 OWNER:    FINANXX
DATE RUN:      10/12/98 10:02:23                 NUMBER REPORTS: 001

  REPORT      WIDTH      PAGES          NOTES:
  -----      -
GLIST         132        39
**END**

Place an S beside the report to
be viewed & press the ENTER key.

Place a P beside the report to
be printed & press the ENTER key.
    
```

Once a report is selected, its contents are displayed on the screen. Of course, no editing of report views is allowed.

Viewing and printing reports was discussed in the prerequisite class, *Using IE in the NCAS Environment (IE01)*.

```

D B S INFORMATION EXPERT ----- VIEW A REPORT JSVRPS
SERIES:  C-U-GL-DETAIL-LEDGER-DAPG67   REPORT:  GLIST   PAGE 00001  LINE 001
COMMAND INPUT ==>                                COLUMNS 001  079
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-----+-----
RMSID11                                           STATE OF NORTH CAROLINA GENERAL LEDGE
GLIST                                           DETAIL TRANSACTION LEDGER
1101 DEPARTMENT OF LABOR                          FOR THE PERIOD 08/01/98 - 09/30

CENTER: 1110          COMMISSIONER'S OFFICE

  EFF DATE   DOCUMENT          ENTY   ADDITIONAL DESCRIPTIVE INFO
  -----   -----
ACCT 533110   GENERAL OFFICE SUPPLIES
08/19/98     372515-001   11PT  RALEIGHOFFICESU / 081998 2084
08/19/98     372515-001   11PT  RALEIGHOFFICESU / 081998 2084
08/20/98     373100-001   11PT  RALEIGHOFFICESU / 082098 2089
08/20/98     373100-001   11PT  RALEIGHOFFICESU / 082098 2089
08/20/98     375360-001   11PT  RALEIGHOFFICESU / 082098 2089
08/20/98     375360-001   11PT  RALEIGHOFFICESU / 082098 2089
08/21/98     373852-001   11PT  RALEIGHOFFICESU / 082198 2096
08/21/98     373852-001   11PT  RALEIGHOFFICESU / 082198 2096

08                                           * PERIOD BALANCE *
ACTION: _____ PF: 3 End 4 Nxt Rpt 6 Top 7 Pg Bwd 8 Pg Fwd 9 Last Pg
    
```

Delete a Report/Listing (RVUT)

The *Report Viewing Delete a Series (RVUT)* screen is available from the *RV* menu screen. The *RVUT* screen is used to delete the results of reports or preparation when you have completed viewing them. This screen does not delete the IE source code stored in Source Management library or the prepared version stored in the Report Request library.

It is important to delete unwanted reports from the *Report Viewing* screen. Deleting report series keeps the *Report Viewing* file from filling up.

NOTES

```
D B S  INFORMATION EXPERT  -- REMOVE SERIES FROM REPORT VIEWING FILE  RVUT

LIBRARY: USERXX                                NUMBER OF MEMBERS: 0003 MAXIMUM: 0225
FIND:
SERIES NAME                                TYPE                                ACTION TAKEN
-----
AXX-FIRST-QUARTER-REPORT                   RPT SERIES
AXX-QUARTERLY-BALANCES                     RPT SERIES
AXX-QUARTERLY-BALANCES-COND                RPT SERIES
****  END OF DIRECTORY  ****

ACTION: _____  PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

System Administration

The System Administration facility is used to perform administrative functions. The *System Administration (SA)* main menu can be accessed from the *Primary Option* menu by typing **SA** in the SELECTION field. The System Administration facility has two options that will be discussed in this class.

```
D B S  INFORMATION EXPERT  -----  SYSTEM ADMINISTRATION  SA

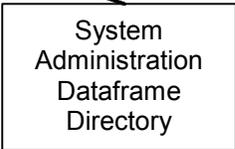
ENTER SELECTION BELOW:

LF - DATAFRAME DIRECTORY LIST
LR - SERIES DIRECTORY LIST
LB - LIBRARY MAINTENANCE
SF - SHOW SYSTEM FILE STATUS
AL - SECURITY ACCESS LIST UPDATE
RE - RETURN TO PRIMARY OPTION MENU

SELECTION ==>> LF

ACTION: _____

PRESS:  ENTER Process  PF1 Help  PF3 Return to Primary Option Menu
```



NOTES

Dataframe Directory List (SALF)

The *Dataframe Directory list (SALF)* screen is available from the SA menu screen. A list of dataframes that have been entered into the reserve source member DATAFRAME-LIST is displayed. A dataframe can be viewed by typing an **S** before the dataframe name. These screens will be discussed in more detail in the *Information Expert Terms and Concepts* section.

```

D B S  INFORMATION EXPERT ----- DATAFRAME DIRECTORY LIST  SALF

      DATAFRAME  DESCRIPTION OF DATAFRAME              NOTES:
      -----
      * INDICATES THAT THIS DATAFRAME IS NOT          To list the contents
      RECOMMENDED FOR USE WITH EXPERT                   of a Dataframe, enter
      REPORTING.                                         an S next to the name
                                                         & press the ENTER key
      -----
      *****
      * OSC * *          D A T A F R A M E S          *
      *****
      C-MASTER  MASTER TABLE
      C-80BYTE   80 CHARACTER SEQUENTIAL FILE

      *****
      * AP * *          D A T A F R A M E S          *
      *****
      S APINVC01 INVOICE INFORMATION
      APINVC02  INVOICE INFORMATION - UTILITY VIEW    *
      APINVC04  INVOICE INFORMATION - UTILITY VIEW    *

      ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
    
```

Series Directory List (SALR)

The *Series Directory List (SALR)* is available from the SA menu screen. When a report series or subroutine is prepared, the Expert Language is converted to machine code and added to the Report Request library. This screen lists all members in the Report Request library. This screen is used to delete report series or subroutines that are no longer needed.

 This does NOT delete the source code, only the “prepared” version.

NOTES

```
D B S  INFORMATION EXPERT  -----  REPORT REQUEST FILE DIRECTORY LIST  SALR

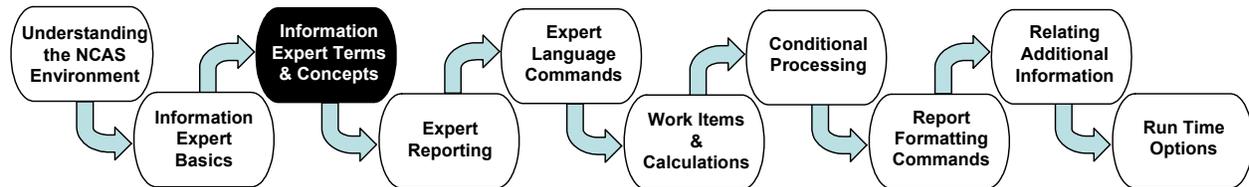
LIBRARY: USERXX                                NUMBER OF MEMBERS: 0002 MAXIMUM: 0225
FIND:
MEMBER NAME                                TYPE                                LAST PREPARED INFO
-----
D A-TEST                                    ** DELETED *
AXX-FIRST-QUARTER-REPORT                   RPT SERIES                          05/15/00  MSAUSER
C-AXX-ACCOUNT-DESCRIPTIONS                 RPT SERIES                          06/09/00  MSAUSER
****  END OF DIRECTORY  ****

Enter D  to delete a member.  Key over library name to change libraries.
ACTION: _____  PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

SUMMARY

You have just learned the different sections in the Online Support Facility. In the Source Management Facility, you have learned how to create, copy, and maintain library members. You were also introduced to the Source Management text editor that will be used to update Expert Language report series. You are now ready to learn the Expert Language Terms and Concepts.

Information Expert Terms and Concepts



Overview

Certain IE terms and concepts are important for a user to understand in order to acquire a basic understanding of Information Expert. This chapter explains some of these basic terms.

IE Terms

One of the first steps when designing a report is to choose the data to appear on the report. This data is retrieved from the Application files by the Data Dictionary. The Data Dictionary contains the intelligence to know where the data resides on each application file. Each part of the data dictionary is given a descriptive name enabling you to choose the information you require for a report.

Data Dictionary Structure

The data dictionary is comprised of entities. When you create a report, you select data entities that direct IE to the data required for the report. These entities are divided into four levels. These four levels are ITEMS, GROUPS, RECORDS, and DATAFRAMES.

ITEMS

Items are the most elementary level in the data dictionary. Items are usually what you select to print on a report. They are individual fields from the application files. Examples of items are listed below:

| | |
|------------------|------------------------|
| GL-COMPANY-ID | General Ledger Company |
| GL-ACCOUNT-ID | General Ledger Account |
| CV-VENDOR-NUMBER | Vendor Number |
| FA-ASSET-NUMBER | Fixed Asset Number |
| PUR-PO-NUMBER | Purchase Order Number |

Item names can be from 1 to 30 characters. They must begin with a letter. Item names can contain letters, numbers, and hyphens. Spaces are not allowed. Item names should describe the information contained in the entity.

NOTES

GEAC / OSC uses the following naming convention to begin item names delivered on the data dictionary.

| | |
|------------------------------|------|
| Accounts Payable | AP- |
| Accounts Receivable | AR- |
| Budgetary Control | BC- |
| Common Components | CC- |
| Data Communication Interface | DC- |
| Financial Controller | FC- |
| Fixed Assets | FA- |
| General Ledger | GL- |
| Inventory | IN- |
| Purchasing | PUR- |
| Custom - OSC | C- |

Items have specific characteristics such as length, type, column heading, print format, decimal points, or date format. The **type** and **length** are required to define an item. In certain cases, decimal points and date formats are added to augment the definition. Column headings and print formats are optional.

- **Type** defines an item as numeric or alphanumeric. Numeric items can contain only numbers. Only numeric type items are allowed in calculations. Alphanumeric items can contain any character (numbers, letters, or special characters). Alphanumeric items are not allowed in calculations.
- The **length** of an item defines the size of the item. The length will be the total number of characters contained in the field. The maximum length varies by type:

| Type | Description | Sign | Max Length |
|------|-----------------|------|---------------|
| A | Alphanumeric | | 255 Positions |
| N | Display Numeric | +/- | 15 Positions |
| O | Display Numeric | | 15 Positions |
| P | Packed Numeric | +/- | 15 Positions |
| Q | Packed Numeric | | 15 Positions |

- The number of **decimal places** can be specified for numeric types N-Q. The number of decimal places should be included in the total length of an item. The number of decimal places can never be more than the total length of the item.
- If an item contains a date, it is important to define the item with a **date format**. IE has powerful date routines that are very useful. Certain lengths and types are required for specific date formats. The table below shows the different date formats with the proper lengths and types.

NOTES

| Code | Length | Type | Format |
|------|--------|---------|----------|
| D1 | 5 | N O P Q | YYDDD |
| D2 | 6 | N O P Q | MMDDYY |
| D3 | 6 | N O P Q | DDMMYY |
| D4 | 6 | N O P Q | YYMMDD |
| D5 | 7 | N O P Q | YYYYDDD |
| D6 | 8 | A | MM/DD/YY |
| D7 | 8 | A | DD/MM/YY |
| D8 | 8 | A | YY/MM/DD |
| D9 | 8 | N O P Q | MMDDYYYY |
| D10 | 8 | N O P Q | DDMMYYYY |
| D11 | 8 | N O P Q | YYYYMMDD |
| D12 | 8 | N O P Q | YYYYDDMM |

-  If an item is defined in one date format, it is NOT necessary to "convert" it into another format before printing. Dates stored in any format can print in any other format.
-  The **Length**, **Type**, number of **Decimal** places, or **Date** format is known as the **LTD**.

The following are examples of items along with their **LTD**:

```

FC-GL-COMPANY-ID      (4A)
FC-GL-ACCOUNT-ID     (18A)
FC-GL-CENTER-ID      (12A)
FC-GL-ENT-EFFECTIVE-DATE (7PD5)
FC-GL-ENT-DR-CR-AMOUNT (15P2)
    
```

- Column headings** can be created for each item on the data dictionary. Column headings are used in the LIST command as a default heading. These headings can be overridden. Column headings can have up to four separate lines, each line containing as many as 30 characters. Column headings are enclosed with apostrophes ('). Individual lines of a heading are separated by a comma (,). To use an apostrophe within a column heading, enter two apostrophes where one should display.

NOTES

The following are examples of column headings:

| Column Heading | Results |
|-----------------------------|-------------------------------|
| 'COMPANY, ID' | COMPANY ID |
| 'VENDOR, NAME' | VENDOR NAME |
| 'YTD, EXPENDITURE, BALANCE' | YTD EXPENDITURE BALANCE |
| 'VENDOR'S, ADDRESS' | VENDOR'S ADDRESS |

- A default **print format** can also be specified for each item on the data dictionary. A print format can be specified for alphanumeric, numeric, and date data types.

The mapping character for an alphanumeric item is **X**. Special edit characters for alphanumeric items are any character other than X. The following table shows print formats for alphanumeric items.

| Text | LTD | Print Format | Results |
|------------|-----|------------------|----------------|
| LUCY SMITH | 10A | 'XXXXXX' | LUCY S |
| 9199812345 | 10A | '(XXX) XXX-XXXX' | (919) 981-2345 |
| ABCDEFGH | 7A | 'X!X@XTX*VX>' | A!B@CTD*EVF> |
| 121084327 | 9A | 'XXX-XX-XXXX' | 121-08-4327 |

 A **mapping character** is any character that will be replaced by the actual characters in a field. They are similar to a "place holder."

The mapping characters for date items are:

| | |
|------|------------|
| DD | Day |
| MM | Month |
| YY | Year |
| YYYY | Year |
| DDD | Julian Day |

Special edit characters for a date item are / or -. A date stored in any date format can be printed in any other date format by specifying a print format. Examples of print formats for a date item follow:

NOTES

| Date | LTD | Print Format | Print As |
|-------|------|--------------|------------|
| 00120 | 5OD1 | 'YY/DDD' | 00/120 |
| 00120 | 5OD1 | 'MM/DD/YY' | 04/29/00 |
| 00120 | 5OD1 | 'MM/DD/YYYY' | 04/29/2000 |

The mapping characters for a numeric item are 9, Z, and \$. Two special edit characters are a decimal point (period) and a thousands separator (comma). A minus sign, parentheses, or the characters CR or DB can be used to designate a negative value. A plus symbol can be used to designate a positive value. Decimal alignment is maintained based on the placement of the decimal point in the print format. The following are examples of print formats for numeric items.

| Value | LTD | Print Format | Prints As |
|----------|-----|-------------------|-------------|
| 1234567 | 7N2 | '99,999.99' | 12,345.67 |
| 1234567 | 7N2 | '\$99,999.99' | \$12,345.67 |
| 0004567 | 7N2 | '\$\$,\$\$\$.99' | \$45.67 |
| 0004567 | 7N2 | '\$99,999.99' | \$00,045.67 |
| -1234567 | 7N2 | '99,999.99' | 12,345.67 |
| -1234567 | 7N2 | '-99,999.99' | -12,345.67 |
| -1234567 | 7N2 | '99,999.99-' | 12,345.67- |
| -1234567 | 7N2 | '(99,999.99)' | (12,345.67) |
| -1234567 | 7N2 | '99,999.99CR' | 12,345.67CR |
| 0004567 | 7N2 | 'ZZ,ZZZ.99' | 45.67 |

GROUP

Groups are collections of entities, usually related in some manner. A group consists of items or other groups. The following is an example of a group:

```
FC-GL-CO-ACCOUNT-CENTER-GROUP;
CONTAINS;
    FC-GL-COMPANY-ID;
    FC-GL-ACCOUNT-ID;
    FC-GL-CENTER-ID
```

To print the accounting distribution made up of the three items, you could refer to the individual item names or refer to the group name.

NOTES

RECORD

A record is a collection of items and/or groups. It represents a complete set of data that is related. Records are used to create dataframes.

Dataframe

A dataframe is a collection of records. A dataframe is a simple way to view related data. When creating a report, a primary dataframe will be selected. Any item or group included in the selected dataframe is eligible for use in the report. If additional data is needed, secondary dataframes can be accessed. Once a secondary dataframe is referenced in a report, any item that is included in that dataframe is eligible for use in the report.

- There is usually one **primary** dataframe in a report. The primary dataframe is defined as the dataframe found on the **INPUT** command.
- There may be as many **secondary** dataframes as needed. A secondary dataframe is a dataframe associated with the **RELATE** and **READ** commands.

There are two types of dataframes, **structured** and **non-structured**. When a structured dataframe is the primary dataframe, IE selects only the records that are necessary for processing. When a non-structured dataframe is used as the primary dataframe, processing logic is required to select the records containing the elements needed for the report. When selecting a dataframe, choose a structured dataframe as the primary input. A list of the common dataframes for each product is included in the appendix.

-  GEAC delivers multiple dataframes for each product. Each dataframe contains a different view of the data for that product.
-  Custom dataframes also exist for additional views of product and in-house data.

Before selecting a dataframe, collect all the information needed for your report. Review the delivered dataframes to find one dataframe that meets most of your reporting needs. This dataframe should contain most of the items you need for your report. This will be your primary input dataframe. If there are additional items needed, find another dataframe(s) that contain(s) those items. These dataframes will be considered the secondary dataframes.

The System Administration Data Dictionary List (SALF) facility allows you to view a dataframe. Items, groups, records, and other useful information about a dataframe are displayed.

WALKTHROUGH: Using Expert Reporting

NOTES

SCENARIO

You have received a request for a custom report. You are not sure which dataframe to use. Use the System Administration Online facility to view the dataframe.

1. Type **PM** in the ACTION field and press **Enter** to return to the main menu.

```
D B S INFORMATION EXPERT ----- PRIMARY OPTION MENU PM

ENTER SELECTION BELOW:

ER - EXPERT REPORTING
SM - SOURCE MANAGEMENT
JS - JOB PREPARATION & SUBMISSION
RV - REPORT VIEWING
SA - SYSTEM ADMINISTRATION
MR - EXPERT MANAGEMENT REPORTING
EN - END THE SESSION

SELECTION ==> 2
LIBRARY ==> USERXX

ACTION: _____

PRESS:      ENTER Process          PF1 Help    PF3 End Session
```

2. Type **SA** in the SELECTION field and press **Enter** to access the *System Administration* screen.

```
D B S INFORMATION EXPERT ----- SYSTEM ADMINISTRATION SA

ENTER SELECTION BELOW:

LF - DATAFRAME DIRECTORY LIST
LR - SERIES DIRECTORY LIST
LB - LIBRARY MAINTENANCE
SF - SHOW SYSTEM FILE STATUS
AL - SECURITY ACCESS LIST UPDATE
RE - RETURN TO PRIMARY OPTION MENU

SELECTION => 3

ACTION: _____

PRESS:      ENTER Process    PF1 Help    PF3 Return to Primary Option Menu
```

3. Type **LF** in the SELECTION field and press **Enter** to access the *Dataframe Directory List* screen.

NOTES

```

D B S  INFORMATION EXPERT ----- DATAFRAME DIRECTORY LIST  SALF

DATAFRAME  DESCRIPTION OF DATAFRAME          NOTES:
-----
GLACCTPL   ACCOUNT POLICY INFORMATION           To list the contents
GLCOMPPL   COMPANY POLICY INFORMATION             of a Dataframe, enter
GLCURRYR   CURRENT YEAR BALANCES                    an S next to the name
GLFISCAL   FISCAL CALENDAR DEFINITIONS             & press the ENTER key
GLFYPER    FISCAL CALENDAR PERIOD DEFINITIONS
GLRSPDES   CENTER DESCRIPTIONS
GLOPENYR   GENERAL LEDGER OPEN YEARS INFORMATION *

*****
* PS *    *          D A T A F R A M E S          *
*****
PURPO01   PURCHASE ORDER INFO - PRIMARY VIEW
PURPO02   PURCHASE ORDER INFORMATION                *
PURREQ01  REQUISITION INFORMATION - PRIMARY VIEW
PURREQ04  REQUISITION INFORMATION - UTILITY VIEW *
**END**

ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
    
```

4. Press the **F8** key twice until you come to dataframe GLOPENYR.

```

D B S  INFORMATION EXPERT ----- DATAFRAME DIRECTORY LIST  SALF

DATAFRAME  DESCRIPTION OF DATAFRAME          NOTES:
-----
GLACCTPL   ACCOUNT POLICY INFORMATION           To list the contents
GLCOMPPL   COMPANY POLICY INFORMATION             of a Dataframe, enter
GLCURRYR   CURRENT YEAR BALANCES                    an S next to the name
GLFISCAL   FISCAL CALENDAR DEFINITIONS             & press the ENTER key
GLFYPER    FISCAL CALENDAR PERIOD DEFINITIONS
GLRSPDES   CENTER DESCRIPTIONS
5 GLOPENYR   GENERAL LEDGER OPEN YEARS INFORMATION *

*****
* PS *    *          D A T A F R A M E S          *
*****
PURPO01   PURCHASE ORDER INFO - PRIMARY VIEW
PURPO02   PURCHASE ORDER INFORMATION                *
PURREQ01  REQUISITION INFORMATION - PRIMARY VIEW
PURREQ04  REQUISITION INFORMATION - UTILITY VIEW *
**END**

ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
    
```

5. Type **S** before the dataframe GLOPENYR and press **Enter**.

NOTES

```

D B S  INFORMATION EXPERT  ----- LIST CONTENTS OF DATAFRAME GLOPENYR JSALFD

FIND DATA NAME:

ITEM / GROUP NAME                LVL  DISPL  TYPE  FLD  NBR  DEC  DT
                                -----  -----  -----  -----  -----  -----
                                LVL  DISPL  TYPE  SIZE  DIG  POS  CD  OCCS
                                -----  -----  -----  -----  -----  -----
GL-COMPANY-POLICY-RECORD          00    0    A    160
GL-COMPANY-ID                     01    0    A     4
FILLER                             01    4    A    34
GL-RECORD-ID                      01   38    A     1
FILLER                             01   39    A     5
GL-SEQUENTIAL-PROCESS-OPTION      01   44    A     1
GL-AGGREGATES-OPTION              01   45    A     1
GL-NUMBER-OF-DAYS-LATE-ALERT      01   46    O     2     2  0
GL-POSTING-DATE                   01   48    P     4     7  0     5
GL-CURRENT-FISCAL-YEAR            01   52    O     4     4  0
FILLER                             01   56    A     1
GL-NBR-ACTV-SEGMENTS-ALLOWED      01   57    O     1     1  0
GL-NUMBER-OF-PERIODS-OPEN         01   58    O     2     2  0
GL-CURRENT-PERIOD                 01   60    O     2     2  0
GL-NBR-PERIODS-ALLOWED-OPEN      01   62    O     2     2  0

ACTION: _____  1 Help  3 End  4 File Attr  6 Top  7 Pg Bwd  8 Pg Fwd
    
```

GL Company Policy Record

Filler

- LVL – Level 00 designates records. Level 01 are items or groups. A group will have a Level 02 directly under the group name, beginning at the same location.
 - DISPL – Displacement or beginning location of the item relative to 0.
 - TYPE – Type of item.
 - FLD SIZE – Actual field size. If the item is packed, the actual number of bytes it takes to contain the compressed number. For example, the actual field size for a LTD of 15P2 is 8 bytes.
 - NBR DIG – Length or size of the item. This is how large a number or name the field can hold. For example, the number of digits for a LTD of 15P2 is 15.
 - DEC POS – Decimal Positions. This is the number of decimal places. For example, the number of decimal places for a LTD of 15P2 is 2.
 - DT CD – Date Code. If the item is a date, this displays the date code for the internal storage format.
 - OCCS – Occurrences. If the field is a recurring item, this contains the number of occurrences. Recurring items will be discussed in the *Advanced Information Expert* training class.
 - Use the **F8** or **F7** keys to page forward and backward.
6. Press the **F4** key to display the File Attributes on the *Show File Attributes* screen for the dataframe.

NOTES

```
D B S  INFORMATION EXPERT ----- SHOW FILE ATTRIBUTES  JSALFF

DATAFRAME  NAME: GLOPENYR      TYPE: LOGICAL  I/O MODULE: GLLLMP11

ORGANIZED BY:
  GL-COMPANY-ID
  GL-ACCOUNT-ID
  GL-CENTER-ID

ACTION: _____ PF1 Help  PF3 End  PF8 List Records
```

ORGANIZED BY

The ORGANIZED BY gives the natural sequence of the dataframe. The natural sequence is how the data is sorted. This natural sequence establishes control breaks for the data. Control breaks will be discussed in more detail in the *Expert Language Commands and Conditional Processing* sections.

7. Press the **F8** key.

```
D B S  INFORMATION EXPERT ----- LIST RECORDS FOR DATAFRAME GLOPENYR JSALFR

RECORD NAME                               NOTES:
-----
GL-COMPANY-POLICY-RECORD                   To display the attributes of a
GL-ACCOUNT-POLICY-RECORD                   record, enter an S next to the
GL-CENTER-POLICY-RECORD                   name and press the ENTER key.
GL-CURR-YEAR-ENDING-BAL-REC
GL-CURR-YEAR-AGGREGATES-REC
GL-WEEK-1-DAILY-ACTIVITY-REC
GL-WEEK-2-DAILY-ACTIVITY-REC
GL-WEEK-3-DAILY-ACTIVITY-REC
GL-WEEK-4-DAILY-ACTIVITY-REC
GL-WEEK-5-DAILY-ACTIVITY-REC
GL-WEEK-6-DAILY-ACTIVITY-REC
GL-OPEN-PYR-ENDING-BAL-REC
GL-OPEN-PYR-AGGREGATES-REC

ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg  Fwd
```

These are the records that are contained in the dataframe.

NOTES

```
D B S  INFORMATION EXPERT  -----  LIST RECORDS FOR DATAFRAME GLOPENYR JSALFR

RECORD NAME                               NOTES:
-----
GL-COMPANY-POLICY-RECORD                   To display the attributes of a
8 GL-ACCOUNT-POLICY-RECORD                 record, enter an S next to the
GL-CENTER-POLICY-RECORD                   name and press the ENTER key.
GL-CURR-YEAR-ENDING-BAL-REC
GL-CURR-YEAR-AGGREGATES-REC
GL-WEEK-1-DAILY-ACTIVITY-REC
GL-WEEK-2-DAILY-ACTIVITY-REC
GL-WEEK-3-DAILY-ACTIVITY-REC
GL-WEEK-4-DAILY-ACTIVITY-REC
GL-WEEK-5-DAILY-ACTIVITY-REC
GL-WEEK-6-DAILY-ACTIVITY-REC
GL-OPEN-PYR-ENDING-BAL-REC
GL-OPEN-PYR-AGGREGATES-REC

ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

8. Type **S** before the record GL-ACCOUNT-POLICY-RECORD and press **Enter**.

```
D B S  INFORMATION EXPERT  -----  DISPLAY RECORD ATTRIBUTES  JSALFA

DATAFRAME NAME: GLOPENYR
RECORD NAME: GL-ACCOUNT-POLICY-RECORD
LEVEL =  GL-ACCOUNT-ID
IDENTIFIED BY:  GL-RECORD-ID  EQ  'B'  AND  GL-CHARGE-TYPE  EQ  'B'
KEY IS:  GL-COMPANY-ID  'B'  GL-ACCOUNT-ID  ' ' ' ' ' '

ACTION:  9 _____ PF1 Help  PF3 End
```

- LEVEL indicates this dataframe is structured. If LEVEL is omitted from this screen, the dataframe is non-structured.
- IDENTIFIED BY tells a structured dataframe how to identify this record from other records.
- KEY IS provides the items necessary to use this dataframe in a RELATE command. This allows the dataframe to be used as a secondary dataframe. This will be discussed in the chapter *Relating Additional Information*.

9. Type **PM** in the ACTION field and press **Enter** to return to the *Primary Menu* screen.

NOTES

Report Series

A report series is a series of statements that define a report or group of reports derived from the same primary dataframe. A report series extracts the requested data, can sort the extracted data and then can generate a report. A report series can also be used to create files in addition to reports.

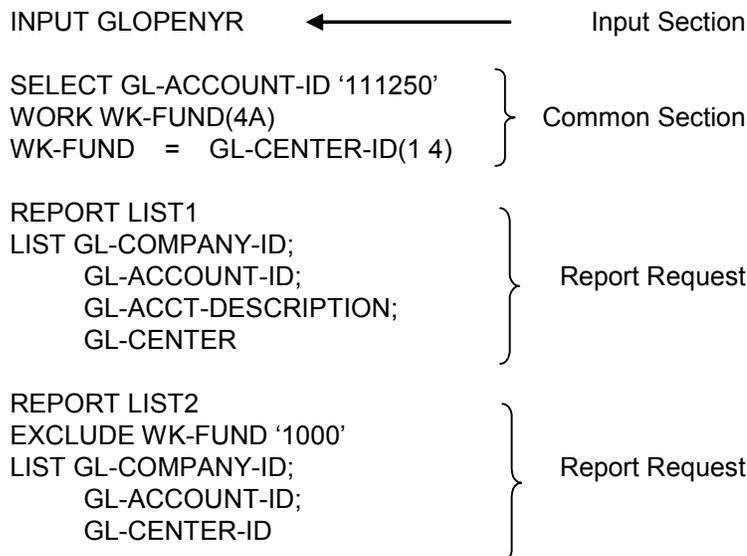
A report series is created using the Expert Language. Expert Language commands are free form in columns 1 through 72. An Expert Language statement can be continued to another line by using a semi-colon (;). Comments can be inserted into a report series by placing an asterisk (*) in column 1. Blank lines can be used to separate commands and for readability.

A report series is divided into three sections, INPUT, COMMON, and REPORT REQUEST.

- The **Input** section defines the primary dataframe used in the report series. It is normally one IE command – INPUT or MATCH. (The MATCH command will be covered in the *Advanced Information Expert Reporting* training class.)
- The **Common** section defines the part of the report series beginning after the Input section and ending at the first Report request section. The Report request section is defined by a REPORT command. The Common section defines values, selection criteria, and procedures that are shared by all reports in the report series. The common section is optional.
- The **Report request** section defines a specific report. The Report request section begins at the first REPORT command and ends at the next REPORT command or the end of the report series. You can have as many Report request sections as you need.
 -  If you have multiple reports both using the same primary input dataframe, review the criteria to see if it makes sense to combine these into one report series. It is more efficient to run one report series with two report requests than to run two report series.

The following is an example of a report series with two report requests:

NOTES



Life Cycle of a Report Series

When you use the INPUT command, IE handles reading the application files to retrieve the data. IE retrieves a record and applies any selection criteria to determine if the record is needed by the report series. If the record is needed, the Expert Language commands in the Common Section are executed.

IE then determines if the record is needed by any of the report requests. The first report request is evaluated. If the record is needed by the report request, items from the primary dataframe and work items created in the common section that are used in the report request are extracted. All subsequent report requests are processed in the same manner. This is called the "Extract Phase."

Once all the records have been extracted, IE begins to process the report requests. If there is a sort requested, IE reorders the records based on the sort criteria. Any logic or calculations in the report request are performed. Then the first report is generated. All other reports are processed in the same manner.

Preparing a Report Series

Before a report series can be executed to generate a report, it must be prepared. Preparation is the process of editing the Expert Language commands for proper syntax and converting the commands into "machine language." When you run a report series, you actually execute the machine language. The machine language resides on the Report Request library. You can use the *Job Submission (JS)* screen RU (Run a report series) or RT (Run Time Options) to execute the machine language. A report series can also be executed by submitting a RUN STATEMENTS type member from the *Source Management (SM)* screen LS (List members).

NOTES

To remove a prepared report series from the Report Request library, use the *System Administration (SA)* screen LR (List Report Requests).

Whenever a report series is modified, it must be re-prepared.

EXERCISES

Assign a correct LTD for the following items:

1. 'MM/DD/YY' _____
2. 'YYYYDDD' _____
3. '12345.56' _____
4. '-1234.32' _____
5. 'NORTH' _____

Are the following formats valid? If not, explain why they are invalid.

1. 6P7 _____
2. 16P2 _____
3. 3N3 _____
4. 7PD2 _____
5. 8AD5 _____

Are the following column headings valid? If not, explain why they are invalid.

1. 'REMIT TO,ADDRESS'

2. 'ACCOUNT'

3. 'FINAL,PERIOD,TO,DATE,BALANCE'

4. '****\$\$\$(((

Are the following numeric print formats valid? If not, explain why they are invalid.

NOTES

1. '-99,999.99CR' _____
2. '\$ZZZZ,ZZZ.99' _____
3. '\$\$\$,\$\$\$.99-' _____
4. '(-999,999CR)' _____

Alphanumeric Print Formats:

5. 'ZZ,ZZZ.XX' _____
6. 'XXX-XXX-XXX' _____
7. '(-XXX.XXCR)' _____

ACTIVITY

SCENARIO

You will be asked to use the dataframe GLCURRYR in the next section. Using the *System Administration List* dataframe screens, answer the questions below.

1. What are the records that make up the GLCURRYR dataframe?
 - _____
 - _____
 - _____
 - _____
 - _____
 - _____

2. What is the natural sequence of the dataframe (ORGANIZED BY)?
 - _____
 - _____
 - _____

NOTES

3. Is the dataframe structured or non-structured?
 - _____

4. What is the Length for the item GL-POSTING-DATE? What is the date format?
 - _____
 - _____

5. What is the length of the item GL-PERIOD-1-BALANCE? How many decimal places does this item have?
 - _____
 - _____

6. What are the items that are included in the group GL-KEY?
 - _____
 - _____
 - _____

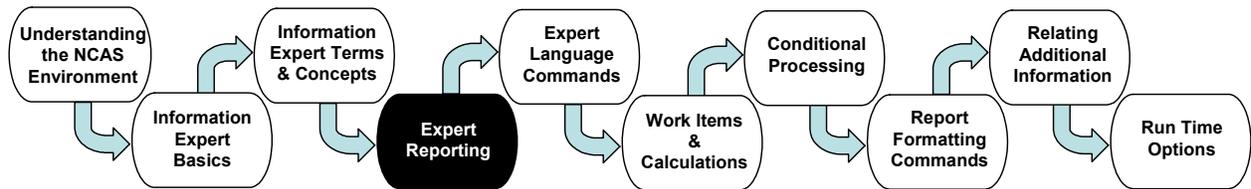
7. What is the key for the GL-COMPANY-RECORD?
 - _____

SUMMARY

You have just learned some of the basic terms and concepts that will be useful in creating reports. You have learned about the Data Dictionary and four elements that reside on the dictionary – Items, Groups, Records, and Dataframes. You have been introduced to the LTD, column headings, and print formats. You know how to access a dataframe through the *System Administration List* dataframe screens and view items, records, and the file attributes.

You have also learned what a report series is and the different sections of a report series – Input Section, Common Section, and Report Request.

Creating a Report with Expert Reporting



Overview

The previous section, *Information Expert Terms and Concepts*, introduced data dictionary terms and report series concepts. This section explains the process of creating a report series using Expert Reporting. Expert Reporting is also known as “10 Step.” The user will create a report series, submit the report to prepare and run the report.

Expert Reporting

Expert Reporting is a facility in the Online Support Facility. Expert Reporting steps through a series of screens requesting selections. Expert Reporting will translate the selections into Expert Language commands creating a report series. Expert Reporting can be used to create, modify, or execute a report series.

Expert Reporting will store the report series in your source management library. A report series created through Expert Reporting can be modified and maintained in Source Management. If a report series is created by Expert Reporting, and then updated in Source Management, it cannot be used again through the Expert Reporting facility. Future maintenance must be made using Source Management.

WALKTHROUGH: Using Expert Reporting

SCENARIO

You have received a request for a custom report. The requester would like a report containing the first quarter totals for the expenditure accounting distributions for your company. Order this report by company, account, and center. The body of the report should contain the accounting distribution, account description, periods 1-3, and a quarterly total. You will also print totals by account and company.

1. Type **PM** in the ACTION field and press to return to the *Primary Option Menu* screen.

NOTES

```
D B S INFORMATION EXPERT ----- PRIMARY OPTION MENU PM

ENTER SELECTION BELOW:

ER - EXPERT REPORTING
SM - SOURCE MANAGEMENT
JS - JOB PREPARATION & SUBMISSION
RV - REPORT VIEWING
SA - SYSTEM ADMINISTRATION
MR - EXPERT MANAGEMENT REPORTING
EN - END THE SESSION

SELECTION ==> 2
LIBRARY ==> USERXX

ACTION: _____

PRESS:      ENTER Process          PF1 Help    PF3 End Session
```

2. Type **ER** in the SELECTION field and press **Enter** to access the *Expert Reporting* screen.

```
D B S INFORMATION EXPERT --- BUILD / CHANGE REPORTS ER

This function will take you through a step by step process to build a
report or series of reports (Report Series). Listed below are the steps:

1 - Give the Report Series a Name
2 - Select a Dataframe
3 - Give your Report a Name
4 - Define Selection/Exclusion Criteria
5 - Define how report is to be sequenced
6 - Define any Calculations required
7 - Define Page Headings
8 - Select Data to be displayed
9 - Define how Data is to be totalled
10 - Repeat steps 3-9 for the Next Report

Your Reports will be stored in Library USERXX

PRESS:      ENTER Begin    PF1 Help    PF3 Return to Primary Option Menu

ACTION _____
```

3. This screen now displays the “10 Step” used in Expert Reporting.
 **Fastpath:** Access the *ER* screen by typing OSF.ER in the ==>field on the *MSA.MENU* screen.

NOTES

```
D B S  INFORMATION EXPERT  ---  BUILD / CHANGE REPORTS  ER

This function will take you through a step by step process to build a
report or series of reports (Report Series). Listed below are the steps:

1 - Give the Report Series a Name
2 - Select a Dataframe
3 - Give your Report a Name
4 - Define Selection/Exclusion Criteria
5 - Define how report is to be sequenced
6 - Define any Calculations required
7 - Define Page Headings
8 - Select Data to be displayed
9 - Define how Data is to be totalled
10 - Repeat steps 3-9 for the Next Report

Your Reports will be stored in Library USERXX )

PRESS:      ENTER Begin      PF1 Help      PF3 Return to Primary Option Menu

ACTION _____
```

4. Press  to begin your report series.



If you have access to other libraries, you can change the library on this screen. The library will be the location where the report series is stored.

```
JSBESN

STEP 1 -- ENTER A NAME FOR YOUR REPORT SERIES: 5

PRESS:      ENTER Continue      PF1 Help      PF3 Previous Step
```

5. **STEP 1.** Type **AXX-FIRST-QUARTER-REPORT** as the report series name and press . **XX** is the agency identifier that can be found at your workstation.

A report series name must begin with a letter. It can be from 1 to 30 characters long. When creating a name for your report series, make it descriptive so you will know what kind of report is being generated.

In practice, GEAC reports begin with the product designator. NCAS custom reports normally begin with C-. Agencies should use the designation AXX- where XX is their agency number to start their reports.

NOTES

```

STEP 2 -- SELECT A DATAFRAME FOR YOUR REPORTS                                     JSBSDV

DATAFRAME  DESCRIPTION OF DATAFRAME                                     NOTES:
-----
GLACCTPL   ACCOUNT POLICY INFORMATION                                     Place S or L beside
GLCOMPPL   COMPANY POLICY INFORMATION                                     desired Dataframe &
6 GLCURRYR  CURRENT YEAR BALANCES                                           press the ENTER key
GLFISCAL   FISCAL CALENDAR DEFINITIONS
GLFYPER    FISCAL CALENDAR PERIOD DEFINITIONS                               S - Use Dataframe
GLMISDES   MISCELLANEOUS DESCRIPTIONS                                       L - List Contents
GLOPENYR   GENERAL LEDGER OPEN YEARS INFORMATION *
*****
* PS *     *           D A T A F R A M E S           *           Press the PF3 key to
*****     *           *           *           *           cancel this function
PURPO01    PURCHASE ORDER INFO - PRIMARY VIEW                               & return to the pre-
PURPO02    PURCHASE ORDER INFORMATION *                                     vious step.
PURREQ01   REQUISITION INFORMATION - PRIMARY VIEW
PURREQ04   REQUISITION INFORMATION - UTILITY VIEW *
**END**

PRESS:     ENTER Process   PF1 Help   PF6 Top   PF7 Page Bwd   PF8 Page Fwd
ACTION _____
    
```

- STEP 2.** The dataframe to select is **GLCURRYR**. Press the **F8** key to page forward to find this dataframe. Type **S** beside the dataframe and press **Enter**.

Non-structured dataframes are designated by an * at the end of the description. These dataframes are not suitable for use in Expert Reporting.

If you are unsure of the contents of a dataframe, type an **L** beside the dataframe name. This will list the contents.

Use the **F8** and **F7** keys to page forward and backward.

Recurring fields are not displayed and cannot be used in Expert Reporting.

```

JSBERF

STEP 3A -- ENTER THE NAME OF YOUR FIRST REPORT: 7

PRESS:     ENTER Continue   PF1 Help   PF3 Previous Step
ACTION _____
    
```

- STEP 3A.** Type **QTRRPT** as the report name. Press **Enter**.

A report name can be from 1 to 8 characters and must begin with a letter.

NOTES

```
STEP 3B -- SET THE WIDTH OF YOUR REPORT: 132 8 JSBWID

NOTE: The width must be greater than zero and less than 255.

ACTION _____ PRESS: ENTER Continue PF1 Help PF3 Previous Step
```

8. **STEP 3B.** Type **160** over 132 in the SET THE WIDTH OF YOUR REPORT field as the report width and press **Enter**.

The report width will default to 132 characters. Reports can be produced with a width from 1 to 255 characters. For reports larger than 132 characters, special JCL may be required depending on the printer used to print the report.

```
JSBPSL

STEP 4A - DEFINE SELECTION CRITERIA FOR REPORT QTRRPT

This step allows you to choose items whose values will be used to select a
portion of the data base to be processed by this report.

Once you have chosen the items, you will be presented with a screen for each
item. On these screens you enter values to be used to select specific records
for this report.

PRESS: ENTER Continue PF1 Help PF3 Previous Step PF4 Skip This Step
ACTION _____
```

9. **STEP 4A.** Press **Enter**.

Selection criteria is used to limit the data processed by the report. Adding selection criteria to a report is very important. At the very least, selection criteria should be defined to include data for only your agency. Without selection criteria, the report will include data for all agencies. This could create a very large report and be very expensive.

NOTES

```

JSBSDN
STEP 4A -- PLACE AN S BESIDE THE ITEMS TO BE USED TO SELECT RECORDS

10 GL-COMPANY-ID          10 GL-ACCOUNT-ID
   GL-CENTER-ID          GL-SEGMENT-ID
   GL-POSTING-DATE       GL-CURRENT-FISCAL-YEAR
   GL-NUMBER-OF-PERIODS-OPEN GL-CURRENT-PERIOD
   GL-NBR-PERIODS-ALLOWED-OPEN GL-YEARS-OF-HISTORY
   GL-CLOSING-ACCOUNT-ID  GL-CLOSING-CENTER-ID
   GL-ACCT-DESCRIPTION    GL-CONTROL-ACCOUNT-ID
   GL-ACCT-TYPE           GL-CLASS-CODE
   GL-GROUP-CODE          GL-NORMAL-SIGN-CODE
   GL-CNTR-STATUS-CODE    GL-ACTIVATE-DATE
   GL-INACTIVATE-DATE     GL-LAST-ACTIVITY-DATE
   GL-INTER-LVL-1-RPT-CENTER-ID GL-INTER-LVL-2-RPT-CENTER-ID
   GL-INTER-LVL-3-RPT-CENTER-ID GL-CURRENT-PERIOD-BALANCE
   GL-CURRENT-PERIOD-ACTIVITY GL-CURRENT-PERIOD-AVERAGE
   GL-PRIOR-PERIOD-BALANCE  GL-PRIOR-PERIOD-ACTIVITY
   GL-PRIOR-PERIOD-AVERAGE GL-PERIOD-1-BALANCE
   GL-PERIOD-2-BALANCE     GL-PERIOD-3-BALANCE
   GL-PERIOD-4-BALANCE     GL-PERIOD-5-BALANCE
   GL-PERIOD-6-BALANCE     GL-PERIOD-7-BALANCE
   GL-PERIOD-8-BALANCE     GL-PERIOD-9-BALANCE
ACTION _____ PRESS ENTER Return PF1 Help PF6 Top PF7 Pg Bwd PF8 Pg Fwd
    
```

10. **STEP 4A.** Type **S** beside the item **GL-COMPANY-ID**. Type **S** beside the item **GL-ACCOUNT-ID**. Press **[Enter]**.

All items eligible for selection criteria are listed on the screen. Select as many items as necessary to meet the requirements of your report. Use the **[F8]** and **[F7]** keys to page forward and backward to review all items available.

```

STEP 4A -- DEFINE SELECTION CRITERIA FOR REPORT QTRRPT

ENTER SELECTION VALUES BELOW FOR GL-COMPANY-ID

FROM VALUE      THRU VALUE
11  _           _____
____            _____
____            _____
____            _____
____            _____
____            _____
____            _____
____            _____
____            _____
____            _____
____            _____
____            _____
____            _____
____            _____
____            _____

PRESS:  ENTER Continue  PF1 Help  PF3 Previous Step  PF5 Select Data
ACTION _____
    
```

11. **STEP 4A.** Type **XX01** in the FROM VALUE field and press **[Enter]**. XX01 is the company identifier that has been assigned to your workstation.

NOTES

```
JSBORD

STEP 5 -- LISTED BELOW IS THE ORDER FOR REPORT QTRRPT

1 #REPORTID                Renumber to change the order of the list.
2 GL-COMPANY-ID
3 GL-ACCOUNT-ID            To remove an item from the list, blank
4 GL-CENTER-ID            out the number next to the item.

                            To select additional data, press the
                            PF5 key.

                            Press the ENTER key to process changes
                            or continue to the next step.

PRESS:   ENTER Process   PF1 Help   PF3 Previous Step

ACTION _____
```

16. STEP 5. Press .

 This section controls the order of the data on the report. This is the way the information will be sorted. The fields that are sorted establish “levels of control”.

To change the order, simply change the numbers in front of the item to the order desired.

To add additional items to the sort, press the key. This will display other items in the dataframe. Type **S** beside the item you wish to add to the sort list. Re-order the numbers as desired.

To remove an item from the sort list, remove the number in front of the name. Press .

```
JSBPAS

STEP 6 -- DEFINE CALCULATIONS FOR REPORT ACCTLST

This step allows you to define calculations for the report. A selection list
is presented showing all numeric & date fields. Once you have chosen the items
to be used, a screen is presented letting you define your calculations.

PRESS:   ENTER Continue   PF1 Help   PF3 Previous Step   PF4 Skip This Step
ACTION _____
```

17. STEP 6. Press .

NOTES

```

JSBSDN
STEP 6 -- PLACE AN S BESIDE THE ITEMS TO BE USED IN CALCULATIONS

GL-POSTING-DATE
GL-NUMBER-OF-PERIODS-OPEN
GL-NBR-PERIODS-ALLOWED-OPEN
GL-CLASS-CODE
GL-NORMAL-SIGN-CODE
GL-INACTIVATE-DATE
GL-CURRENT-PERIOD-BALANCE
GL-CURRENT-PERIOD-AVERAGE
GL-PRIOR-PERIOD-ACTIVITY
GL-CURRENT-FISCAL-YEAR
GL-CURRENT-PERIOD
GL-YEARS-OF-HISTORY
GL-GROUP-CODE
GL-ACTIVATE-DATE
GL-LAST-ACTIVITY-DATE
GL-CURRENT-PERIOD-ACTIVITY
GL-PRIOR-PERIOD-BALANCE
GL-PRIOR-PERIOD-AVERAGE
18 GL-PERIOD-1-BALANCE
18 GL-PERIOD-2-BALANCE
18 GL-PERIOD-3-BALANCE
GL-PERIOD-4-BALANCE
GL-PERIOD-5-BALANCE
GL-PERIOD-6-BALANCE
GL-PERIOD-7-BALANCE
GL-PERIOD-8-BALANCE
GL-PERIOD-9-BALANCE
GL-PERIOD-10-BALANCE
GL-PERIOD-11-BALANCE
GL-PERIOD-12-BALANCE
GL-PERIOD-13-BALANCE
GL-CURR-YEAR-LTD-BALANCE
GL-PERIOD-1-ACTIVITY
GL-PERIOD-2-ACTIVITY
GL-PERIOD-3-ACTIVITY
GL-PERIOD-4-ACTIVITY
GL-PERIOD-5-ACTIVITY
GL-PERIOD-6-ACTIVITY
GL-PERIOD-7-ACTIVITY
GL-PERIOD-8-ACTIVITY
ACTION _____ PRESS ENTER Return PF1 Help PF6 Top PF7 Pg Bwd PF8 Pg Fwd
    
```

18. **STEP 6.** Type **S** beside the items **GL-PERIOD-1-BALANCE**, **GL-PERIOD-2-BALANCE**, and **GL-PERIOD-3-BALANCE** and press **Enter**.

```

STEP 6 -- DEFINE CALCULATIONS FOR REPORT QTRRPT
JSBCAL

Build the calculations using letters assigned to the items below.

OP1      (+, -, *, /)  OP2      RESULT  OPTIONAL RESULT NAME
19      19      19      =  R1  ( 19 )
19      19      19      =  R2  ( 19 )
—      —      —      =  R3  ( )
—      —      —      =  R4  ( )
—      —      —      =  R5  ( )
—      —      —      =  R6  ( )

Numeric values may be assigned to any free letter.

A: GL-PERIOD-1-BALANCE      B: GL-PERIOD-2-BALANCE
C: GL-PERIOD-3-BALANCE      D: _____
E: _____                F: _____
G: _____                H: _____
I: _____                J: _____
K: _____                L: _____

PRESS:  ENTER Process  PF1 Help  PF3 Previous Step  PF5 Select Data
ACTION _____
    
```

19. **STEP 6.** Type **A** under OP1 on the first line.
- Type **+** on the first line under the arithmetic symbols.
 - Type **B** under OP2 on the first line.
 - Type **PERIOD-1-and-2** on the first line under OPTIONAL RESULT NAME.
 - Type **R1** on the second line under OP1.
 - Type **+** on the second line under the arithmetic symbols.

- Type **C** on the second line under OP2.
- Type **QUARTERLY-BALANCE** on line 2 under OPTIONAL RESULT NAME and press **Enter**.

NOTES

Calculations are performed on any numeric or date item types. Only items eligible for calculations are displayed. Selected items from the previous screen are assigned to a letter at the bottom of the screen.

Any “free” letter may be used for constants in a calculation.

To create a calculation, enter a letter as the first operand. Enter the operator - + (add), - (subtract), * (multiply), or / (divide). To complete the calculation, enter another letter as the second operand.

The results are placed in fields named R1 – R6. The result field should be renamed. The optional field name, with the hyphens removed, will be used as the column heading on a report. Results from previous calculations can be used in subsequent calculations.

JSBPGH

STEP 7 -- BUILD PAGE HEADINGS FOR REPORT QTRRPT

DATE FOR THE REPORT: __ / __ / __ (Default is Today's Date)

FIRST HEADING LINE: **20** _____

SECOND HEADING LINE: **20** _____

PRESS: ENTER Process PF1 Help PF3 Previous Step

ACTION _____

20. **STEP 7.** Type **FIRST QUARTER EXPENDITURE BALANCES** in the field after the FIRST LEADING LINE. Type **FOR AGENCY XX** (where XX is your assigned training class agency identifier) in the field labeled SECOND HEADING LINE and press **Enter**.

Today's date will default onto the page heading. You can set a particular date by entering it in the fields provided.

Expert Reporting allows for two optional heading lines.

NOTES

```
JSBSDN
STEP 8 -- PLACE AN S BESIDE THE ITEMS TO BE PRINTED ON THIS REPORT

#REPORTID
21 QUARTERLY-BALANCE
21 GL-ACCOUNT-ID
GL-SEGMENT-ID
GL-CURRENT-FISCAL-YEAR
GL-CURRENT-PERIOD
GL-YEARS-OF-HISTORY

GL-CLOSING-CENTER-ID
GL-CONTROL-ACCOUNT-ID
GL-CLASS-CODE
GL-NORMAL-SIGN-CODE
GL-ACTIVATE-DATE
GL-LAST-ACTIVITY-DATE
GL-INTER-LVL-2-RPT-CENTER-ID
GL-CURRENT-PERIOD-BALANCE
GL-CURRENT-PERIOD-AVERAGE
GL-PRIOR-PERIOD-ACTIVITY
21 GL-PERIOD-1-BALANCE
21 GL-PERIOD-3-BALANCE
GL-PERIOD-5-BALANCE

PERIOD-1-AND-2
21 GL-COMPANY-ID
21 GL-CENTER-ID
GL-POSTING-DATE
GL-NUMBER-OF-PERIODS-OPEN
GL-NBR-PERIODS-ALLOWED-OPEN
GL-CLOSING-ACCOUNT-ID
21 GL-ACCT-DESCRIPTION
GL-ACCT-TYPE
GL-GROUP-CODE
GL-CNTR-STATUS-CODE
GL-INACTIVATE-DATE
GL-INTER-LVL-1-RPT-CENTER-ID
GL-INTER-LVL-3-RPT-CENTER-ID
GL-CURRENT-PERIOD-ACTIVITY
GL-PRIOR-PERIOD-BALANCE
GL-PRIOR-PERIOD-AVERAGE
21 GL-PERIOD-2-BALANCE
GL-PERIOD-4-BALANCE
GL-PERIOD-6-BALANCE

ACTION _____ PRESS ENTER Return PF1 Help PF6 Top PF7 Pg Bwd PF8 Pg Fwd
```

21. **STEP 8.** Type **S** beside the following items and press **[Enter]**:

- QUARTERLY-BALANCE**
- GL-COMPANY-ID**
- GL-ACCOUNT-ID**
- GL-CENTER-ID**
- GL-ACCT-DESCRIPTION**
- GL-PERIOD-1-BALANCE**
- GL-PERIOD-2-BALANCE**
- GL-PERIOD-3-BALANCE**

Use the **[F8]** and **[F7]** keys to page forward and backward to display more items available to print on the report.

Items displayed are available to print on a report. Items created in a calculation are also available.

NOTES

```
STEP 8 -- POSITION ITEMS TO BE PRINTED ON REPORT QTRRPT          JSBLST

Items listed below will be printed from left to right

22 QUARTERLY-BALANCE           Renumber to change the order of the
22 GL-COMPANY-ID               list.
22 GL-ACCOUNT-ID
22 GL-CENTER-ID               To remove an item, blank out the number
22 GL-ACCT-DESCRIPTION         next to the name of the item.
22 GL-PERIOD-1-BALANCE
22 GL-PERIOD-2-BALANCE         To select additional data, press the
22 GL-PERIOD-3-BALANCE         PF5 key.

                                Press the ENTER key to process changes
                                or to continue to the next step

PRESS:  ENTER Process   PF1 Help   PF3 Previous Step   PF5 Select Data
ACTION _____
```

22. **STEP 8.** Type over the numbers, changing the numbers to 8 1 2 3 4 5 6 7 and press **Enter**. The order should change, moving the QUARTERLY-BALANCE item to the bottom. Press **Enter**.

Type the numbers in front of the items in the order you want them to appear on the page of the report – from left to right.

If you have missed an item that you need on the report, press the **F5** key. This will display all the items available for reporting. Type **S** in front of the item name to select additional items.

If there are items selected by mistake, delete the number in front of the item name.

NOTES

```
STEP 9 -- SELECT ITEMS TO BE TOTALED FOR REPORT QTRRPT                JSBTOT

GL-COMPANY-ID                    Enter an S beside items to be totaled.
GL-ACCOUNT-ID                    Press the ENTER key to process selections
GL-CENTER-ID                     & continue to the next step.
GL-ACCT-DESCRIPTION

23 GL-PERIOD-1-BALANCE
23 GL-PERIOD-2-BALANCE
23 GL-PERIOD-3-BALANCE
23 QUARTERLY-BALANCE

PRESS:      ENTER Process      PF1 Help      PF3 Previous Step
ACTION _____
```

23. **STEP 9.** Type **S** in front of the items and press **Enter**:

GL-PERIOD-1-BALANCE
GL-PERIOD-2-BALANCE
GL-PERIOD-3-BALANCE
QUARTERLY-BALANCE

When a numeric item is totaled, the values are accumulated to derive the total.

When an alphanumeric item is totaled, the items are counted.

```
STEP 9 -- SELECT LEVELS FOR THE TOTALS ON REPORT QTRRPT                JSBTBY

TOTAL FOR REPORT
24 GL-COMPANY-ID                    Enter an S beside the levels at
24 GL-ACCOUNT-ID                    which totals are to be taken.
GL-CENTER-ID                       Press the ENTER key to process
                                      selections & continue to the next
                                      step.

PRESS:      ENTER Process      PF1 Help      PF3 Previous Step
ACTION _____
```

24. **STEP 9.** Type **S** beside the item **GL-COMPANY-ID** and **GL-ACCOUNT-ID** and press **Enter**.

This section sets the "control breaks" where totals are created. A control break is a change in value of an item that was sorted.

STEP 5 sets the items to be sorted, establishing the control breaks.

NOTES

```
JSBNXR
STEP 10 -- REPORT QTRRPT COMPLETED FOR SERIES AXX-FIRST-QUARTER-REPORT

ENTER SELECTION BELOW:

1 - Save this Series & Exit
2 - Save this Series & Return
3 - Review/Change this Series
4 - Build another Report
5 - View the IE Commands
6 - Prepare this Series
7 - Prepare,Run and Print Reports
8 - Prepare,Run and View Reports
9 - Cancel this Function & Exit

====> 25

PRESS:  ENTER Process          PF1 Help   PF3 Previous Step
ACTION _____
```

25. **STEP 10.** Type **5** after the **====>** field and press **Enter**.

```
STEP 10 -- COMMANDS FOR REPORT SERIES AXX-FIRST-QUARTER-REPORT          JSBBRP
-----1-----2-----3-----4-----5-----6-----7--
***** ***** TOP OF DATA *****
000100 INPUT          GLCURRYR
000200
000300 REPORT        QTRRPT   WIDTH      160
000400
000500 SELECT
000600   GL-COMPANY-ID
000700   '2201'
000800
000900 SELECT
001000   GL-ACCOUNT-ID
001100   ( '5300'
001200   '53999999999' )
001300
001400 EXCLUDE
001500   GL-CENTER-ID
001600   '999999999999'
001700
001800 PERIOD-1-AND-2          (15P02) =
001900   GL-PERIOD-1-BALANCE          + GL-PERIOD-2-BALANCE
ACTION _____ PRESS: ENTER End PF1 Help PF6 Top PF7 Pg Bwd PF8 Pg Fwd
```

26. Press the **F8** key.

NOTES

```
STEP 10 -- COMMANDS FOR REPORT SERIES AXX-FIRST-QUARTER-REPORT      JSBBRP
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7--
001900      GL-PERIOD-1-BALANCE                + GL-PERIOD-2-BALANCE
002000
002100 QUARTERLY-BALANCE                (15P02) =                               ;
002200      PERIOD-1-AND-2                + GL-PERIOD-3-BALANCE
002300
002400 DEFINE          PAGEHEADINGS                               ;
002500      'DATE: ' #SYSDATE                               ;
002600      'FIRST QUARTER EXPENDITURE BALANCES'             ;
002700      'PAGE #PAGE'                                     ;
002800 NEXT LINE                                                 ;
002900      'FOR AGENCY XX'                                   ;
003000
003100 LIST                                                         ;
003200      GL-COMPANY-ID                                     ;
003300      GL-ACCOUNT-ID                                     ;
003400      GL-CENTER-ID                                     ;
003500      GL-ACCT-DESCRIPTION                               ;
003600      GL-PERIOD-1-BALANCE                               ;
003700      GL-PERIOD-2-BALANCE                               ;
003800      GL-PERIOD-3-BALANCE                               ;
ACTION _____ PRESS: ENTER End  PF1 Help  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

27. Press the **F8** key.

```
STEP 10 -- COMMANDS FOR REPORT SERIES AXX-FIRST-QUARTER-REPORT      JSBBRP
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7--
003800      GL-PERIOD-3-BALANCE                               ;
003900      QUARTERLY-BALANCE                               ;
004000 TOTAL                                                         ;
004100      GL-PERIOD-1-BALANCE                               ;
004200      GL-PERIOD-2-BALANCE                               ;
004300      GL-PERIOD-3-BALANCE                               ;
004400      QUARTERLY-BALANCE                               ;
004500 BY                                                         ;
004600      GL-COMPANY-ID                                     ;
004700      GL-ACCOUNT-ID                                     ;
004800
***** ***** BOTTOM OF DATA *****
ACTION _____ PRESS: ENTER End  PF1 Help  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

28. Press **Enter**.

NOTES

```
JSBNXR

STEP 10 -- REPORT QTRRPT COMPLETED FOR SERIES AXX-FIRST-QUARTER-REPORT

ENTER SELECTION BELOW:

1 - Save this Series & Exit
2 - Save this Series & Return
3 - Review/Change this Series
4 - Build another Report
5 - View the IE Commands
6 - Prepare this Series
7 - Prepare,Run and Print Reports
8 - Prepare,Run and View Reports
9 - Cancel this Function & Exit

===> 29

PRESS:   ENTER Process           PF1 Help   PF3 Previous Step
ACTION  _____
```

29. **STEP 10.** Type **8** after the **==>** field and press **Enter**.

```
D B S INFORMATION EXPERT ----- JOB SUBMISSION JSJSUB

JOB "FAAIERUN" HAS BEEN SUBMITTED
TO RUN "AXX-FIRST-QUARTER-REPORT"

Press the ENTER key to continue
```

30. Press **Enter**.

```
JSBLDI

STEP 1 -- LISTED BELOW ARE EXISTING REPORT SERIES

REPORT SERIES NAME          NOTES:
-----
AXX-FIRST-QUARTER-REPORT    To change an existing Report Series
**** END OF DIRECTORY ****   place an S next to the Series name
                               & press the ENTER key.

                               To create a new Report Series press
                               the ENTER key. You will be prompted
                               for a name.

PRESS:   PF1 Help   PF3 Previous Step   PF6 Top   PF7 Pg Bwd   PF8 Pg Fwd
ACTION  31 _____
```

31. Type **RVLS** in the ACTION field and press **Enter**.

NOTES

```

D B S  INFORMATION EXPERT  -----  REPORT VIEWING DIRECTORY  RVL5
LIBRARY: FINANXX                NUMBER OF MEMBERS: 0001  MAXIMUM: 0225
FIND: _____
SERIES NAME                      TYPE                LAST UPDATE INFO  LAST VIEWED
-----
32  AXX-FIRST-QUARTER-REPORT      RPT SERIES        05/15/00  MSAUSER  05/16/00
    ****  END OF DIRECTORY  ****

Enter S to view or P to print member.  Key over library to change libraries.
ACTION: _____  PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
    
```

32. Type **S** beside the report series AXX-FIRST-QUARTER-REPORT (XX is the agency assigned to you for this class). Press .



When performing step 32, wait until the report series is complete. You may see **INCOMPLETE** under the LAST VIEWED column. Or you may receive the message: **REPORT/PRINT SERIES BEING ADDED – TRY AGAIN LATER.** Wait and try again.

```

D B S  INFORMATION EXPERT  -----  REPORT REQUEST DIRECTORY  JSVRDI

REPORT SERIES:  AXX-FIRST-QUARTER-REPORT      LIBRARY:  USERXX
DATE PREPARED:  05/15/00   15:59:54          OWNER:    MSAUSER
DATE RUN:       05/15/00   15:59:55          NUMBER REPORTS: 001

REPORT      WIDTH  PAGES      NOTES:
-----
33  QTRRPT    150    23          Place an S beside the report to
    **END**                                     be viewed & press the ENTER key.

                                                Place a P beside the report to
                                                be printed & press the ENTER key.

ACTION: _____  PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
    
```

33. Type **S** beside the report request QTRRPT and press .

NOTES

```

D B S INFORMATION EXPERT ----- VIEW A REPORT JSVRPS
SERIES: AXX-FIRST-QUARTER-REPORT REPORT: QTRRPT PAGE 00001 LINE 001
COMMAND INPUT ==> COLUMNS 34 079
-----1-----2-----3-----4-----5-----6-----7-----
DATE: 02/20/01 FIRST QUARTER EXP
FOR AG

CO
ID ACCOUNT ID CENTER ID ACCOUNT DESCRIPTION PERIOD
-----
2201 531212 2100 SPA-REG SALARIES-RECPT
2200 SPA-REG SALARIES-RECPT
=====

531322 2100 CONTR EMPL PER IRS-RECPT
2200 CONTR EMPL PER IRS-RECPT
=====

531462 2100 EPA&SPA-LONGVTY PAY-REC
2200 EPA&SPA-LONGVTY PAY-REC
=====
ACTION: PF: 3 End 4 Nxt Rpt 6 Top 7 Pg Bwd 8 Pg Fwd 9 Last Pg
    
```

34. Type **080** over 001 in the COLUMNS field and press the **F11** key.

```

D B S INFORMATION EXPERT ----- VIEW A REPORT JSVRPS
SERIES: AXX-FIRST-QUARTER-REPORT REPORT: QTRRPT PAGE 00001 LINE 001
COMMAND INPUT ==> COLUMNS 080 158
8-----9-----10-----11-----12-----13-----14-----15-----
ENDITURE BALANCES PAGE
ENCY XX

1 BALANCE PERIOD 2 BALANCE PERIOD 3 BALANCE QUARTERLY BALANCE
-----
4,801.79 9,602.13 12,622.55 27,026.47
4,801.79 9,602.13 12,622.55 27,026.47
=====
9,603.58 19,204.26 25,245.10 54,052.94

1.45 501.45 1,101.45 1,604.35
1.45 501.45 1,101.45 1,604.35
=====
2.90 1,002.90 2,202.90 3,208.70

1.45 1.45 1.45 4.35
1.45 1.45 1.45 4.35
=====
ACTION: 35 PF: 3 End 4 Nxt Rpt 6 Top 7 Pg Bwd 8 Pg Fwd 9 Last Pg
    
```

To page forward and backward, press the **F8** and **F7** keys.

To return to the top of the report, press the **F6** key.

To proceed to the top of the last page, press the **F9** key.

To page to the right, press the **F10** key. To page to the left, press the **F11** key.

To exit the report request, press the **F3** key.

35. Type **PM** in the ACTION field and press **Enter** to return to the *Primary Option Menu* screen.

NOTES

Maintaining Expert Reports

Expert Reports can also be maintained and executed using the Expert Reporting Facility. The following walkthrough describes how to access report series through Expert Reporting.

WALKTHROUGH: Maintaining an Expert Report

SCENARIO

You have received another report request. You have determined it can be added to the Expert Report AXX-FIRST-QUARTER-REPORT. This new report request will display period 3 ending balance for asset accounts for your company. You will add a new report request to the report series AXX-FIRST-QUARTER-REPORT. Summary centers should be excluded. Asset accounts are accounts that are within the range 100000 to 1999999999. Order this report by company, account, and center. The body of the report should contain the accounting distribution (company, account, and center), account description, and the period 3 ending balance. Print totals by company only.

```
D B S  INFORMATION EXPERT  -----  PRIMARY OPTION MENU  PM

      ENTER SELECTION BELOW:

      ER - EXPERT REPORTING
      SM - SOURCE MANAGEMENT
      JS - JOB PREPARATION & SUBMISSION
      RV - REPORT VIEWING
      SA - SYSTEM ADMINISTRATION
      MR - EXPERT MANAGEMENT REPORTING
      EN - END THE SESSION

      SELECTION ==> 1
      LIBRARY  ==> USERXX

ACTION: _____

PRESS:      ENTER Process          PF1 Help      PF3 End Session
```

1. Type **ER** in the SELECTION field and press **Enter** to access the *Expert Reporting* screen.

NOTES

```
D B S  INFORMATION EXPERT  ---  BUILD / CHANGE REPORTS  ER

This function will take you through a step by step process to build a
report or series of reports (Report Series). Listed below are the steps:

 1 - Give the Report Series a Name
 2 - Select a Dataframe
 3 - Give your Report a Name
 4 - Define Selection/Exclusion Criteria
 5 - Define how report is to be sequenced
 6 - Define any Calculations required
 7 - Define Page Headings
 8 - Select Data to be displayed
 9 - Define how Data is to be totalled
10 - Repeat steps 3-9 for the Next Report

Your Reports will be stored in Library USERXX

PRESS:  ENTER Begin  PF1 Help  PF3 Return to Primary Option Menu

ACTION _____
```

2. Press .

```
JSBLDI

STEP 1 -- LISTED BELOW ARE EXISTING REPORT SERIES

REPORT SERIES NAME          NOTES:
-----
AXX-FIRST-QUARTER-REPORT    To change an existing Report Series
**** END OF DIRECTORY ****  place an S next to the Series name
                              & press the ENTER key.

                              To create a new Report Series press
                              the ENTER key. You will be prompted
                              for a name.

PRESS:  PF1 Help  PF3 Previous Step  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
ACTION _____
```

This screen lists all report series that are eligible to be used in Expert Reporting.

NOTES

```
JSBLDI

STEP 1 -- LISTED BELOW ARE EXISTING REPORT SERIES

REPORT SERIES NAME          NOTES:
-----
3 AXX-FIRST-QUARTER-REPORT   To change an existing Report Series
**** END OF DIRECTORY ****   place an S next to the Series name
                               & press the ENTER key.

                               To create a new Report Series press
                               the ENTER key. You will be prompted
                               for a name.

PRESS:  PF1 Help   PF3 Previous Step   PF6 Top   PF7 Pg Bwd   PF8 Pg Fwd
ACTION _____
```

3. Type **S** beside the existing report series AXX-FIRST-QUARTER-REPORT and press **Enter**.

```
JSBRVR

STEP 1 -- REVIEWING REPORT SERIES AXX-FIRST-QUARTER-REPORT

REPORT  ACTION          NOTES:
-----
QTRRPT

To review a report enter an S next to
the name & press the ENTER key.

To delete a report enter a D next to
the name & press the ENTER key.

To add a new report press the ENTER key

To save, submit, or view the remaining
reports as is, press the PF4 key.

PRESS:  ENTER Process   PF1 Help   PF3 Previous Step

ACTION _____
```

4. Press **Enter**.

To review or change an existing report request, type **S** beside the report request name. Expert Reporting will step through the screens with the current values saved from each screen. Any information previously entered can be changed.

To delete a report request, type **D** beside the report request name.

To create a new report request, press **Enter**.

To save, submit, or view reports, press the **F4** key.

NOTES

```
JSBERN

STEP 3A -- ENTER THE NAME OF YOUR NEXT REPORT: 5

PRESS:  ENTER Continue    PF1 Help    PF3 Previous Step

ACTION _____
```

5. Type **ASSETLST** in the report name field and press .
6. Complete the rest of the screens required to define the report request.
 - Select the asset account range.
GL-ACCOUNT-ID 100000 - 19999999999
 - Select your company.
GL-COMPANY-ID XX01
 - Exclude the summary centers.
GL-CENTER-ID 9999999999999
 - Select the desired order for your report.
#REPORTID
GL-COMPANY-ID
GL-ACCOUNT-ID
GL-CENTER-ID
 - Press the key to skip the calculation step.
 - Enter the desired pageheading.
BALANCES FOR ASSET ACCOUNTS
 - Select the items to be displayed on the report. Put them in the desired order.
GL-COMPANY-ID
GL-ACCOUNT-ID
GL-CENTER-ID
GL-ACCT-DESCRIPTION
GL-PERIOD-3-BALANCE
 - Select the items you want to total.
GL-PERIOD-3-BALANCE

NOTES

- Select where you want totals to be computed and printed.
GL-COMPANY-ID

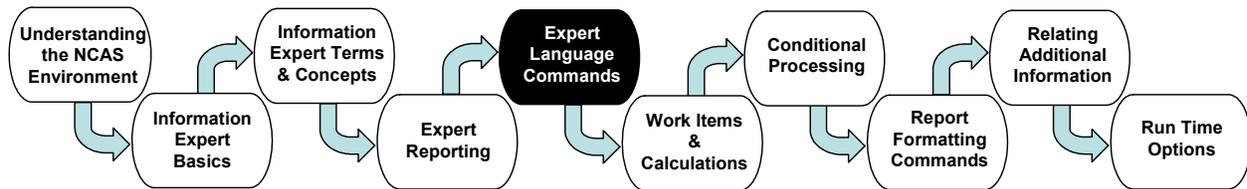
```
JSBNXR  
  
STEP 10 -- REPORT QTRRPT COMPLETED FOR SERIES AXX-FIRST-QUARTER-REPORT  
  
ENTER SELECTION BELOW:  
  
1 - Save this Series & Exit  
2 - Save this Series & Return  
3 - Review/Change this Series  
4 - Build another Report  
5 - View the IE Commands  
6 - Prepare this Series  
7 - Prepare,Run and Print Reports  
8 - Prepare,Run and View Reports  
9 - Cancel this Function & Exit  
  
===> 7  
  
PRESS: ENTER Process          PF1 Help   PF3 Previous Step  
ACTION 8
```

7. When all the screens are completed, prepare, run, and view this new report request by typing **8** in the SELECTION field on the *JSBNXR* screen.
8. Type **RVLS** in the ACTION field and press **Enter** to transfer to report viewing to view your report.

SUMMARY

You have just learned to create and maintain a report series using Expert Reporting. We are now ready to learn more about Source Management and enhancing a report series.

Expert Language Commands



Overview

The last section, *Creating a Report with Expert Reporting*, created a report series using Expert Reporting. This section explains the Expert Language commands and how to use them. The user will create a report using Source Management, submit the report to prepare, and run the report.

Expert Language

The Expert Language is made up of free form commands. These commands are placed in columns 1-72. Inserting a semi-colon at the end of the line can continue Expert Language commands. Comment lines can be inserted into a report series by placing an asterisk in the first column. Blank lines and indention can be used to enhance readability.

INPUT Command

The INPUT command specifies the primary dataframe to be processed by the report series. If used, it *MUST* be the first command in the report series. There can only be one INPUT command in a report series. All report requests within the report series will use the data extracted from this dataframe.

The format of the command is:

INPUT dataframe

The dataframe name is from one to eight characters. The dataframe must already exist on the data dictionary.

Here is an example of the INPUT command:

```
INPUT GLOPENYR
```

 GEAC has delivered dataframes to define data from Accounts Payable, Purchasing, Inventory, General Ledger, Fixed Assets, Budgetary Control, and Financial Controller. The OSC has developed additional in-house dataframes to enhance the delivered dataframes. A complete list of dataframes available can be found in NCPUB in the DATAFRAME-LIST member.

NOTES

 The most commonly used dataframes are listed in the **QRG 1: Common Dataframes**.

SELECT Command

The SELECT command selects information for a report series or report request based on specific values for the specified item of the SELECT command. Records can be selected in the common section that applies to all report requests. Additional selection criteria may be added to a report request to further limit the information.

The format of the command is:

SELECT entity value

If the SELECT command is in the common section, the entity must be an item from the dataframe selected on the INPUT command. If the SELECT command is in a report request, the entity can be any item from the input dataframe, any item from a secondary dataframe referenced in the common section, or any work field created in the common section.

The value can be a single value, multiple values, or a range of values. A value can be numeric, alphanumeric, or a date field. The value will be based on the LTD of the item selected. Alphanumeric values are enclosed in apostrophes. A range of values is enclosed in parenthesis. Numeric values can have minus signs and decimal points, when applicable. Numeric values are not enclosed in apostrophes.

Here are examples of the SELECT command and their meaning:

```
SELECT GL-COMPANY-ID '1401'  
    Select company 1401  
SELECT GL-COMPANY-ID '1401' '1402' '1403'  
    Select companies 1401, 1402, and 1403  
SELECT GL-COMPANY-ID ('1401' '1403')  
    Select companies 1401 through 1403  
SELECT GL-CLASS-CODE 1 2 3 6 7  
    Select class codes 1, 2, 3, 6, 7  
SELECT GL-CLASS-CODE (1 4) 6 7  
    Select class codes 1 through 4 and 6 and 7
```

Multiple SELECT commands specifying different entities can be used in one report series or report request. The commands are executed in order as they appear and are connected by a logical "AND." The same entity cannot appear on more than one SELECT command in the same section. The same entity can appear on a SELECT command in the common section and a SELECT in the report request section.

 A SELECT command should always be used in the **common section** to limit information requested to your agency. This also will allow the dataframe to process more efficiently and reduce processing costs.

NOTES

Selection criteria should always include selection by:

| | | |
|---------------|-----|-----------------|
| Company | for | General Ledger |
| Paying Entity | for | Account Payable |
| Buying Entity | for | Purchasing |
| Level 1 | for | Fixed Assets |

EXCLUDE Command

The EXCLUDE command eliminates information for a report series or report request based on specific values for the specified item of the EXCLUDE command. Records can be excluded in the common section that applies to all report requests. Additional exclusion criteria can be added to a report request to further limit the information.

The format of the command is:

EXCLUDE entity value

If the EXCLUDE command is in the common section, the entity must be an item from the dataframe selected on the INPUT command. If the EXCLUDE command is in a report request, the entity can be any item from the input dataframe, any item from a secondary dataframe referenced in the common section, or any work field created in the common section.

The value can be a single value, multiple values, or a range of values. A value can be numeric, alphanumeric, or a date field. The value will be based on the LTD of the item selected. Alphanumeric values must be enclosed in apostrophes. A range of values is enclosed in parenthesis. Numeric values can have minus signs and decimal points, when applicable. Numeric values are not enclosed in apostrophes.

Here are examples of the EXCLUDE command and their meaning:

EXCLUDE GL-COMPANY-ID '1401'
Exclude company 1401

EXCLUDE GL-COMPANY-ID '1401' '1402' '1403'
Exclude companies 1401, 1402, and 1403

EXCLUDE GL-COMPANY-ID ('1401' '1403')
Exclude companies 1401 through 1403

EXCLUDE GL-CLASS-CODE 1 2 3 6 7
Exclude class codes 1, 2, 3, 6, 7

EXCLUDE GL-CLASS-CODE (1 4) 6 7
Exclude class codes 1 through 4 and 6 and 7

Multiple EXCLUDE commands specifying different entities can be used in one report series or report request. The commands are executed in the order they appear and are connected by a logical "OR." The same entity cannot appear on more than one EXCLUDE command in the same section. The same entity can appear on an EXCLUDE command in the common section and an EXCLUDE in the report request section.

NOTES

REPORT Command

The REPORT command identifies the beginning of a report request. All the commands following the REPORT command, up to the next REPORT command, define the pertinent logic for the report request.

The REPORT command can also be used to define the width of the report and the number of lines per page of a report. See **QRG 3: IE Keywords** for further information.

One format of the command is:

REPORT report-id

The report-id is the name of the report request. The name of a report request is from one to eight characters in length, and must begin with a letter. The report-id is the only part of the REPORT command that is required.

Another format of the command is:

REPORT report-id **WIDTH IS** chars **LINES** lines-per-page

The **WIDTH IS** clause defines the width of a report request. The default width is 132 characters. The maximum report width is 255 characters.

The **LINES** clause is used to set the number of lines that print on a page before ejecting to a new page. The default number of lines is 60. The maximum number of lines can be up to 999.

Here are examples of the REPORT command and their meaning:

REPORT QTRRPT
Defines report QTRRPT

REPORT QTRRPT WIDTH IS 150
Defines report QTRRPT and changes the width to 150 characters

REPORT QTRRPT LINES 66
Defines report QTRRPT and changes the number of lines per page to 66

REPORT QTRRPT LINES 66 WIDTH IS 150
Defines report QTRRPT and changes the number of lines per page to 66 and the width to 150 characters

ORDER BY Command

The ORDER BY command is used to sequence the data in the report by sorting the values based on the items specified in the command. The ORDER BY can only be placed in a report request – never in the common section.

NOTES

The ORDER BY command must be one of the first commands after the REPORT command. SELECT and EXCLUDE commands are the only commands allowed between the ORDER BY and REPORT command.

The data can be sorted in ascending or descending order, with ascending order being the default. The order of the items will be sorted from major to minor. Each time a value changes in an item of the ORDER BY, a control break is created. Control breaks are used to determine when to print totals, page and column heading, or to perform special processing.

The format of the command is:

ORDER BY item1 item2 item3...

Items that appear on the ORDER BY command can be from the primary dataframe or any work field created in the common section. Items from a secondary dataframe may also be included as long as the secondary dataframe is processed in the common section.

If the order in which you want the data in the report is the same as the natural order of the data from the dataframe, do not use an ORDER BY command.

 To check the natural order of the dataframe, go to the *System Administration List (SALF)* dataframes screen.

Here are examples of the ORDER BY command and their meaning:

```
ORDER BY  GL-COMPANY-ID ;  
           GL-CENTER-ID  ;  
           GL-ACCOUNT
```

For each company, sort all accounts for each center.

```
ORDER BY GL-EFFECTIVE-DATE DESC  
           Sort by effective date, with the most current date first.
```

DEFINE PAGEHEADINGS Command

The DEFINE PAGEHEADINGS command identifies the page heading information to print at the top of the page in a report request. The DEFINE PAGEHEADINGS command is only valid in the report request section – not in the common section. Each report request will have its own DEFINE PAGEHEADINGS command. There can only be one DEFINE PAGEHEADINGS command in a report request. If you need to change the report headings in a report request, use the REDEFINE PAGEHEADINGS command. The format of the DEFINE PAGEHEADINGS and REDEFINE PAGEHEADINGS commands are the same.

One format of the command is:

```
DEFINE PAGEHEADINGS 'literal'  
REDEFINE PAGEHEADINGS 'literal'
```

NOTES

The literal can be any alphanumeric characters. A literal can be up to 255 characters. The literal must also be enclosed in single quotes. The literal will be centered on the page.

The following format of the command has included page numbers and the system date:

```
DEFINE PAGEHEADINGS ;  
    'DATE: ' #SYSDATE ;  
    'STATE OF NORTH CAROLINA' ;  
    'PAGE: ' #PAGE-NUMBER
```

#SYSDATE is a predefined system variable that contains "today's date."
#PAGE-NUMBER is also a system variable. It contains the page number of the current page. The following example would be a page heading generated from the command above:

```
DATE: 01/01/2000      STATE OF NORTH CAROLINA      PAGE: 1
```

Each of the three lines is centered based on the width of the report request.

Information Expert predefines system variables. They are preceded by a #. A list of other system variables of this material can be found in the **QRG 2: Predefined Variables** at the back of this course material.

There is an additional option that can be used to generate multiple lines of page headings. The option NEXT LINE instructs IE to start the following part of the page heading on a new line.

The following format of the command has multiple lines of page headings:

```
DEFINE PAGEHEADINGS ;  
    'DATE: ' #SYSDATE ;  
    'STATE OF NORTH CAROLINA' ;  
    'PAGE: ' #PAGE-NUMBER ;  
    NEXT LINE ;  
    'QUARTERLY EXPENDITURE REPORT'
```

The following page heading would be generated from the above command.

```
DATE: 01/01/2000      STATE OF NORTH CAROLINA      PAGE: 1  
                        QUARTERLY EXPENDITURE REPORT
```

The second line will be centered under the first line.

LIST Command

NOTES

The LIST command is one of two commands that prints a report. The LIST command automates as many reporting features as possible, eliminating some of the design work associated with reporting. The LIST command will format each item on a report line. Column headings will be generated and aligned over data. Each item will automatically be spaced, wrapping to additional lines if necessary. The LIST command can also compute and print totals and subtotals, allowing for printing special descriptions associated with these totals. The LIST command can only be located in a report request. There can only be one LIST command in a report request.

A simple format of the LIST command is:

```
LIST  ITEM-NAME1  ;  
      ITEM-NAME2  ;  
      (ETC)
```

ITEM-NAME1 and ITEM-NAME2 can be items from the primary dataframe (or secondary dataframe if available) or any work item. This part of the LIST command creates the body of the report. The value for each item is printed for each record selected. The semicolon is used to continue the command.

Column headings will be created for each item in the body of the LIST command. Column headings defined when the item was created will be used as the default heading. Column headings can be overridden by using the HEADING IS clause of the LIST command.

```
LIST  ITEM-NAME1  HEADING IS 'heading1,heading2';  
      ITEM-NAME2  HEADING IS 'heading1'      ;  
      (ETC)
```

The column heading must be enclosed in apostrophes. You can have up to four lines of column headings. To separate heading lines, use a comma. If no column heading can be found, IE will use the item name, removing any hyphens. The following is an example of the LIST command containing the HEADING IS clause.

```
LIST  GL-COMPANY-ID  ;  
      GL-ACCOUNT-ID  HEADING IS 'ACCT'      ;  
      GL-CENTER-ID   HEADING IS 'COST,CENTER'
```

The above command would generate the following column headings:

```
CO          COST  
ID          ACCT  CENTER  
-----
```

You also have an option to specify the print format you want to use when the item prints. If you want to override the print format established with the item, or the default print format, use the AS option. Refer to the *Information Expert Terms and Concepts* section for more information on print formats.

NOTES

```
LIST  GL-COMPANY-ID           ;
      GL-ACCOUNT-ID HEADING IS 'ACCT' ;
      AS 'XX-XXXXXXXXXX' ;
      GL-CENTER-ID  HEADING IS 'COST,CENTER' ;
      GL-PERIOD-1-BALANCE           ;
      AS '$ZZZ,ZZZ,ZZZ.99'
```

IE will suppress repeated values for sequenced items in the ORDER BY command or in the ORGANIZED BY of the dataframe. To print the repeated values, use the ALL option before the sequenced item.

```
LIST  ALL ITEM-NAME1 HEADING IS 'heading1,heading2' ;
      ALL ITEM-NAME2 HEADING IS 'heading1'           ;
      (ETC)
```

When the TOTAL option is included as part of the LIST command, the system automatically calculates totals.

```
LIST  ITEM-NAME1 HEADING IS 'heading1,heading2' ;
      ITEM-NAME2 HEADING IS 'heading1'           ;
      (ETC)                                       ;
TOTAL ITEM-NAME1                                 ;
      (ETC)
```

The TOTAL option indicates which items in the body of the report are to be totaled. If the item is numeric, the total is the accumulation of the values. If the item is alphanumeric, the item is counted. A grand total is printed at the end of the report.

```
LIST  ITEM-NAME1 HEADING IS 'heading1,heading2' ;
      ITEM-NAME2 HEADING IS 'heading1'           ;
      (ETC)                                       ;
TOTAL ITEM-NAME1                                 ;
      (etc)                                       ;
BY    ITEM-NAME3 HEADING IS 'total heading' ADVANCE NN;
      ITEM-NAME4 NEWPAGE                         ;
      (etc)                                       ;
      #REPORTID
```

The BY clause tells IE at which control break to print the total for the item(s) listed on the TOTAL option. The item(s) in the BY clause *MUST* be an item on the ORDER BY command. If no ORDER BY command is used, the item *MUST* be part of the ORGANIZED BY clause of the primary dataframe definition. If the keyword #REPORTID is used, a grand total is printed at the end of the report.

Headings can be specified for the total levels. If no heading is specified, the heading "TOTALS BY", followed by the item name, will be used. The ADVANCE nn option tells the LIST command to leave extra lines after printing the total (nn is the number of extra lines to leave). The NEWPAGE option tells the LIST command to eject to a new page after the totals have been printed.

WALKTHROUGH: Creating a Report in Source Management

NOTES

SCENARIO

You have been asked to write a report to list the master chart of accounts. The master chart is found by selected the account numbers and their descriptions for the master company AAAA. Use Source Management to perform this task.

1. Type **PM** in the ACTION field and press to return to the *Primary Option Menu* screen.

```
D B S  INFORMATION EXPERT  -----  PRIMARY OPTION MENU  PM

      ENTER SELECTION BELOW:

      ER - EXPERT REPORTING
      SM - SOURCE MANAGEMENT
      JS - JOB PREPARATION & SUBMISSION
      RV - REPORT VIEWING
      SA - SYSTEM ADMINISTRATION
      MR - EXPERT MANAGEMENT REPORTING
      EN - END THE SESSION

      SELECTION ===>  ___
      LIBRARY  ===>  USERXX

ACTION:  2  _____

PRESS:   ENTER Process          PF1 Help      PF3 End Session
```

2. Type **SMCR** in the ACTION field and press to access the *Source Management Create* screen.

```
D B S  INFORMATION EXPERT  -----  DEFINE TYPE OF SOURCE MEMBER  SMCR

      ENTER MEMBER TYPE BELOW:

      1 - REPORT SERIES           5 - RUN STATEMENTS
      2 - PRINT-SERIES           6 - DICTIONARY MAINTENANCE
      3 - SUBROUTINES            7 - UTILITY STATEMENTS
      4 - MISCELLANEOUS

      MEMBER TYPE  ===>  3
      MEMBER NAME  ===>  3 XX-ACCOUNT-DESCRIPTIONS  _____
      LIBRARY NAME ===>  USERXX

ACTION:  _____

PRESS:   ENTER Process          PF1 Help      PF3 Cancel Create
```

3. Type **1** in the MEMBER TYPE field. Type **AXX-ACCOUNT-DESCRIPTION** in the MEMBER NAME field and press .

NOTES

```

EDIT REPORT SERIES: AXX-ACCOUNT-DESCRIPTIONS          COLUMNS 001 072
COMMAND INPUT ==>                                   SCROLL ==> HALF
-----1-----2-----3-----4-----5-----6-----7--
***** ***** TOP OF DATA *****
'''''' input glacctpl
''''''
'''''' select gl-company-id 'aaaa'
''''''
'''''' report actdesc width 80
''''''
'''''' define pageheadings;
''''''         'date: ' #sysdate;
''''''         'state of north carolina';
''''''         'page: ' #page-number;
''''''         next line;
''''''         'account listing'
''''''
'''''' list  gl-account          heading is 'account';
''''''        gl-acct-description heading is 'account description';
'''''' total gl-account-id ;
''''''        by #reportid

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd

```

4. Type the above text in the lines available and press **Enter**.

There should be at least one space between commands and item names. Blank lines and indentation can be used to enhance readability.

To continue a command to another line, place a semicolon at the end of the line. The last line of the command should not end with a semicolon.

```

EDIT REPORT SERIES: AXX-ACCOUNT-DESCRIPTIONS          COLUMNS 001
072
COMMAND INPUT ==> 5                                SCROLL ==> HALF
HALF
-----1-----2-----3-----4-----5-----6-----7--
***** ***** TOP OF DATA *****
000100 INPUT GLACCTPL
000200
000300 SELECT GL-COMPANY-ID 'AAAA'
000400
000500 REPORT ACTDESC WIDTH 80
000600
000700 DEFINE PAGEHEADINGS;
000800         'DATE: ' #SYSDATE;
000900         'STATE OF NORTH CAROLINA';
001000         'PAGE: ' #PAGE-NUMBER;
001100         NEXT LINE;
001200         'ACCOUNT LISTING'
001300 LIST  GL-ACCOUNT          HEADING IS 'ACCOUNT';
001400        GL-ACCT-DESCRIPTION HEADING IS 'ACCOUNT DESCRIPTION';
001500 TOTAL GL-ACCOUNT-ID;
001600        BY #REPORTID
***** ***** BOTTOM OF DATA *****

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg
Fwd

```

5. Type **CHECK** in the COMMAND INPUT field and press **Enter**.

NOTES

```

EDIT REPORT SERIES: AXX-ACCOUNT-DESCRIPTIONS                ERRORS ENCOUNTERED
COMMAND INPUT ==>> 7                                       SCROLL ==>> HALF
-----1-----2-----3-----4-----5-----6-----7--
***** ***** TOP OF DATA *****
000100 INPUT GLACCTPL
000200
000300 SELECT GL-COMPANY-ID 'AAAA'
000400
000500 REPORT ACTDESC WIDTH 80
000600
000700 DEFINE PAGEHEADINGS;
000800     'DATE: ' #SYSDATE;
000900     'STATE OF NORTH CAROLINA';
001000     'PAGE: ' #PAGE-NUMBER;
001100     NEXT LINE;
001200     'ACCOUNT LISTING'

001300 LIST  GL-ACCOUNT 7 HEADING IS 'ACCOUNT';
001301 ** IEL-0101 EXPECTING DATA NAME. FOUND GL-ACCOUNT
001400     GL-ACCT-DESCRIPTION HEADING IS 'ACCOUNT DESCRIPTON';
001500 TOTAL GL-ACCOUNT-ID;
001600     BY #REPORTID

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd
    
```

7. Change the item name on the LIST command from GL-ACCOUNT to **GL-ACCOUNT-ID**. Type **CHECK** in the COMMAND INPUT field and press .

```

EDIT REPORT SERIES: AXX-ACCOUNT-DESCRIPTIONS                NO ERRORS
FOUND
COMMAND INPUT ==>>
HALF SCROLL ==>>
-----1-----2-----3-----4-----5-----6-----7--
-
***** ***** TOP OF DATA *****
000100 INPUT GLACCTPL
000200
000300 SELECT GL-COMPANY-ID 'AAAA'
000400
000500 REPORT ACTDESC WIDTH 80
000600
000700 DEFINE PAGEHEADINGS;
000800     'DATE: ' #SYSDATE;
000900     'STATE OF NORTH CAROLINA';
001000     'PAGE: ' #PAGE-NUMBER;
001100     NEXT LINE;
001200     'ACCOUNT LISTING'
001300 LIST  GL-ACCOUNT-ID HEADING IS 'ACCOUNT';
001400     GL-ACCT-DESCRIPTION HEADING IS 'ACCOUNT DESCRIPTON';
001500 TOTAL GL-ACCOUNT-ID;
001600     BY #REPORTID
***** ***** BOTTOM OF DATA *****

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd
    
```

8. Correct any other errors that you receive. The message **NO ERRORS FOUND** should appear in the upper right corner of the screen.

NOTES

```

EDIT REPORT SERIES: AXX-ACCOUNT-DESCRIPTIONS          NO ERRORS FOUND
COMMAND INPUT ==> 9                                SCROLL ==> HALF
-----1-----2-----3-----4-----5-----6-----7--
***** ***** TOP OF DATA *****
000100 INPUT GLACCTPL
000200
000300 SELECT GL-COMPANY-ID 'AAAA'
000400
000500 REPORT ACTDESC WIDTH 80
000600
000700 DEFINE PAGEHEADINGS;
000800     'DATE: ' #SYSDATE;
000900     'STATE OF NORTH CAROLINA';
001000     'PAGE: ' #PAGE-NUMBER;
001100     NEXT LINE;
001200     'ACCOUNT LISTING'
001300 LIST  GL-ACCOUNT-ID      HEADING IS 'ACCOUNT';
001400     GL-ACCT-DESCRIPTION HEADING IS 'ACCOUNT DESCRIPTON';
001500 TOTAL GL-ACCOUNT-ID;
001600     BY #REPORTID
***** ***** BOTTOM OF DATA *****

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd

```

9. Type **SAVE** in the COMMAND INPUT field and press **Enter**.

```

EDIT REPORT SERIES: AXX-ACCOUNT-DESCRIPTIONS          MEMBER SAVED
COMMAND INPUT ==> 10                               SCROLL ==> HALF
-----1-----2-----3-----4-----5-----6-----7--
***** ***** TOP OF DATA *****
000100 INPUT GLACCTPL
000200
000300 SELECT GL-COMPANY-ID 'AAAA'
000400
000500 REPORT ACTDESC WIDTH 80
000600
000700 DEFINE PAGEHEADINGS;
000800     'DATE: ' #SYSDATE;
000900     'STATE OF NORTH CAROLINA';
001000     'PAGE: ' #PAGE-NUMBER;
001100     NEXT LINE;
001200     'ACCOUNT LISTING'
001300 LIST  GL-ACCOUNT-ID      HEADING IS 'ACCOUNT';
001400     GL-ACCT-DESCRIPTION HEADING IS 'ACCOUNT DESCRIPTON';
001500 TOTAL GL-ACCOUNT-ID;
001600     BY #REPORTID
***** ***** BOTTOM OF DATA *****

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd

```

10. Type **SUBMIT** in the COMMAND INPUT field and press **Enter**.

```

D B S INFORMATION EXPERT ----- JOB SUBMISSION JSJSUB

JOB "FAAIEPRP" HAS BEEN SUBMITTED
TO PREPARE "AXX-ACCOUNT-DESCRIPTIONS"

Press the ENTER key to continue

```

11. Press **Enter**.

NOTES

```

EDIT REPORT SERIES: AXX-ACCOUNT-DESCRIPTIONS          COLUMNS 001 072
COMMAND INPUT ==>                                     SCROLL ==> HALF
-----1-----2-----3-----4-----5-----6-----7--
***** ***** TOP OF DATA *****
000100 INPUT GLACCTPL
000200
000300 SELECT GL-COMPANY-ID 'AAAA'
000400
000500 REPORT ACTDESC WIDTH 80
000600
000700 DEFINE PAGEHEADINGS;
000800     'DATE: ' #SYSDATE;
000900     'STATE OF NORTH CAROLINA';
001000     'PAGE: ' #PAGE-NUMBER;
001100     NEXT LINE;
001200     'ACCOUNT LISTING'
001300 LIST  GL-ACCOUNT-ID      HEADING IS 'ACCOUNT';
001400     GL-ACCT-DESCRIPTION HEADING IS 'ACCOUNT DESCRIPTON';
001500 TOTAL GL-ACCOUNT-ID;
001600     BY #REPORTID
***** ***** BOTTOM OF DATA *****

ACTION: 12 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd

```

12. Type **RVLS** in the ACTION field and press **Enter** to access the *Report Viewing Directory* screen.

```

D B S INFORMATION EXPERT ----- REPORT VIEWING DIRECTORY RVLS

LIBRARY: USERXX          NUMBER OF MEMBERS: 0002  MAXIMUM: 0225
FIND:
SERIES NAME              TYPE              LAST UPDATE INFO  LAST VIEWED
-----
AXX-FIRST-QUARTER-REPORT  RPT SERIES    05/15/00  MSAUSER  05/16/00
13 AXX-ACCOUNT-DESCRIPTIONS  PREP LIST     06/09/00  MSAUSER
**** END OF DIRECTORY ****

Enter S to view or P to print member.  Key over library to change libraries.
ACTION: PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd

```

13. Type **S** before AXX-ACCOUNT-DESCRIPTIONS and press **Enter**.

 Make sure the TYPE field contains PREP LIST.

NOTES

```

D B S  INFORMATION EXPERT  -----  REPORT REQUEST DIRECTORY  JSVRDI

REPORT SERIES:  AXX-ACCOUNT-DESCRIPTIONS          LIBRARY:  USERXX
DATE PREPARED:  06/09/00   16:34:33              OWNER:    MSAUSER
DATE RUN:       06/09/00   16:34:33              NUMBER REPORTS: 001

  REPORT      WIDTH      PAGES          NOTES:
  -----      -
14 PREPLIST    120         1          Place an S beside the report to
**END**                                     be viewed & press the ENTER key.

                                           Place a P beside the report to
                                           be printed & press the ENTER key.

ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd

```

14. Type **S** before PREPLIST and press **Enter**.

```

D B S  INFORMATION EXPERT  -----  VIEW A REPORT JSVRPS
SERIES:  AXX-ACCOUNT-DESCRIPTIONS          REPORT:  PREPLIST  PAGE 00001  LINE 019
COMMAND INPUT ==>                          COLUMNS 001  079
-----+-----1-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-----+-----
0011  001100          NEXT LINE;
0012  001200          'ACCOUNT LISTING'
0013  001300  LIST    GL-ACCOUNT-ID          HEADING IS 'ACCOUNT';
0014  001400          GL-ACCT-DESCRIPTION HEADING IS 'ACCOUNT DESCRIPTON';
0015  001500          TOTAL GL-ACCOUNT-ID;
0016  001600          BY  #REPORTID

***  AXX-ACCOUNT-DESCRIPTIONS HAS BEEN PREPARED AND ADDED TO THE REPORT REQU
***  COMMON IS 0 BYTES IN LENGTH

***  ACTDESC IS 1,288 BYTES IN LENGTH
*****  END OF REPORT LISTING  *****

ACTION: _____ PF: 3 End  4 Nxt Rpt  6 Top  7 Pg Bwd  8 Pg Fwd  9 Last Pg

```

15. Press the **F8** key twice to page forward to the bottom of the report.

A successful preparation will result in the message:

*** {report series name} HAS BEEN PREPARED AND ADDED TO THE REPORT REQUEST FILE.

Make sure you always check the preparation listing to insure this message has been generated. This message will always appear on the bottom of the last page of your preparation listing.

NOTES

```
D B S INFORMATION EXPERT ----- VIEW A REPORT JSVRS
SERIES: AXX-ACCOUNT-DESCRIPTIONS      REPORT: PREPLIST PAGE 00001 LINE 019
COMMAND INPUT ==>                      COLUMNS 001 079
-----1-----2-----3-----4-----5-----6-----7-----
0011 001100      NEXT LINE;
0012 001200      'ACCOUNT LISTING'
0013 001300 LIST  GL-ACCOUNT-ID        HEADING IS 'ACCOUNT';
0014 001400      GL-ACCT-DESCRIPTION HEADING IS 'ACCOUNT DESCRIPTON';
0015 001500 TOTAL GL-ACCOUNT-ID;
0016 001600      BY #REPORTID

*** AXX-ACCOUNT-DESCRIPTIONS HAS BEEN PREPARED AND ADDED TO THE REPORT REQU
*** COMMON IS 0 BYTES IN LENGTH
*** ACTDESC IS 1,288 BYTES IN LENGTH
***** END OF REPORT LISTING *****

ACTION: 16 PF: 3 End 4 Nxt Rpt 6 Top 7 Pg Bwd 8 Pg Fwd 9 Last Pg
```

16. Type **JS** in the ACTION field and press **Enter** to access the *Job Submission Facility* screen.

```
D B S INFORMATION EXPERT ----- JOB SUBMISSION FACILITY JS

ENTER SELECTION BELOW:

PR - LIST SERIES TO BE PREPARED
RU - LIST SERIES TO BE RUN
AP - LIST APPLICATION JOBS
RT - ENTER RUN-TIME OPTIONS
RE - RETURN TO PRIMARY OPTION MENU

SELECTION   ==> 17
SERIES NAME ==>
LIBRARY NAME ==> USERXX

ACTION: _____

PRESS:      ENTER Process  PF1 Help  PF3 Return to Primary Option Menu
```

17. Type **RU** in the SELECTION field and press **Enter** to access the *Run A Report Series* screen.

NOTES

```
D B S  INFORMATION EXPERT ----- RUN A REPORT SERIES  JSRU

LIBRARY: USERXX

REPORT SERIES NAME          ACTION          NOTES:
-----
AXX-FIRST-QUARTER-REPORT
18 AXX-ACCOUNT-DESCRIPTIONS   To submit a job to run a
**** END OF DIRECTORY      **** Report Series enter an S
                                next to the name & press
                                the ENTER key.

                                To change libraries enter
                                the new library name and
                                press the ENTER key.

ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

18. Type **S** before AXX-ACCOUNT-DESCRIPTIONS and press **Enter**.

```
D B S  INFORMATION EXPERT ----- RUN A REPORT SERIES  JSRU

LIBRARY: USERXX      JOB "FAAIERUN" HAS BEEN SUBMITTED
                      TO RUN "AXX-ACCOUNT-DESCRIPTIONS"

REPORT SERIES NAME          ACTION          NOTES:
-----
AXX-FIRST-QUARTER-REPORT
AXX-ACCOUNT-DESCRIPTIONS   SUBMITTED      To submit a job to run a
**** END OF DIRECTORY      **** Report Series enter an S
                                next to the name & press
                                the ENTER key.

                                To change libraries enter
                                the new library name and
                                press the ENTER key.

ACTION: 19 _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

19. Type **RVLS** in the ACTION field and press **Enter** to return to the *Report Viewing Directory* screen.

NOTES

```
D B S INFORMATION EXPERT ----- REPORT VIEWING DIRECTORY RVL5
LIBRARY: USERXX                      NUMBER OF MEMBERS: 0002  MAXIMUM: 0225
FIND:
SERIES NAME                          TYPE                LAST UPDATE INFO  LAST VIEWED
-----
AXX-FIRST-QUARTER-REPORT             RPT SERIES         05/15/00  MSAUSER  05/16/00
20 AXX-ACCOUNT-DESCRIPTIONS          RPT SERIES         06/09/00  MSAUSER
**** END OF DIRECTORY ****

Enter S to view or P to print member.  Key over library to change libraries.
ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

20. Type **S** before AXX-ACCOUNT-DESCRIPTIONS and press .

 Make sure the TYPE field has changed to RPT SERIES.

```
D B S INFORMATION EXPERT ----- REPORT REQUEST DIRECTORY JSVRDI

REPORT SERIES:  AXX-ACCOUNT-DESCRIPTIONS          LIBRARY:  USERXX
DATE PREPARED:  06/09/00   16:34:35              OWNER:    MSAUSER
DATE RUN:       06/09/00   16:55:14              NUMBER REPORTS: 001

REPORT      WIDTH  PAGES          NOTES:
-----
21 ACTDESC      80    50              Place an S beside the report to
**END**                                           be viewed & press the ENTER key.

                                           Place a P beside the report to
                                           be printed & press the ENTER key.

ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
```

21. Type **S** before ACTDESC and press .

NOTES

```

D B S  INFORMATION EXPERT ----- VIEW A REPORT JSVRPS
SERIES:  AXX-ACCOUNT-DESCRIPTION      REPORT: ACTDESC  PAGE 00001 LINE 001
COMMAND INPUT ==>                      COLUMNS 001 079
-----1-----2-----3-----4-----5-----6-----7-----
DATE: 02/20/01          STATE OF NORTH CAROLINA          PAGE: 1
                          ACCOUNT LISTING

          ACCOUNT          ACCOUNT DESCRIPTION
          -----          -----
          111250          POOL CSH-DISBURSING ACCT
          111260          POOL CSH-BUDGET CODE CSH
          111270          POOL CSH-ALLOTMENT ACCT
          111280          POOL CSH-UNALLOT APPRO/CI
          211100          ACCOUNTS PAYABLE
          221100          ACCTS PAYABLE-NON CURR
          261100          ACCOUNTS PAYABLE
          274200          DUE TO AGENCY FUND
          310000          CONTRIBUTED CAPITAL
          320000          FUND BALANCE
          330000          RETAINED EARNINGS
          340000          INVESTMENT IN PROPERTY
          360000          RETAINED EARNINGS

ACTION: 23 PF: 3 End 4 Nxt Rpt 6 Top 7 Pg Bwd 8 Pg Fwd 9 Last Pg

```

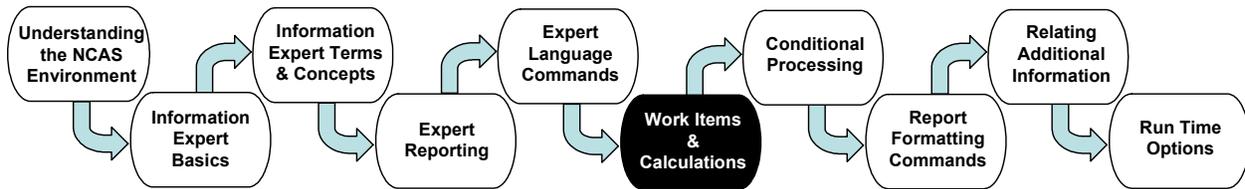
This is the first page of the results.

- 22. View other pages by pressing the **F8** and **F7** keys.
- 23. When you have finished viewing the results, type **PM** in the ACTION field and press **Enter** to return to the *Primary Options* menu screen.

SUMMARY

You have just learned to create a report series using Source Management. We have used Expert Language commands INPUT, SELECT, REPORT, DEFINE PAGEHEADINGS, and LIST. We are now ready to learn about work fields and calculations using Expert Language commands.

Work Items and Calculations



Overview

In the previous section, *Expert Language Commands*, you created a report series using Source Management. You learned some of the basic Expert Language commands. This section explains the use of Expert Language work items and how to use them in calculations and assigning statements. The user will create a report series in Source Management using work items, submit the report series to prepare, and run the report series.

Work Fields

There may be times when you want to perform a calculation and store the results to use later. Or you may want to redefine an item that is already stored on the data dictionary. IE allows you to create a *work* item to use in these situations. A work item is a temporary data field that is used in the report series it is defined. It is not stored on the data dictionary but stored in temporary storage. Temporary storage is memory that is used during the execution of a computer program. Temporary storage is reused after each program has executed. Work items are recreated in temporary storage each time the report series is executed.

WORK Command

The WORK command can be used to establish a temporary work item. The WORK command must be placed in the report series before the work item is referenced. If the work item is defined in the common section, the work item can be used in any or all report requests. If the work item is defined in a report request, the work item can only be used by that specific report request.

The format of the command is:

WORK FIELD-NAME (LENGTH TYPE DECIMAL-PLACES 'COLUMN HEADING' 'PRINT FORMAT')

WORK FIELD-NAME (LENGTH TYPE DATE-FORMAT 'COLUMN HEADING' 'PRINT FORMAT')

NOTES

The field name can be up to 30 characters and must begin with a letter. Hyphens, letters, and numbers can be used to make the name descriptive. A work field cannot be the same name as one on the data dictionary or an IE keyword. IE keywords can be found in the **QRG 3: IE Keywords** section in the back of this course material.

| | |
|---|------|
| GEAC / OSC uses the following naming convention to begin item names delivered on the data dictionary. | |
| Accounts Payable | AP- |
| Accounts Receivable | AR- |
| Budgetary Control | BC- |
| Common Components | CC- |
| Data Communication Interface | DC- |
| Financial Controller | FC- |
| Fixed Assets | FA- |
| General Ledger | GL- |
| Inventory | IN- |
| Purchasing | PUR- |
| Custom - OSC | C- |

 A suggested naming convention for work items is to begin the field name with WK-.

The **Length**, **Type**, and **Decimal place** or **Date** format is referred to as the **LTD**. The LTD must be specified for all work items. Work fields follow the same rules as items on the data dictionary. You may want to review the section, *Information Expert Terms & Concepts*.

| Type | Description | Sign | Max Length |
|------|-----------------|------|---------------|
| A | Alphanumeric | | 255 Positions |
| N | Display Numeric | +/- | 15 Positions |
| O | Display Numeric | | 15 Positions |
| P | Packed Numeric | +/- | 15 Positions |
| Q | Packed Numeric | | 15 Positions |

Column headings can be established for work items although they are not required. Column headings are used in conjunction with the LIST command. Column headings can have up to four lines, each line containing a maximum of 30 characters. To design a column heading with multiple lines, use a comma to separate the text for each line. (Refer to the previous section, *Expert Language Commands*, for more details regarding how column headings are derived.)

Print formats are not required but can also be established for a work item. The default print format will be used if a print format is not defined. The LTD, column headings, and print formats are order specific on the WORK command. If a print format is to be specified and a column heading is not, place an asterisk as a placeholder for the column heading.

Here are examples of the WORK command:

NOTES

```
WORK WK-FISCAL-YEAR      (40 'FISCAL,YEAR' )
WORK WK-FUND             (4A 'FUND' )
WORK WK-PHONE-NUMBER    (10A 'PHONE NUMBER' ;
                        '(XXX) XXX-XXXX' )
WORK WK-BALANCE          (15P2 * '-ZZ,ZZZ,ZZZ.99' )
```

A work item can be created without the WORK command. The LTD for a work item can be specified when performing a calculation or assignment. Column headings and print formats are not allowed when defining work items in this manner. The following are examples of defining work items in a calculation and an assign statement:

```
WK-AVG-BALANCE(15P2) = GL-PERIOD-1-BALANCE / 30
WK-FUND (4A)          = GL-CENTER-ID
```

IE will create a work item if the LTD has not been established through a WORK command or as a part of the calculation or assign statement. The item name containing the results of a calculation or assignment will automatically be established as a work item. The length, type, and date format or decimal places will be derived from the expression on the right side of the calculation. The following are examples of defining work items in this manner:

```
WK-LIFE-TO-DATE = GL-LIFE-TO-DATE-BALANCE-AMT
** IEL-1301 CREATED WORK FIELD WITH LTD OF 15P2
WK-NEW-CENTER = WK-FUND
** IEL-1301 CREATED WORK FIELD WITH LTD OF 4A
```

Informative message IEL-1301 is displayed after IE creates a work item. The message confirms the creation of a work item and the LTD assigned.

 **Warning:** When allowing a work field to be defined by IE, make sure the LTD assigned is applicable. In the above example, the work variable WK-LIFE-TO-DATE has a numeric assignment of 15P2, which is large enough to contain the value from GL-LIFE-TO-DATE-BALANCE-AMT. The LTD assigned WK-NEW-CENTER is 4A- derived from the LTD of the item WK-FUND. Since a center field is normally 12 alphanumeric characters, this work field created might not be large enough.

 Work items should be defined and values set in the same section. Do not define a work item in the common section and set its value in the report request. Results will be unpredictable.

Alphanumeric Work Items

Alphanumeric work items can contain letters, numbers, and special symbols. The assign statement can be used to create alphanumeric work items. The resulting item is on the left side of the statement. The data to be stored into the item is on the right side. The data can be a literal, work item, or data dictionary items. If a literal is used, it must be enclosed in apostrophes.

NOTES

Examples of the assign statement using a literal are:

```
WK-TITLE = 'OFFICE OF THE STATE CONTROLLER'  
*** IEL-1301 CREATED WORK FIELD WITH LTD OF 30A
```

```
WORK WK-JANUARY (7A)  
WK-JANUARY = 'JANUARY'
```

```
WK-VENDOR-NAME(20A) = CV-VENDOR-NAME
```

Numeric Work Items

Numeric work items can contain numbers, a sign, and a decimal point. No other special characters are valid (comma, dollar sign, etc.). Numeric items are not enclosed in apostrophes.

The following are examples of assigning numeric items:

```
WORK WK-COUNT(30)  
WK-COUNT = 0
```

```
WORK WK-ORIGINAL-AMOUNT(15P2)  
WK-ORIGINAL-AMOUNT = -1234.56
```

Numeric types N and O are called display numeric. A display numeric is an internal storage term. Type N is signed numeric – either positive or negative. Type O is unsigned numeric and carries no sign. When numeric items of type N are stored, the last character is stored with a sign. The number 1 with a positive sign is stored as an A, the number 2 with a positive sign is stored with a B and so on. The following is how the number 123 would be stored in display work fields:

LTD Internal Storage

```
5N0    0012C  
5O0    00123
```

Numeric types P and Q are called packed numeric. Type P is packed with a sign. Type Q is packed without a sign. When a numeric item is packed, it compresses the number and sign, taking up less memory. The following is how the number 123 would be stored in these packed work fields:

LTD Internal Storage

```
5P0    013  
        02C  
5Q0    013  
        02F
```

Packed numeric items are stored more efficiently. The type defines the way the item is stored internally in the computer – it does not affect the way a numeric item will print on a report. When printing a numeric item, it is translated into a display number that is readable on a report.

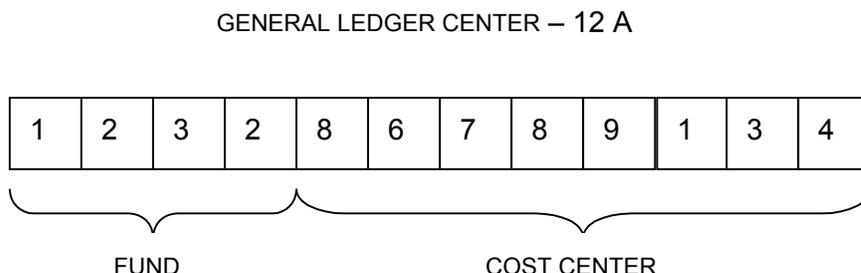
 A packed item does not have to be equated to a display numeric item before printing.

NOTES

Alphanumeric Sub-String

You can isolate parts of an alphanumeric field by “sub-stringing.” Sub-string operations are only valid on alphanumeric type items (type A). To sub-string, specify the starting position of the information you desire and how many characters.

For example, the General Ledger center field is composed of budget fund and cost center. The breakdown is displayed below.



If you want to create a work item that contained only the fund, you would sub-string beginning in position 1 for four characters.

```
WORK WK-FUND(4A)  
WK-FUND = GL-CENTER-ID (1 4)
```

If you wanted to create a work item that contained only the cost center, you would sub-string beginning in position 5 for eight characters.

```
WORK WK-COST-CENTER(8A)  
WK-COST-CENTER = GL-CENTER-ID (5 8)
```

Moving Numeric Items to Alphanumeric

If you like to perform sub-string operations on a numeric item, you will need to assign the numeric item to an alphanumeric item. When you move a numeric item into an alphanumeric item, it moves the data as it is internally stored – no translation occurs into the alphanumeric format. If you move a display numeric item with a sign (type N) into an alphanumeric item, the last character will be A, B, C, etc. – based on the above logic. If you move a packed numeric item to an alphanumeric item, the compressed data is moved and will not be readable as an alphanumeric item.

Before moving a numeric item to an alphanumeric field, move the numeric item to an O type work item (display numeric, no sign). Packed fields will be translated to a display numeric field. When types N and P are translated, the sign in the last character is removed, leaving just the number. For example, a type N item with a positive 1 in the last character would have an A, a type O item would have a 1.

NOTES

Once a numeric item has been moved to an alphanumeric item, the above alphanumeric sub-string operations can be performed on the alphanumeric item.

Concatenating Alphanumeric

Alphanumeric items and literals can be combined or “concatenated” together to form one item. To concatenate, connect the literals or items with a period (.). Make sure there is at least one space before and after the period.

Look at a Fixed Asset example. Below is a list of fields from the Fixed Asset dataframe FAOASSET.

| <u>ITEM NAME</u> | <u>LTD</u> | <u>DESCRIPTION</u> |
|------------------|------------|--------------------|
| FA-LEVEL-5-VALUE | 4A | FUND |
| FA-LEVEL-6-VALUE | 3A | RCC |
| FA-LEVEL-7-VALUE | 3A | RCC + FRC |
| FA-LEVEL-8-VALUE | 2A | FRC |

The value of FA-LEVEL-5-VALUE contains the budget fund. The values in items FA-LEVEL-6-VALUE, FA-LEVEL-7-VALUE, and FA-LEVEL-8 VALUE contain the cost center. The budget fund and cost center combined construct the General Ledger center. The following code could be used to create work items containing cost center.

```
WORK WK-COST-CENTER (8A)  
WORK WK-GL-CENTER (12A)
```

```
WK-COST-CENTER = FA-LEVEL-6-VALUE . ;  
                FA-LEVEL-7-VALUE . ;  
                FA-LEVEL-8-VALUE
```

```
WK-GL-CENTER   = FA-LEVEL-5-VALUE . WK-COST-CENTER
```

Date Items

The following table gives the valid types and lengths for the available date formats.

NOTES

| Code | Length | Type | Format |
|------|--------|---------|----------|
| D1 | 5 | N O P Q | YYDDD |
| D2 | 6 | N O P Q | MMDDYY |
| D3 | 6 | N O P Q | DDMMYY |
| D4 | 6 | N O P Q | YYMMDD |
| D5 | 7 | N O P Q | YYYYDDD |
| D6 | 8 | A | MM/DD/YY |
| D7 | 8 | A | DD/MM/YY |
| D8 | 8 | A | YY/MM/DD |
| D9 | 8 | N O P Q | MMDDYYYY |
| D10 | 8 | N O P Q | DDMMYYYY |
| D11 | 8 | N O P Q | YYYYMMDD |
| D12 | 8 | N O P Q | YYYYDDMM |

The print format will tell IE how to display a date on a report, no matter what internal storage format is used.

You may want to change an item defined in one date format to an item defined as a different date format. To do this, create a work item in the desired format. Assign the date item to the new item. IE will convert the date for you. Below is an example:

```
WORK WK-JULIAN-DATE(7OD5)
WORK WK-NEW-DATE (8OD9)
```

```
WK-JULIAN-DATE = 2000182
WK-NEW-DATE = WK-JULIAN-DATE
```

(WK-NEW-DATE is now stored as 06302000)

When assigning a literal to a date item, the literal must be in the same format as the date item. In the example above, WK-JULIAN-DATE is defined as numeric, date format D5 – which is format YYYYDDD. The literal must also be in this format – 2000182. If the date item is defined as D6, D7, or D8, the literal must be enclosed in apostrophes because they are alphanumeric items. Below are some additional examples:

NOTES

| Date Format | Literal | Format |
|-------------|------------|----------|
| 5OD1 | 00182 | YYDDD |
| 6OD2 | 063000 | MMDDYY |
| 6OD3 | 300600 | DDMMYY |
| 6OD4 | 000630 | YYMMDD |
| 7OD5 | 2000182 | YYYYDDD |
| 8AD6 | '06/30/00' | MM/DD/YY |
| 8AD7 | '30/06/00' | DD/MM/YY |
| 8AD8 | "00/06/30" | YY/MM/DD |
| 8OD9 | 06302000 | MMDDYYYY |
| 8OD10 | 30032000 | DDMMYYYY |
| 8OD11 | 20000630 | YYYYMMDD |
| 8OD12 | 20003006 | YYYYDDMM |

Isolating Date Fields

Sometimes in a report you need to know the month, day, or year. The following technique can be used with any date format to isolate month, day, and year.

1. Create a work display numeric date item with no sign. Select the format MMDDYYYY.

WORK WK-DATE-O (8OD9)

2. Create an alphanumeric work item that will contain the date. Also create work items for month, day, and year.

WORK WK-DATE-A(8A)
 WORK WK-MONTH(2A)
 WORK WK-DAY(2A)
 WORK WK-YEAR(4A)

3. Move the date you want to isolate to a Type O numeric date item. This example will use the IE variable #SYSDATE as the date used to isolate the month, day, and year. Move the display numeric date to the alphanumeric item.

WK-DATE-O = #SYSDATE
 WK-DATE-A = WK-DATE-O

4. Sub-string the alphanumeric item into the individual day, month, and year work items.

WK-MONTH = WK-DATE-A (1 2)
 WK-DAY = WK-DATE-A (3 2)
 WK-YEAR = WK-DATE-A (5 4)

Calculations

NOTES

A calculation is made up of operands, operators, and a result. The operand can be numeric items, date items, or a numeric literal. The items can be from the data dictionary or work items. The operators are listed below:

| Operator | Operation |
|----------|----------------|
| + | ADDITION |
| - | SUBTRACTION |
| * | MULTIPLICATION |
| / | DIVISION |

The operands and operators will be on the right side of the calculation.

An equal sign (=) separates the operands and operators from the result. The result will be on the left side of the calculation. The results will be placed in a numeric item.

Below are some examples of simple calculations:

```

WORK WK-FIRST-QUARTER-BALANCE(15P2)
WK-FIRST-QUARTER-BALANCE = GL-PERIOD-1-BALANCE +;
                           GL-PERIOD-2-BALANCE +;
                           GL-PERIOD-3-BALANCE
    
```

If the calculation continues to more than one line, use a semi-colon to continue the statement. There should be at least one space between the operands, operators, and equal sign.

Calculations can be very simple to extremely complex. Calculations are evaluated from left to right, performing multiplication and division first, then addition and subtraction. Parentheses can be used to indicate the order you want the expression evaluated. Look at the example below:

$WK-RESULT = A + B * C$

If A=2, B=3, C=4, operand B would be multiplied by operand C first, then operand A added to the result. The result would be 14. The result would change if parentheses were used:

$WK-RESULT = (A + B) * C$

The result from this calculation would be 20.

Date Differences

Two dates can be subtracted resulting in the number of days between the two. The two date items can be in any date format – they do not have to be the same. The resulting item will be numeric. Below is an example of date differences:

NOTES

WORK WK-DAYS (70)
WK-DAYS = GL-POSTING-DATE - GL-LAST-ACTIVITY-DATE

This calculation would tell the number of days since the accounting distribution was last used.

Date Aging

If you want to extend a date into the future, you can add a numeric item or literal to a date field. The resulting field will be a date field. Suppose you have an invoice and know it will be due in 30 days. You want to know the date it will be due.

WK-DUE-DATE(7PD5) = AP-INVOICE-DATE + 30

ACTIVITY: Using SMCR

SCENARIO

You have been asked to write a quarterly expenditure report for your company. The report series will be AXX-QUARTERLY-BALANCES. Use the *Source Management (SMCR)* screen to create the new report series.

1. Use the GLCURRYR input dataframe.
2. Using the SELECT command, select your GL-COMPANY-ID 'XX01'.
3. Using the SELECT command, select the range of expenditure accounts:
 - SELECT GL-ACCOUNT-ID ('5' '599999999999')
4. Exclude the GL-CENTER-ID summary center of '999999999999'.
5. Create a work field WK-FUND using the WORK command. The LTD will be (4A). The fund is the first four characters of the GL-CENTER-ID.
6. Begin the report section by naming your report request using the REPORT command.
7. Order the report request by GL-COMPANY-ID, WK-FUND, GL-ACCOUNT-ID, and GL-CENTER-ID.
8. Create two work fields for the quarterly balances using the WORK command. The LTD will be (15P2).
9. Calculate the first quarter balance by adding GL-PERIOD-1-BALANCE, GL-PERIOD-2-BALANCE, and GL-PERIOD-3-BALANCE.

NOTES

10. Calculate the second quarter balance by adding GL-PERIOD-4-BALANCE, GL-PERIOD-5-BALANCE, and GL-PERIOD-6-BALANCE.
11. Create page headings by using the DEFINE PAGEHEADINGS command. The report title should be 'First and Second Quarter Balances'. Add a date and page numbers.
12. Using the LIST command, define the body of the report. From left to right, GL-ACCOUNT-ID, GL-ACCT-DESCRIPTION, GL-CENTER-ID, WK-FUND, first quarter balance, and second quarter balance.
13. Use the TOTAL option of the LIST command to total the first and second quarter balance.
14. Use the BY option of the LIST command to indicate you want totals by WK-FUND.
15. Once your report series is complete, use the CHECK command to verify your command syntax. Correct any errors. Save your report series.
16. Once all errors have been corrected, prepare your report series by entering SUBMIT in the command line.
17. View your preparation listing. Use the ACTION field to enter **RVLS**. Ensure the preparation was successful.
18. Run your report series. Use the ACTION field to enter **JSRU**. Submit your report series to run. Go back to RVLS to view the results.

See the following pages for screen print sample results of the preceding scenario.

```

EDIT REPORT SERIES: AXX-QUARTERLY-BALANCES                COLUMNS 001 072
COMMAND INPUT ==>                                       SCROLL ==> page
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-----
***** ***** TOP OF DATA *****
000100 INPUT GLCURRYR
000110
000120 * SELECTION CRITERIA
000200 SELECT GL-COMPANY-ID 'XX01'
000300 SELECT GL-ACCOUNT-ID ('5' '599999999999')
000301 EXCLUDE GL-CENTER-ID '999999999999'
000310
000320 * WORK FIELDS
000400 WORK WK-FUND(4A)
000500 WK-FUND = GL-CENTER-ID(1 4)
000600
000700 REPORT R1
000800 ORDER BY GL-COMPANY-ID;
000810           WK-FUND      ;
000900           GL-ACCOUNT-ID;
001001           GL-CENTER-ID
001010

ACTION: _____ 1 Help  3 End  5 Find  6 Change  7 Pg Bwd  8 Pg Fwd
    
```

NOTES

```
001020 DEFINE PAGEHEADINGS;
001030     'FIRST AND SECOND QUARTER BALANCES'
001040
001100 WORK WK-QTR-1 (15P2)
001200 WORK WK-QTR-2 (15P2)
001300
001400 WK-QTR-1 = GL-PERIOD-1-BALANCE + ;
001500             GL-PERIOD-2-BALANCE + ;
001600             GL-PERIOD-3-BALANCE
001700 WK-QTR-2 = GL-PERIOD-4-BALANCE + ;
001800             GL-PERIOD-5-BALANCE + ;
001900             GL-PERIOD-6-BALANCE
002000
002100 LIST GL-ACCOUNT-ID;
002110         GL-ACCT-DESCRIPTION;
002200         GL-CENTER-ID;
002210         WK-FUND           ;
002300         WK-QTR-1 HEADING IS 'QUARTER,1,BALANCE';

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd
```

```
EDIT REPORT SERIES: AXX-QUARTERLY-BALANCES          COLUMNS 001 07
COMMAND INPUT ==>                                SCROLL ==> PAG
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-
002400     WK-QTR-2 HEADING IS 'QUARTER,2,BALANCE';
002410 TOTAL;
002500     WK-QTR-1 ;
002600     WK-QTR-2 ;
002700 BY   WK-FUND
***** ***** BOTTOM OF DATA *****

ACTION: _____ 1 Help 3 End 5 Find 6 Change 7 Pg Bwd 8 Pg Fwd
```

NOTES

```

D B S INFORMATION EXPERT ----- VIEW A REPORT JSVRPS
SERIES: AXX-QUARTERLY-BALANCES      REPORT: R1      PAGE 00001 LINE 001
COMMAND INPUT ==>                      COLUMNS 001 079
-----1-----2-----3-----4-----5-----6-----7-----
                                      FIRST AND SECOND QUARTER BALAN

```

| ACCOUNT ID | ACCOUNT DESCRIPTION | CENTER ID | WK FUND |
|------------|---------------------------|-----------|---------|
| 531212 | SPA-REG SALARIES-RECPT | 2100 | 2100 |
| 531322 | CONTR EMPL PER IRS-RECPT | 2100 | |
| 531462 | EPA&SPA-LONGVTY PAY-REC | 2100 | |
| 531512 | SOCIAL SEC CONTRIB-RECPTS | 2100 | |
| 531522 | REG RETIRE CONTRIB-RECPTS | 2100 | |
| 531562 | MED INS CONTRIB-RECPTS | 2100 | |
| 531631 | WRKER COMP-MED PAYMENTS | 2100 | |
| 531651 | COMPENSATION TO BOARD MEM | 2100 | |
| 532110 | LEGAL SERVICES | 2100 | |
| 532120 | FINAN/AUDIT SERVICES | 2100 | |
| 532120422 | FIN/AUD-FINDERS FEES | 2100 | |
| 532121 | SECURITIES TRANS FEE | 2100 | |

ACTION: _____ PF: 3 End 4 Nxt Rpt 6 Top 7 Pg Bwd 8 Pg Fwd 9 Last Pg

```

D B S INFORMATION EXPERT ----- VIEW A REPORT JSVRPS
SERIES: AXX-QUARTERLY-BALANCES      REPORT: R1      PAGE 00001 LINE 001
COMMAND INPUT ==>                      COLUMNS 080 132
8-----9-----10-----11-----12-----13-
CES

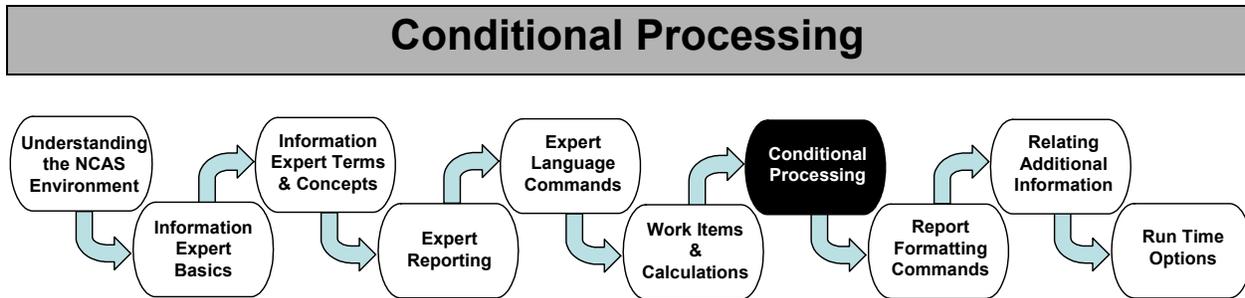
```

| QUARTER 1 BALANCE | QUARTER 2 BALANCE |
|-------------------|-------------------|
| 27,026.47 | 63,427.92 |
| 1,604.35 | 6,804.35 |
| 4.35 | 4.35 |
| 2,179.90 | 5,359.53 |
| 1,931.06 | 4,419.57 |
| 4,504.01 | 7,231.95 |
| 4.35 | 4.35 |
| 1,804.35 | 6,604.35 |
| 4.35 | 4.35 |
| 4.35 | 1,299.35 |
| 4.35 | 4.35 |
| 4.35 | 4.35 |

ACTION: _____ PF: 3 End 4 Nxt Rpt 6 Top 7 Pg Bwd 8 Pg Fwd 9 Last Pg

SUMMARY

You have learned about work fields and calculations. These can be used in the Common section or a report request. We know how to manipulate date items. We can sub-string alphanumeric and concatenate alphanumeric items. We are now ready to advance to the topic of Conditional Processing.



Overview

In the previous section, *Work Items and Calculations*, you created a report series in Source Management using work items. This section explains the use of Expert Language conditional commands and how to use them in a report series. The user will create a report series in Source Management using conditional statements, submit the report series to prepare, and run the report series.

Conditional Processing

There may be times when you want to perform a process based on a condition. For example, the first character of the General Ledger account determines the class of account – whether the account is an asset, liability, expense, etc. If the first character is a 1, you might want to assign a work item the value “ASSET”. If the first character is a “2”, assign the work item “LIABILITY” and so on.

There are three types of conditional processing offered by the Expert Language – basic conditional processing, control break processing, and processing on the first or last record. All conditional processing commands can be placed in the common section or report request section.

Basic Conditional Processing

Basic conditional commands process a series of Expert Language statements based on if the condition is true. You can process as many statements as necessary. To tell IE which statements are part of the condition, the last conditional statement is closed with the END command. There are two basic conditional commands – IF and WHEN.

IF/END Command

The IF/END command allows you to express a condition comparing two or more values. You can compare the value of an item to another item, literal, or system variable (for example, #SYSDATE). The following are operators used to establish test conditions:

NOTES

| | |
|----|--------------------------|
| EQ | Equal To |
| NE | Not Equal To |
| GT | Greater Than |
| GE | Greater Than or Equal To |
| LT | Less Than |
| LE | Less Than or Equal To |

If you are comparing an alphanumeric item to a literal, the literal must be enclosed in apostrophes. If the item is numeric, the literal must be numeric and can include a sign and decimal points. Remember that numeric literals are not enclosed in apostrophes.

IF/END commands can appear in the common section or in report requests.

The format for the command is:

```
IF CONDITIONAL-STATEMENT
   ie statements - true
END
```

Here is a simple set of Expert Language commands using the IF/END statement:

```
WORK WK-CLASS (1A)
WORK WK-CLASS-TITLE (12A)

WK-CLASS = GL-ACCOUNT-ID (1 1)

IF WK-CLASS EQ '1'
  WK-CLASS-TITLE = 'ASSET'
END

IF WK-CLASS EQ '2'
  WK-CLASS-TITLE = 'LIABILITY'
END

IF WK-CLASS EQ '3'
  WK-CLASS-TITLE = 'FUND BALANCE'
END

IF WK-CLASS EQ '4'
  WK-CLASS-TITLE = 'REVENUE'
END
```

ELSE Command

The IF/END commands tell IE what to do if the condition is true. The ELSE option can be used with the IF/END command to tell IE what to do if the condition is false.

The format of the command with the ELSE option is:

NOTES

```
IF CONDITIONAL-STATEMENT
  IE STATEMENTS - TRUE
ELSE
  ie statements - false
END
```

Below is an example of the IF/ELSE/END command:

WORK WK-DR-CR-CODE (2A)

```
IF GL-PERIOD-1-BALANCE LT 0
  WK-DR-CR-CODE = 'CR'
ELSE
  WK-DR-CR-CODE = 'DR'
END
```

The conditions on the IF/END commands can be compound. Compound conditions are multiple conditions connected by AND or OR, depending on the logic you need. When using compound conditions, IE evaluates the AND conditions first, then tests OR conditions. Use parentheses to enclose condition statements to insure correct logic processing.

The following is an example of a compound condition:

```
WORK WK-NEW-CENTER (12A)
WORK WK-FUND (4A)
WORK WK-RCC (4A)

WK-FUND = GL-CENTER-ID (1 4)
WK-RCC = GL-CENTER-ID (5 4)

IF (WK-FUND EQ '1410' OR '1420' ) AND (WK-RCC EQ '2000')
  WK-NEW-CENTER = '14101234'
END
```

Nesting IF conditions is also accepted in the Expert Language. Nested conditions consist of several IF statements, all which depend on the previous condition being true. Each IF must have its own END statement to signify the end of statements to execute. Each IF condition can also have an ELSE statement to execute when the condition is false. The following is an example of a nested IF.

NOTES

```
WORK WK-FUND-1 (1A)  
WK-FUND-1 = WK-FUND (1 1)
```

```
IF WK-FUND-1 EQ '1'  
  IF WK-FUND EQ '1410'  
    WK-NEW-CENTER = '1420'  
  ELSE  
    WK-NEW-CENTER = '1423'  
  END  
ELSE  
  WK-NEW-CENTER = '2100'  
END
```

 When creating a report series with IF conditions, a good programming technique is to indent the statements to execute under the condition. Indenting is not required but makes the code easier to read and debug.

WHEN/OTHERWISE Command

The WHEN command is used to test case logic. Case logic is when a single item can have several different values and you want a different action for each one. It can only be used to test if an item equals a specific value. You cannot test for greater than or less than conditions.

The format of the command is:

```
WHEN ITEM IS VALUE1  
  IE STATEMENTS - TRUE  
IS VALUE2  
  ie statements – true  
IS value3  
  ie statements – true  
END
```

The WHEN command must be terminated with an END statement. The first IS clause is considered part of the WHEN command line – if you want to place it on a separate line, you must use a semicolon for continuation. The other IS clauses are stand-alone and do not require semi-colons, unless the value clause needs to be continued. An OR can connect multiple values.

Here is an example of the WHEN command:

NOTES

```
WORK WK-ACCOUNT-TITLE (12A)
WK-ACCOUNT-1(1A) = GL-ACCOUNT-ID (1 1)
```

```
WHEN WK-ACCOUNT-1;
IS '1'
    WK-ACCOUNT-TITLE = 'ASSET'
IS '2'
    WK-ACCOUNT-TITLE = 'LIABILITY'
IS '3'
    WK-ACCOUNT-TITLE = 'FUND BALANCE'
IS '4'
    WK-ACCOUNT-TITLE = 'REVENUE'
IS '5'
    WK-ACCOUNT-TITLE = 'EXPENSE'
IS '0' OR '8'
    WK-ACCOUNT-TITLE = 'ENCUMBRANCE'
END
```

The OTHERWISE option can be used to catch all values not specified on an IS statement. Here is an example of the WHEN command with the OTHERWISE option, combined with an IF statement:

```
IF WK-FUND-1 EQ '1'
    WHEN WK-ROLL-1;
    IS '1000'
        WK-FUND = '1000'
    IS ' 000'
        WK-FUND = WK-FUND (1 1) . '000'
    IS ' 00'
        WK-FUND = WK-FUND (1 2) . '00'
    IS ' 0'
        WK-FUND = WK-FUND (1 3) . '0'
    OTHERWISE
        WK-FUND = WK-FUND
    END
ELSE
    OTHER STATEMENTS
END
```

WALKTHROUGH: Conditional Processing Commands

SCENARIO

You need to add a title for the type of fund.

1. In Source Management, select report series AXX-QUARTERLY-BALANCES.
2. In the report request, create a work field called WK-FUND-1. Using sub-string operations, parse out the first character of WK-FUND.

NOTES

3. In the report request, create a work field called WK-FUND-TITLE based on the following conditions. The logic can be either IF statements or WHEN/OTHERWISE statements:
 - Assign the title 'General Funds' to funds that begin with a 1.
 - Assign the title 'Special Funds' to funds that begin with a 2.
 - Assign the title 'Federal Funds' to funds that begin with a 3.
4. Change the LIST command. Remove GL-CENTER-ID. Add WK-FUND-TITLE to the LIST command after WK-FUND.
5. Save the report series. Check for any errors. Submit the report series for preparation.
6. Go to Report Viewing to ensure the preparation was successful. If so, go to Job Submission and run your report. Return to Report Viewing to view your results.

Control Break Processing

Control break processing commands process a series of Expert Language statements based on the change in value of a sequenced item. There are two control break commands – WHEN CHANGE OCCURS and WHEN CHANGE SENSED.

Control breaks are established by the ORDER BY command. Items used on the ORDER BY command will be available for control break processing by the WHEN CHANGE SENSED/OCCURS commands. If an ORDER BY command is not used, IE will check the dataframe to see if control breaks were established. The ORGANIZED BY clause of the dataframe establishes items available for control break processing.

WHEN CHANGE OCCURS Command

The WHEN CHANGE OCCURS command is used to detect a control break just before it has changed. IE remembers the values of the control break items. When a change occurs, after the first record containing the change is read, the Expert Language statements within the conditional processing command will execute. An END statement is used to terminate the statements that will execute in this conditional process.

The format of the command is:

```
WHEN CHANGE OCCURS IN item-name  
    ie statements  
END
```

The *item-name* must be a control break item.

A common use of the WHEN CHANGE OCCURS command is to start a new page or print headings – anything you want to do *at the beginning* of the control break. The following is an example of the WHEN CHANGE OCCURS processing:

WHEN CHANGE OCCURS IN GL-COMPANY-ID
NEWPAGE
END

NOTES

| <u>COMPANY</u> | <u>ACCOUNT</u> | |
|----------------|----------------|---------------------------------|
| AAAA | 533120 | |
| AAAA | 533120 | |
| AAAA | 533120 | ← When change OCCURS in Account |
| AAAA | 533130 | |
| AAAA | 533130 | ← When change OCCURS in Account |
| | | ← When change OCCURS in Company |
| BBBB | 533120 | |

WHEN CHANGE SENSED Command

The WHEN CHANGE SENSED command is used to detect when a control break is about to change. After the last record of a control break, before the next record is read to create the change, the Expert Language commands within the conditional processing will execute. An END statement is used to terminate the statements to execute for these conditional processes.

The format of the command is:

```

WHEN CHANGE SENSED IN item-name
    ie statements
END
    
```

The *item-name* must be a control break item.

A common use for the WHEN CHANGE SENSED command is to print totals for a control break – or anything you want to do at the end of a control break.

The following is a display of the WHEN CHANGE commands:

| <u>COMPANY</u> | <u>ACCOUNT</u> | |
|----------------|----------------|---------------------------------|
| AAAA | 533120 | |
| AAAA | 533120 | |
| AAAA | 533120 | ← When change SENSED in Account |
| AAAA | 533130 | |
| AAAA | 533130 | ← When change SENSED in Account |
| | | ← When change SENSED in Company |
| BBBB | 533120 | |

NOTES

Look at another example with totals:

```
WHEN CHANGE SENSED IN GL-COMPANY-ID  
<Print total $>  
END
```

| <u>COMPANY</u> | <u>\$\$</u> | |
|----------------|-------------|--------------|
| AAAA | 5 | } Total - 11 |
| AAAA | 4 | |
| AAAA | 2 | |
| BBBB | 3 | } Total - 9 |
| BBBB | 6 | |
| CCCC | 2 | } Total - 2 |

FIRST TIME DO/LAST TIME DO Command

FIRST TIME DO and LAST TIME DO processing commands tell IE to execute a series of Expert Language commands the first time or last time the report series or report request processes. There are two commands used for this conditional processing - FIRST TIME DO and LAST TIME DO.

The FIRST TIME DO command is invoked before the first record is processed. Valid Expert Language commands can be executed within the FIRST TIME DO. Commands that are not allowed are ORDER BY, SELECT, EXCLUDE, WHEN CHANGE SENSED/OCCURS, and LIST. The FIRST TIME DO should be placed before other processing statements. If the command is placed in the common section, the statements will execute when the first input record is processed. If the command is placed in a report request, it will be executed when the first extract record is processed. The processing statements for the FIRST TIME DO command are terminated by an END statement that appears on a line by itself. A common use for the FIRST TIME DO command is to initialize work fields or to establish report titles – anything that should be processed only one time at the beginning of the process.

Below is an example of the FIRST TIME DO command:

```
WORK WK-COUNTER (3N)  
FIRST TIME DO  
    WK-COUNT = 0  
END
```

The LAST TIME DO command is used to execute commands after the last record has been processed. Valid Expert Language commands can be executed within the LAST TIME DO command. The LAST TIME DO command should be placed after other processing statements. If the command is placed in the common section, the statements will execute when the last input record is processed. If the command is placed in a report request, it will be executed when the last extract record is processed. An END statement is used to terminate the LAST TIME DO command and appears on a line by itself. Commands that are not allowed are ORDER BY, SELECT, EXCLUDE, WHEN CHANGE SENSED/OCCURS, and LIST. A common use for the LAST TIME DO command is to print a grand total

for a report – anything that should be executed at the very end of the process.

NOTES

Below is an example of the LAST TIME DO command:

```
LAST TIME DO
  <Print Grand Total>
END
```

EXERCISE

Complete the following statements:

1. Use the WHEN CHANGE OCCURS command to

2. Use the WHEN CHANGE SENSED command to

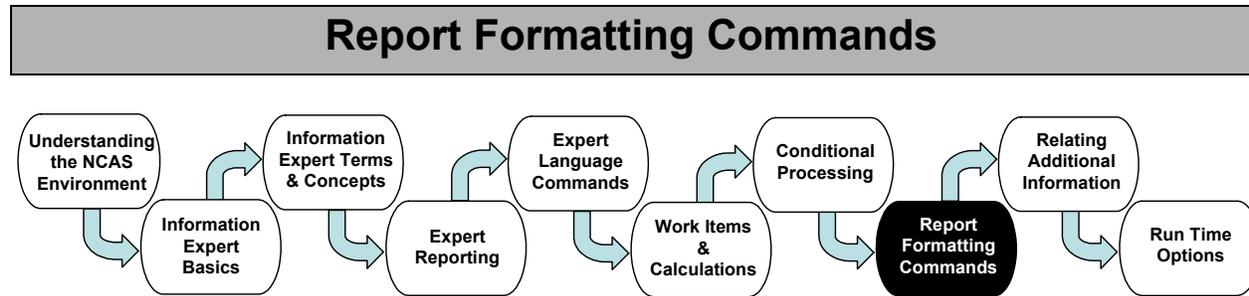
3. Use the FIRST TIME DO command to

4. Use the LAST TIME DO command to

5. The object of a WHEN CHANGE command must be an item on the _____ command or part of the _____ in the dataframe definition.
6. Can the FIRST TIME DO and LAST TIME DO commands be used
 - In the Common section? _____
 - In the Report Request section? _____

SUMMARY

You have learned basic conditional processing commands IF and WHEN. You have also learned control break processing commands WHEN CHANGE OCCURS and WHEN CHANGE SENSED. FIRST TIME DO and LAST TIME DO commands were also introduced. We are now ready to learn about report formatting Expert Language commands.



Overview

In the previous section, *Conditional Processing*, you used the basic conditional processing commands. The control break processing commands and FIRST TIME DO and LAST TIME DO commands are used when creating a report in specific formats. This section explains how to explicitly design a report using the PRINT, TOTAL, and NEWPAGE commands. The user will create a report series in Source Management using explicit formatting commands, submit the report series to prepare, and run the report series.

Report Formatting

As we have seen in the previous sections, the LIST command automates most of the report design functions. There may be times that you want to have complete control over the format of a report. If you are designing a form or complex report, the LIST command's automation might not be appropriate. There is another command used to format a report – the PRINT command.

PRINT Command

The PRINT command can be used to print the body of a report. The PRINT command does NOT generate column headings. The PRINT command does NOT generate subtotals and totals. The PRINT command can only be located in a report request. It cannot be located in the common section. You can have as many PRINT commands as necessary to define your report. You can also use the PRINT command in conjunction with the LIST command.

The PRINT command gives you complete control over the information on your report. When designing a report, you will need to know at what specific column your information will start. You will need to know the length of the item to be printed.

NOTES

One example of the PRINT command is:

```
PRINT AT 01  GL-COMPANY-ID;  
        AT 10  GL-ACCOUNT-ID;  
        AT 30  GL-CENTER-ID
```

This will print the value of GL-COMPANY-ID at column 1, the value of GL-ACCOUNT-ID at column 10, and the value of GL-CENTER-ID at column 30.

 If a command extends to more than one line, use a semicolon to indicate the command is continued.

The AT option is used to give a specific starting location for an item. The starting location and the length of an item make up the number of columns required for printing. The next item cannot begin before the requirement of the previous item. Look at another example.

```
PRINT AT 01  GL-COMPANY-ID  ; LENGTH - 4)  
        AT 10  GL-ACCOUNT-ID  ; LENGTH - 18)  
        AT 25  GL-CENTER-ID   (LENGTH - 12)  
** IEL-0504 ITEM 03 OVERLAYS THE PREVIOUS ITEM  
    IN LINE 01
```

The item GL-COMPANY-ID begins at location 1, with a length of four characters. The next item to print cannot begin before column 5. The item GL-ACCOUNT-ID begins at location 10, with a length of 18 characters. The next item cannot begin before column 28. Since the item GL-CENTER-ID begins at column 25, an error has occurred. Error message IEL-0504 will be displayed at the end of the command if any items overlap. This must be corrected before running the report series.

The number of characters to print can be changed by using a print format. Print formats are included by using the AS option. Refer to the *Information Expert Terms & Concepts* section to review the information on print formats.

Below is an example of the AS option in the PRINT command:

```
PRINT AT 01  GL-COMPANY-ID;  
        AT 10  GL-ACCOUNT-ID AS 'XXXXXXXXXXXX';  
        AT 25  GL-CENTER-ID
```

The print format directs the GL-ACCOUNT-ID to print only eleven characters. The starting location for the GL-ACCOUNT-ID is 10 and the length of the print format is 11 so the next field must start after column 21. Adding the print mask to the above example corrects the error.

The PRINT command will allow literals to be printed as well as items.

```
PRINT AT 01  'COMPANY:'  ;  
        AT 10  GL-COMPANY-ID
```

The results of the above PRINT command would be:

```
COMPANY: 1401
```

The PRINT command can print multiple lines. The NEXT LINE option is used to define additional print lines.

NOTES

```
PRINT AT 01 'COMP:' ;  
      AT 10 'ACCOUNT:' ;  
      AT 25 'CENTER:' ;  
      NEXT LINE ;  
      AT 01 GL-COMPANY-ID ;  
      AT 10 GL-ACCOUNT-ID AS 'XXXXXXXXXXXX' ;  
      AT 25 GL-CENTER-ID
```

The result of the above PRINT command would be similar to this:

```
COMP: ACCOUNT:      CENTER:  
1401  111250        1000  
COMP: ACCOUNT:      CENTER:  
1401  111260        1000
```

DEFINE PAGEHEADINGS Command

The PRINT command does not automate column headings. Include column headings on the DEFINE PAGEHEADINGS command for reports that use the PRINT command.

An example of the DEFINE PAGEHEADING command along with the PRINT command is shown below:

```
DEFINE PAGEHEADINGS;  
  'DATE: ' #SYSDATE;  
  'OFFICE OF THE STATE CONTROLLER';  
  'PAGE: ' #PAGE-NUMBER;  
  NEXT LINE;  
  'VALID ACCOUNTING DISTRIBUTIONS';  
  NEXT LINE;  
  ADVANCE 2;  
  AT 01 'COMPANY';  
  AT 10 'ACCOUNT';  
  AT 25 'CENTER';  
  NEXT LINE;  
  AT 01 '_____';  
  AT 10 '_____';  
  AT 25 '_____';  
  ADVANCE 2  
  
PRINT AT 01 GL-COMPANY-ID;  
      AT 10 GL-ACCOUNT-ID AS 'XXXXXXXXXXXX';  
      AT 25 GL-CENTER-ID
```


NOTES

The TOTAL command establishes internal work items used to accumulate totals and subtotals. In the above example, GL-PERIOD-1-BALANCE will be subtotaled for items GL-CENTER-ID, GL-ACCOUNT-ID, and GL-COMPANY-ID. These internal work fields are given unique item names so they can be referenced in other Expert Language commands. These names are constructed by concatenating the subtotal item name to the accumulated item. In the above example, the internal work item holding the accumulated total for the GL-CENTER-ID would be:

GL-CENTER-ID.GL-PERIOD-1-BALANCE

The internal work item holding the accumulated total for the GL-ACCOUNT-ID would be:

GL-ACCOUNT-ID.GL-PERIOD-1-BALANCE

The internal work item holding the accumulated total for the GL-COMPANY-ID would be:

GL-COMPANY-ID.GL-PERIOD-1-BALANCE

The internal work item holding the grand total would be:

TOTAL.GL-PERIOD-1-BALANCE

The totals are reset to zero automatically when the value changes in the control break item. You do not have to reset these accumulators.

Now that we know how to refer to the totals and subtotal items, we need to issue specific commands to print these on our report. The conditional processing command WHEN CHANGE SENSED can be used to print subtotals. The LAST TIME DO command can be used to print a grand total.

NOTES

The report would now look like this:

```
PRINT AT 01 GL-COMPANY-ID;
        AT 10 GL-ACCOUNT-ID AS 'XXXXXXXXXXXX';
        AT 28 GL-CENTER-ID;
        AT 50 GL-PERIOD-1-BALANCE

TOTAL   GL-PERIOD-1-BALANCE;
        BY GL-COMPANY-ID;
           GL-ACCOUNT-ID;
           GL-CENTER-ID

WHEN CHANGE SENSED IN GL-CENTER-ID
        PRINT AT 01 'CENTER TOTAL: ' ;
           AT 50 GL-CENTER-ID.GL-PERIOD-1-BALANCE
END

WHEN CHANGE SENSED IN GL-ACCOUNT-ID
        PRINT AT 01 'ACCOUNT TOTAL: ' ;
           AT 50 GL-ACCOUNT-ID.GL-PERIOD-1-BALANCE
END

WHEN CHANGE SENSED IN GL-COMPANY-ID
        PRINT AT 01 'COMPANY TOTAL: ' ;
           AT 50 GL-COMPANY-ID.GL-PERIOD-1-BALANCE
END

LAST TIME DO
        PRINT AT 01 'REPORT TOTAL: ';
           AT 50 TOTAL.GL-PERIOD-1-BALANCE
END
```

EXERCISE

SCENARIO

Create the accumulated total name for each of the TOTAL commands below:

```
TOTAL   WK-AMOUNT;
        BY GL-COMPANY-ID;
           GL-ACCOUNT-ID;
           WK-FUND
```

1. _____
2. _____
3. _____
4. _____

TOTAL WK-YTD-EXPENDITURES;
WK-MTD-EXPENDITURES;
WK-CUR-EXPENDITURES;
BY WK-BUDGET-CODE;
WK-ACCOUNT;
WK-FUND

NOTES

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

NEWPAGE Command

The NEWPAGE command tells IE to start the next print line on a new page. The format of the command is:

```
NEWPAGE
```

Normally, the NEWPAGE command is used in conjunction with the WHEN CHANGE OCCURS command. The following is an example of the NEWPAGE command:

```
WHEN CHANGE OCCURS IN GL-COMPANY-ID  
NEWPAGE  
END
```

NOTES

ACTIVITY

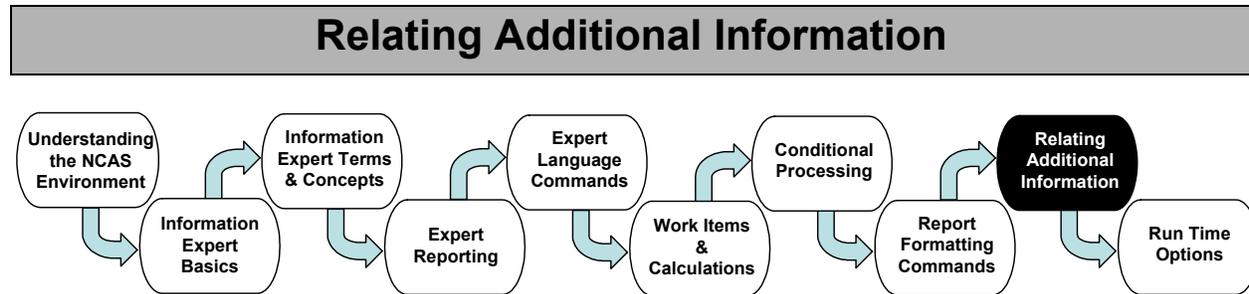
SCENARIO

In this scenario, you will use the conditional command WHEN CHANGE SENSED. A report has been created that calculates quarterly balances by class. You want to modify this report to print a total for each class.

1. In Source Management, go to SMUT and copy the report series AXX-QUARTERLY-REPORT-BY-CLASS from IE03 to your library.
2. Change the default library from IE03 back to your user library (USERXX). Press **Enter**. Rename the report series. Replace XX with your identifier. Go to SMLS for editing.
3. Change the company SELECT command to select your assigned company.
4. In the report request, add a WHEN CHANGE SENSED and a PRINT command. The PRINT command should print the class, class title, the accumulated first quarter balance, and the accumulated second quarter balance for each class.
5. Save the report series. Check for any errors. Submit the report series for preparation.
6. Go to Report Viewing to ensure the preparation was successful. If so, go to Job Submission and run your report. Return to Report Viewing to view your results.

SUMMARY

You have learned to format a report using the PRINT and TOTAL commands. We are now ready to learn how to access secondary dataframes in the Expert Language.



Overview

In the previous section, *Report Formatting Commands*, you created a report series using the PRINT command and control break processing. This section explains how to access secondary dataframes to pull in additional data. The user will create a report series in Source Management using the RELATE command.

Relating Additional Information

We have learned the INPUT command defines the primary dataframe. Any item included in the primary dataframe can be used in the report series. Sometimes you need data from other dataframes too. For example, we have printed the account and account description in a previous example. We have printed the center – but no center description. If you review the dataframe GLCURRYR/GLOPENYR that was selected on the INPUT command, you will notice that the center description is not on that dataframe. There is another dataframe delivered, GLMISDES, which contains the center descriptions. We will need to include this as a secondary dataframe. To use a dataframe as a secondary dataframe, we will use the RELATE command.

RELATE Command

The RELATE command allows data to be retrieved from a secondary dataframe. Information from the secondary dataframe is based on values from the primary dataframe or from work items. Only dataframes with the KEY IS clause defined will be allowed in the RELATE command. The KEY IS clause is found on the *File Attributes* screen on the System Administration Dataframe Directory List (SALF).

 Refer to the *Information Expert Terms & Concepts* section to review the section on the System Administration Dataframe Directory List.

NOTES

Two forms of the RELATE command are:

RELATE DATAFRAME

RELATE DATAFRAME **WHERE**;

ITEM-NAME1 = ITEM-NAME2 **AND**;

ITEM-NAME3 = ITEM-NAME4 (etc)

Use of the WHERE clause is based on the item names in the primary dataframe and the associated items in the secondary dataframe. ITEM-NAME1 and ITEM-NAME3 can be work items, items from the primary dataframe, or items from another secondary dataframe. ITEM-NAME2 and ITEM-NAME4 are the secondary dataframe that contain the same information as ITEM-NAME1 and ITEM-NAME3.

 Item names containing similar information may be identified by different names. AP-VENDOR-NUMBER is the item name containing the vendor number in Accounts Payable dataframes. CV-VENDOR-NUMBER is the item name containing the vendor number in Common Components dataframes. To relate dataframes using these item names, the WHERE clause would have to be used.

When using the WHERE clause, items containing the same information must have the same Length, type, and decimal places or data format (LTD). In the above example, ITEM1 and ITEM2 must match LTDs.

Look at the following example. Assume a report series is using dataframe GLACCTPL as the primary dataframe. The SALF screen below lists some of the items from this dataframe.

```

D B S  INFORMATION EXPERT ----- LIST CONTENTS OF DATAFRAME GLACCTPL JSALFD
FIND DATA NAME:
ITEM / GROUP NAME                LVL  DISPL  TYPE  FLD  NBR  DEC  DT
-----
GL-ACCOUNT-POLICY-RECORD         00    0    A    160
GL-COMPANY-ID                    01    0    A     4
GL-CHARGE-TYPE                   01    4    A     1
GL-ACCOUNT-ID                    01    5    A    18
FILLER                            01   23    A    15
GL-RECORD-ID                     01   38    A     1
FILLER                            01   39    A     2
GL-ACCT-DESCRIPTION              01   41    A    25
GL-CONTROL-ACCOUNT-ID            01   66    A    18
GL-ACCT-TYPE                     01   84    A     1
GL-CLASS-CODE                    01   85    O     1   1  0
GL-GROUP-CODE                    01   86    O     1   1  0
GL-NORMAL-SIGN-CODE              01   87    O     1   1  0
GL-ACCT-REQUIRED-ENTRY-IND       01   88    A     1
GL-ACCT-BALANCE-UPPER-LIMIT      01   89    P     8   15  2
ACTION: _____  1 Help  3 End  4 File Attr  6 Top  7 Pg Bwd  8 Pg Fwd
    
```

To complete our report, we need to know the current fiscal year for the company. This information is not contained in the primary dataframe. Look at dataframe GLCOMPPL. You will see the item GL-CURRENT-FISCAL-YEAR.

NOTES

```

D B S INFORMATION EXPERT ----- LIST CONTENTS OF DATAFRAME GLCOMPPL JSALFD
FIND DATA NAME:
ITEM / GROUP NAME          LVL  DISPL  TYPE  FLD  NBR  DEC  DT
-----
                           SIZE  DIG  POS  CD  OCCS
-----
GL-COMPANY-POLICY-RECORD   00    0    A    160
GL-COMPANY-ID              01    0    A     4
FILLER                     01    4    A    34
GL-RECORD-ID              01   38    A     1
FILLER                     01   39    A     5
GL-SEQUENTIAL-PROCESS-OPTION 01   44    A     1
GL-AGGREGATES-OPTION      01   45    A     1
GL-NUMBER-OF-DAYS-LATE-ALERT 01   46    O     2    2    0
GL-POSTING-DATE           01   48    P     4    7    0    5
GL-CURRENT-FISCAL-YEAR     01   52    O     4    4    0
FILLER                     01   56    A     1
GL-NBR-ACTV-SEGMENTS-ALLOWED 01   57    O     1    1    0
GL-NUMBER-OF-PERIODS-OPEN  01   58    O     2    2    0
GL-CURRENT-PERIOD         01   60    O     2    2    0
GL-NBR-PERIODS-ALLOWED-OPEN 01   62    O     2    2    0

ACTION: _____ 1 Help  3 End  4 File Attr  6 Top  7 Pg Bwd  8 Pg Fwd
    
```

GL-CURRENT-FISCAL-YEAR

Before going any further, we need to insure we can relate to this dataframe. To verify this, we need to check the record attributes. Below is a screen of the attributes for the GL-COMPANY-POLICY-RECORD.

```

D B S INFORMATION EXPERT ----- DISPLAY RECORD ATTRIBUTES JSALFA
DATAFRAME NAME: GLCOMPPL
RECORD NAME: GL-COMPANY-POLICY-RECORD
LEVEL = GL-COMPANY-ID
IDENTIFIED BY: GL-RECORD-ID EQ 'A' AND GL-COMPANY-ID NE ' '
KEY IS: GL-COMPANY-ID ' ' 'A' ' '
ACTION: _____ PF1 Help  PF3 End
    
```

KEY IS

The KEY IS clause provides us with the information necessary to relate to this dataframe. We see there is one item in the KEY IS clause – GL-COMPANY-ID. The other fields are static and will not change. To use the RELATE command, we need to supply a value for the company. Every time the RELATE command is executed, the current value for the company will be used to match a record on the secondary dataframe. If a match is found, all items on the secondary dataframe are available to the report series. If a match is not found, the record from the secondary dataframe is initialized.

NOTES

In our example, because the item name containing the company in our primary dataframe is GL-COMPANY-ID and the item name containing the company in the secondary dataframe is also GL-COMPANY-ID, we can use the simple form of the RELATE command:

```
INPUT GLACCTPL
RELATE GLCOMPPL
REPORT ACCTLST
LIST  GL-COMPANY-ID;
      GL-ACCOUNT-ID;
      GL-ACCT-DESCRIPTION;
      GL-CURRENT-FISCAL-YEAR
```

Look at an example where the item names are different. Assume the primary dataframe is GLOPENYR. This dataframe contains records for company, accounts, and centers. On the account record we find the account description. But the center description is not on this dataframe. Dataframe GLRSPDES contains a record that holds the center description. First, check the record attributes to see if the dataframe is allowed on a RELATE command.

```
D B S  INFORMATION EXPERT  -----  DISPLAY RECORD ATTRIBUTES  JSALFA

DATAFRAME NAME: GLRSPDES

RECORD NAME: GL-RESP-CENTER-DESC-RECORD

LEVEL =  GL-DESCRIPTION-KEY-POS-7-18

IDENTIFIED BY:  GL-CUSTOM-CTRL-FILE-SECTION  EQ  '8'  AND
                GL-MISC-DEFINITION-ID  EQ  'CD'  AND
                GL-DESCRIPTION-KEY-POS-1-6  EQ  ' '  AND
                GL-DESCRIPTION-TYPE  EQ  ' '

KEY IS:  '8'  GL-COMPANY-ID  'CD'  ' '  '  GL-DESCRIPTION-KEY-POS-7-18

ACTION:  _____  PF1 Help  PF3 End
```

Since the KEY IS clause is present, we can use this dataframe in a RELATE command. Next we need to look at the data that we need to supply to the RELATE command. There are two items GL-COMPANY-ID and GL-DESCRIPTION-KEY-POS-7-18. There is not an item called GL-DESCRIPTION-KEY-POS-7-18 in the primary dataframe. In this case we need to use the WHERE clause. The WHERE clause is used to tell the RELATE command that we have the same information but different names. GL-DESCRIPTION-KEY-POS-7-18 is another name for GL-CENTER-ID. To use the GLRSPDES as a secondary dataframe, we would issue this RELATE command:

```
INPUT GLOPENYR
RELATE GLRSPDES WHERE;
      GL-CENTER-ID = GL-DESCRIPTION-KEY-POS-7-18
```

The item GL-DESCRIPTION contains the center description and can be used in the report series.

NOTES

Items from secondary dataframes related in the common section can be used by any report request. Items from secondary dataframes related in a report request can only be used by that particular report request. If more than one report request utilizes items from the same secondary dataframe, it may be more efficient to move the RELATE command to the common section instead of including it in every report request.

RELATE BY Option

There is an efficiency option on the RELATE command. The form of the command is:

```
RELATE DATAFRAME BY ITEM-NAME WHERE;  
    ITEM-NAME1 = ITEM-NAME2 AND;  
    ITEM-NAME3 = ITEM-NAME4
```

The BY option tells the RELATE command only to relate when the value of item ITEM-NAME changes. ITEM-NAME must be a control break item— an item that is found on the ORDER BY command or in the natural order of the dataframe. For example, the Accounts Payable invoice master files are ORGANIZED by paying entity, vendor number, and vendor group number. So all the invoices for a particular vendor will be together. If we want the vendor name on our report, we only need to RELATE one time for each vendor group number – not every time. The RELATE command would look like this:

```
RELATE CVEND01 BY AP-VENDOR-GROUP-NUMBER WHERE;  
    AP-PAYING-ENTITY = CV-PAYING-ENTITY AND;  
    AP-VENDOR-NUMBER = CV-VENDOR-NUMBER AND;  
    AP-VENDOR-GROUP-NUMBER = CV-VENDOR-GROUP-NUMBER
```

NOTES

EXERCISE

Complete the RELATE command for the following dataframes:

1. Dataframe: APINVC01 – Invoice master Dataframe
ITEMS: AP-PAYING-ENTITY
AP-VENDOR-GROUP-NUMBER
AP-VENDOR-NUMBER

```
D B S INFORMATION EXPERT ----- DISPLAY RECORD ATTRIBUTES JSALFA

DATAFRAME NAME: CVEND01
RECORD NAME: CV-VENDOR-SETUP-RECORD
LEVEL = CV-VENDOR-GROUP-NUMBER
IDENTIFIED BY: CV-RECORD-TYPE EQ '01'
KEY IS: CV-PAYING-ENTITY '01' CV-VENDOR-NUMBER CV-VENDOR-GROUP-NUMBER
      ' ' ' ' ' '
      ' ' ' ' ' '

ACTION: _____ PF1 Help PF3 End
```

Dataframe: CVEND01 – Vendor Information

Create the relate to CVEND01

2. Dataframe: GLCURRYR – Current Year Balances
ITEMS: GL-COMPANY-ID

NOTES

```
D B S  INFORMATION EXPERT  -----  DISPLAY RECORD ATTRIBUTES  JSALFA

DATAFRAME NAME: GLFISCAL

RECORD NAME: GL-CAL-CURRENT-YEAR-RECORD

LEVEL =  GL-COMPANY-ID

IDENTIFIED BY:  GL-CUSTOM-CTRL-FILE-SECTION  EQ  '8'  AND
                GL-MISC-DEFINITION-ID  EQ  'FY'  AND
                GL-CAL-CURR-FISCAL-YEAR  EQ  0  AND
                GL-CAL-CURR-SEQUENCE-NUMBER  EQ  0

KEY IS:  '8'  GL-COMPANY-ID  'FY'  '0000'  '00'  '      '

ACTION:  _____  PF1 Help  PF3 End
```

Dataframe: GLFISCAL – Fiscal Calendar Definitions

Create the relate to GLFISCAL

3. Dataframe: GLOPENYR – Open Year Balances

ITEMS: GL-COMPANY-ID
GL-CENTER-ID
WK-COMPANY-FUND (Work Item)
GL-CURRENT-FISCAL-YEAR

NOTES

```
D B S  INFORMATION EXPERT  -----  DISPLAY RECORD ATTRIBUTES  JSALFA

DATAFRAME NAME: C-MASTER
RECORD NAME: C-MASTER-RECORD
KEY IS: '8' 'AAAA' 'CD' ' ' ' C-MASTER-COMPANY-FUND C-MASTER-FY

ACTION: _____ PF1 Help PF3 End
```

Dataframe: C-MASTER – Master Table Budget Code

Relate Conditional Processing

There are two statements that can be used to determine if the RELATE command was successful. The .PRESENT and .NOT-PRESENT indicators are useful conditions in an IF statement following a RELATE command. These indicators are used to check to see if particular records in the related dataframe exist.

Look at an example:

```
INPUT GLOPENYR
RELATE GLRSPDES WHERE;
      GL-CENTER-ID = GL-DESCRIPTION-KEY-POS-7-18
IF GL-RESP-CENTER-DESC-RECORD.PRESENT
      WK-CENTER-DESCRIPTION (30A) = GL-DESCRIPTION
ELSE
      WK-CENTER-DESCRIPTION = 'DESCRIPTION NOT FOUND'
END
```

The record name is concatenated to the conditional indicators .PRESENT and .NOT-PRESENT. There are no spaces between the record name and the conditional indicators.

If a record is not present, the items in the record will be initialized to zero (numeric) or spaces (alphanumeric). The fields can still be used although no data will be available.

NOTES

It is a good practice to always do a conditional check to insure the RELATE is working properly. Always use the .PRESENT or .NOT-PRESENT to insure the RELATE is performing correctly.

 When relating to a secondary dataframe, you may receive the following error message:

** IEL-0946 DATA NOT AVAILABLE TO BUILD KEY FOR RELATED VIEW

This error message indicates there is something wrong with the RELATE command. First, insure you have a WHERE clause for all items required in the KEY IS clause. Second, **check your spelling!!!** IE will not tell you the item is misspelled. Instead, you will receive the message above.

ACTIVITY

SCENARIO

In this scenario, you will use the RELATE command. A report has been created that lists detailed posting transactions. You will modify this report to include the budget code.

1. In Source Management, go to *SMUT* and copy the report series AXX-DETAIL-BY-BUDGET CODE from IE03 to your library.
2. Rename the report series. Replace the XX with your company identifier.
3. Change the company SELECT command to select your assigned company.
4. In the report request, add a RELATE command for the C-MASTER dataframe. There is a work field that has been created named WK-BUDGET-CODE. Use this work field to contain the related budget code.
5. Save the report series. Check for any errors. Submit the report series for preparation.
6. Go to Report Viewing to ensure the preparation was successful. If so, go to Job Submission and run your report. Return to Report Viewing to view your results.

NOTES

Common Relates

The following are common RELATE commands that are found in state-wide reports:

To access the **Budget Code** from GL dataframes:

```
WORK WK-COMPANY-FUND (8A)
WORK WK-FUND (4A)
WORK WK-FISCAL-YEAR (4A)
WORK WK-BUDGET-CODE (5A)

WK-FUND = GL-CENTER-ID (1 4)
WK-COMPANY-FUND = GL-COMPANY-ID . WK-FUND
RELATE C-MASTER WHERE;
      WK-COMPANY-FUND = C-MASTER-COMPANY-FUND AND ;
      GL-FISCAL-YEAR = C-MASTER-FY
IF C-MASTER-RECORD.PRESENT
      WK-BUDGET-CODE = C-MASTER-BUDGET-CODE
ELSE
      WK-BUDGET-CODE = '00000'
END
```

To access the **Vendor Name** from Accounts Payable dataframes:

```
WORK WK-VENDOR-NAME (30A)

RELATE CVEND01 WHERE;
      AP-PAYING-ENTITY = CV-PAYING-ENTITY AND;
      AP-VENDOR-NUMBER = CV-VENDOR-NUMBER AND;
      AP-VENDOR-GROUP-NUMBER= CV-VENDOR-GROUP-NUMBER

IF CV-VENDOR-SETUP-RECORD.PRESENT
      WK-VENDOR-NAME = CV-VENDOR-NAME
ELSE
      WK-VENDOR-NAME = ' '
END
```

To access **Center Descriptions** from GL dataframes:

```
WORK WK-CENTER-DESCRIPTION (30A)

RELATE GLRSPDSP WHERE;
      GL-CENTER-ID = GL-DESCRIPTION-KEY-POS-7-18
IF GL-RESP-CENTER-DESC-RECORD.PRESENT
      WK-CENTER-DESCRIPTION = GL-DESCRIPTION
ELSE
      WK-CENTER-DESCRIPTION = 'DESCRIPTION NOT FOUND'
END
```

To access **Fund Descriptions** from GL dataframes:

```
WORK WK-CENTER-ID (12A)
WORK WK-FUND-DESCRIPTION (30A)
WORK WK-FUND(4A)

WK-FUND = GL-CENTER-ID (1 4)
WK-CENTER-ID = WK-FUND . 'F'
```

NOTES

```
RELATE GLRSPDSP WHERE;  
    WK-CENTER-ID = GL-DESCRIPTION-KEY-POS-7-18  
IF GL-RESP-CENTER-DESC-RECORD.PRESENT  
    WK-FUND-DESCRIPTION = GL-DESCRIPTION  
ELSE  
    WK-FUND-DESCRIPTION = 'DESCRIPTION NOT FOUND'  
END
```

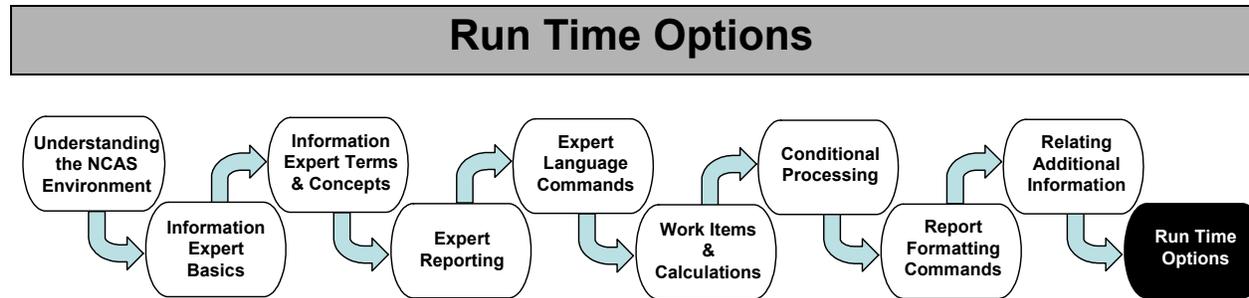
To access the **Budget Code Descriptions** from GL dataframes:

```
WORK WK-CENTER-ID (12A)  
WORK WK-BUDGET-DESCRIPTION (30A)  
WORK WK-BUDGET-CODE(5A)
```

```
< BUDGET CODE WAS DERIVED FROM C-MASTER DATAFRAME >  
WK-CENTER-ID = WK-BUDGET-CODE . 'B'  
RELATE GLRSPDSP WHERE;  
    WK-CENTER-ID = GL-DESCRIPTION-KEY-POS-7-18  
IF GL-RESP-CENTER-DESC-RECORD.PRESENT  
    WK-FUND-DESCRIPTION = GL-DESCRIPTION  
ELSE  
    WK-FUND-DESCRIPTION = 'DESCRIPTION NOT FOUND'  
END
```

SUMMARY

You have learned how to access a secondary dataframe in a report series. You also learned how to check to insure the RELATE command is successful by adding conditional logic. We are now ready to learn about run time features.



Overview

In the previous sections, you created report series using Expert Language commands. This section explains how to make the report series more flexible by passing criteria to the report series when it is executed. This section will explain the two methods in the Expert Language used to pass information to a report series at execution time.

Run Time Options

We have learned about the SELECT and EXCLUDE commands in a previous section. These commands are used to limit the data for a report series or report request. If the selection criteria or exclusion criteria changes frequently, you may want to establish the criteria at run time.

There are three run time commands: RUN-TIME SELECT, RUN-TIME EXCLUDE, and VARIABLE.

RUN-TIME SELECT Command

The RUN-TIME SELECT command processes the same way as the SELECT command. If you change the criteria of the SELECT command, you must prepare the report series again. Since the RUN-TIME SELECT criteria is supplied at run time, the report series does not have to be reprepared when changing the selection criteria.

When using the RUN-TIME SELECT, only identify the item name(s). The values to select will be included when the report series is executed.

The format of the command is:

RUN-TIME SELECT ITEM-NAME

NOTES

Use as many RUN-TIME SELECT commands as needed to define the criteria for the report series. RUN-TIME SELECT and SELECT commands can be used together. Items on the SELECT command cannot be used on the RUN-TIME SELECT in the same section of the report series. RUN-TIME SELECT commands can occur in the common section or a report request section. If the RUN-TIME SELECT occurs in the common section, only items from the primary dataframe can be used in the selection. If the command is placed in a report request, items from any dataframe referenced and any work item can be used as selection criteria.

The values to select will be entered in a RUN member. There will be a SELECT command added to the RUN member to identify the values to select. If values are not supplied for a RUN-TIME SELECT item, the command is ignored. Later in this section, we will describe how to create run members.

The following is an example of the RUN-TIME SELECT command in report series C-EXAMPLE-RUN-TIME-SELECT:

```
INPUT GLOPENYR
RUN-TIME SELECT GL-COMPANY-ID
SELECT GL-ACCOUNT-ID ('5000' '5999999999')
REPORT LISTACT
LIST  GL-COMPANY-ID;
      GL-ACCOUNT-ID'
      GL-CENTER-ID
```

The following is an example of what the RUN member could look like:

```
RUN C-EXAMPLE-RUN-TIME-SELECT;
      SELECT GL-COMPANY-ID '1401'
```

RUN-TIME EXCLUDE Command

The RUN-TIME EXCLUDE command processes the same way as the EXCLUDE command. If you change the criteria of an EXCLUDE command, you must prepare the report series again. Since the RUN-TIME EXCLUDE criteria is supplied at run time, the report series does not have to be reprepared when changing the selection criteria.

When using the RUN-TIME EXCLUDE, only identify the item name(s). The values to exclude will be included when the report series is executed.

The format of the command is:

```
RUN-TIME EXCLUDE ITEM-NAME
```

NOTES

Use as many RUN-TIME EXCLUDE commands as needed to define the criteria for the report series. RUN-TIME EXCLUDE and EXCLUDE commands can be used together. Items on the EXCLUDE command cannot be used on the RUN-TIME EXCLUDE command in the same section of the report series. RUN-TIME EXCLUDE commands can occur in the common section or a report request section. If the RUN-TIME EXCLUDE command occurs in the common section, only items from the primary dataframe can be used in the exclusion. If the command is placed in a report request, items from any dataframe referenced and any work item can be used as exclusion criteria.

The values to exclude will be entered in a RUN member. An EXCLUDE command is added to the RUN member to identify the values to exclude. If values are not supplied for a RUN-TIME EXCLUDE item, the command is ignored. Later in this section, we will describe how to create run members.

VARIABLE Command

The VARIABLE command is used to pass a single value to a work item at run time. The work item must be established using the WORK command before it can be used in the VARIABLE command. The work item can be numeric or alphanumeric. The work item can also be a date item.

The format of the command is:

VARIABLE IS WORK-NAME

VARIABLES ARE WORK-NAME1 WORK-NAME2 ...

If there is more than one work item to be used as a variable, you can use the VARIABLES ARE command. VARIABLE commands can be found in the common section or used in a report request.

The value assigned to a variable will be entered in a RUN member. If no value is supplied, the item will be initialized. Alphanumeric items are initialized to spaces and numeric items are initialized to zeroes. The next section will describe how to create a RUN member.

The following is an example of the VARIABLE command:

```
WORK WK-PERIOD(20)
WORK WK-BALANCE(15P2)

VARIABLE IS WK-PERIOD

WHEN WK-PERIOD;
IS 01      WK-BALANCE = GL-PERIOD-1-BALANCE
IS 02      WK-BALANCE = GL-PERIOD-2-BALANCE
IS 03      WK-BALANCE = GL-PERIOD-3-BALANCE
(etc)
END
```

NOTES

The value to assign WK-PERIOD will be entered in a RUN member. Based on the value of WK-PERIOD, the work item WK-BALANCE will contain the ending balance of period 1, period 2, or period 3, etc.

ACTIVITY

SCENARIO

You want to make your report series flexible for your users. Use report series AXX-ACCOUNT-DESCRIPTIONS. Replace the SELECT for GL-COMPANY-ID with a RUN-TIME SELECT for GL-COMPANY-ID. Prepare the report series.

RUN Members

RUN members can be created for any report series that has been prepared successfully. A RUN member has the command RUN followed by the report series name to execute. When the SUBMIT command is executed on the command line of a RUN member, IE checks the report series to insure it has been prepared. Then IE executes the report series. If there are RUN-TIME SELECT, RUN-TIME EXCLUDE, or VARIABLE commands in the report series, the values to submit at run time are located in the RUN member.

The following walkthrough is the simplest method to establish a RUN member.

WALKTHROUGH: Creating a RUN Member

SCENARIO

You have changed your report series to contain RUN-TIME commands. Create a RUN member to execute the report series.

1. Type **PM** to return to the *Primary Menu* screen if you are not currently on that screen.

NOTES

```
D B S  INFORMATION EXPERT  -----  PRIMARY OPTION MENU  PM

      ENTER SELECTION BELOW:

      ER - EXPERT REPORTING
      SM - SOURCE MANAGEMENT
      JS - JOB PREPARATION & SUBMISSION
      RV - REPORT VIEWING
      SA - SYSTEM ADMINISTRATION
      MR - EXPERT MANAGEMENT REPORTING
      EN - END THE SESSION

      SELECTION ==> 2
      LIBRARY ==> USERXX

ACTION: _____

PRESS:      ENTER Process          PF1 Help      PF3 End Session
```

2. Type **JS** in the SELECTION field and press **Enter**.

```
D B S  INFORMATION EXPERT  -----  JOB SUBMISSION FACILITY  JS

      ENTER SELECTION BELOW:

      PR - LIST SERIES TO BE PREPARED
      RU - LIST SERIES TO BE RUN
      AP - LIST APPLICATION JOBS
      RT - ENTER RUN-TIME OPTIONS
      RE - RETURN TO PRIMARY OPTION MENU

      SELECTION   ==> 3
      SERIES NAME ==> _____
      LIBRARY NAME ==> USERXX

ACTION: _____

PRESS:      ENTER Process   PF1 Help   PF3 Return to Primary Option Menu
```

3. Type **RT** in the SELECTION field and press **Enter**.

NOTES

```

D B S  INFORMATION EXPERT -- SELECT A SERIES WITH RUN-TIME OPTIONS   JSRT

LIBRARY: USERXX

REPORT SERIES NAME          ACTION          NOTES:
-----
AXX-FIRST-QUARTER-REPORT          To create or change the
4 AXX-ACCOUNT-DESCRIPTIONS          run-time options for a
  ****  END OF DIRECTORY  ****          Report Series enter an S
                                          next to the name & press
                                          the ENTER key.

                                          To change libraries enter
                                          the new library name and
                                          press the ENTER key.

ACTION: _____ PF1 Help  PF3 End  PF6 Top  PF7 Pg Bwd  PF8 Pg Fwd
  
```

4. Type **S** before member AXX-ACCOUNT-DESCRIPTIONS.

```

D B S  INFORMATION EXPERT ----- RUN-TIME MEMBER STATUS   JSJRST

REPORT SERIES NAME
-----
AXX-ACCOUNT-DESCRIPTIONS
FOUND IN LIBRARY  USERXX

RUN STATEMENTS MEMBER NAME
-----
AXX-ACCOUNT-DESCRIPTIONS-RUN
CREATED IN LIBRARY  USERXX    <== Change to save member in
                                another library.

REPORTS PRODUCED WHEN THIS IS RUN ARE TO BE PLACED INTO THE LIBRARY USERXX
WHEN THE OPTION TO VIEW THEM ONLINE IS IN EFFECT.

PRESS:  ENTER Continue  PF1 Help  PF3 End

ACTION: _____
  
```

5. Press . A RUN member will be created in your library.



The name of the RUN member will be the report series name with –RUN appended to the end. If the report series name plus the characters –RUN is more than 30 characters, IE will drop enough characters from the end of the name so –RUN can be appended.

NOTES

```
D B S INFORMATION EXPERT ----- SELECT/EXCLUDE REPORTS FOR THIS RUN JSJSEL

REPORT SERIES: AXX-ACCOUNT-DESCRIPTIONS

6 Run all Reports or _ Select Reports or _ Exclude Reports

REPORT ACTION REPORT ACTION NOTES:
-----
_ ACTDESC **END** To run all the reports
in the series, enter an
S next to this option
and press the ENTER key.

To select or exclude by
report, enter an S by
either option, enter an
S next to the reports
chosen and press the
ENTER key. Press PF4
for next function.

ACTION: _____ PF1 Help PF3 End PF6 Top PF7 Pg Bwd PF8 Pg Fwd
```

6. Type **S** in front of the selection RUN ALL REPORTS and press .

```
D B S INFORMATION EXPERT ----- UPDATE RUN-TIME OPTION INFORMATION JSJVAR

REPORT SERIES: AXX-ACCOUNT-DESCRIPTIONS

REPORTING AREA OF OPTION: COMMON

TYPE OF OPTION: RUN-TIME SELECT

OPTION NAME: VALUE OF OPTION:

GL-COMPANY-ID FROM 7
THRU _____

Press: ENTER Continue PF1 Help PF3 End PF4 Skip PF7 Pg Bwd PF8 Pg Fwd

ACTION: _____
```

7. Type **AAAA** in the FROM field and press .

NOTES

```
D B S  INFORMATION EXPERT ----- UPDATE RUN-TIME OPTION INFORMATION  JSJVAR

ENTER ANOTHER VALUE FOR THIS OPTION OR PAGE FORWARD TO NEXT OPTION

      REPORT SERIES:  AXX-ACCOUNT-DESCRIPTIONS

REPORTING AREA OF OPTION:  COMMON

      TYPE OF OPTION:  RUN-TIME SELECT

      OPTION NAME:                VALUE OF OPTION:
GL-COMPANY-ID                FROM  _____
                                THRU  _____

Press:  ENTER Continue  PF1 Help  PF3 End  PF4 Skip  PF7 Pg Bwd  PF8 Pg Fwd
ACTION: _____
```

8. Press **F8**.

```
D B S  INFORMATION EXPERT ----- RUN STATEMENTS SUBMISSION OPTIONS  JSJFIN

RUN STATEMENTS FOR REPORT SERIES:  AXX-ACCOUNT-DESCRIPTIONS

      RUN STATEMENTS MEMBER NAME:  AXX-ACCOUNT-DESCRIPTIONS-RUN

ENTER SELECTION BELOW:

1 - Save changes and Submit
2 - Save changes and Exit
3 - Submit changes but do not Save
4 - View current Run Statements
5 - Cancel this Function and Exit

===> 9

PRESS:  ENTER Process  PF1 Help  PF3 End
ACTION: _____
```

9. Type **4** after the = = => and press **Enter**.

NOTES

```
VIEW CURRENT RUN STATEMENTS MEMBER AXX-ACCOUNT-DESCRIPTIONS-RUN JSJLST

-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7--
***** ***** TOP OF DATA *****
000100 RUN AXX-ACCOUNT-DESCRIPTIONS ;
000200 SELECT GL-COMPANY-ID ;
000300 'AAAA'
***** ***** BOTTOM OF DATA *****

ACTION _____ PRESS: ENTER End PF1 Help PF6 Top PF7 Pg Bwd PF8 Pg Fwd
```

10. Press **Enter**.

```
D B S INFORMATION EXPERT ----- RUN STATEMENTS SUBMISSION OPTIONS JSJFIN

RUN STATEMENTS FOR REPORT SERIES: AXX-ACCOUNT-DESCRIPTIONS

RUN STATEMENTS MEMBER NAME: AXX-ACCOUNT-DESCRIPTIONS-RUN

ENTER SELECTION BELOW:

1 - Save changes and Submit
2 - Save changes and Exit
3 - Submit changes but do not Save
4 - View current Run Statements
5 - Cancel this Function and Exit

===> 11

PRESS: ENTER Process PF1 Help PF3 End
ACTION: _____
```

11. Type **1** after = = => and press **Enter**.

NOTES

```
D B S INFORMATION EXPERT ----- JOB SUBMISSION JSJSUB

JOB "FAAIERUN" HAS BEEN SUBMITTED
TO RUN "AXX-ACCOUNT-DESCRIPTIONS-RUN"

Press the ENTER key to continue
```

12. Press **Enter**.

```
D B S INFORMATION EXPERT -- SELECT A SERIES WITH RUN-TIME OPTIONS JSRT
LIBRARY: USERXX JOB "FAAIERUN" HAS BEEN SUBMITTED

REPORT SERIES NAME          ACTION          NOTES:
-----
AXX-FIRST-QUARTER-REPORT    SUBMITTED      To create or change the
AXX-ACCOUNT-DESCRIPTIONS    SUBMITTED      run-time options for a
**** END OF DIRECTORY ****                                     Report Series enter an S
                                                                next to the name & press
                                                                the ENTER key.

                                                                To change libraries enter
                                                                the new library name and
                                                                press the ENTER key.

ACTION: _____ PF1 Help PF3 End PF6 Top PF7 Pg Bwd PF8 Pg Fwd
```

13. Type **PM** in the ACTION field and press **Enter**.

SUMMARY

You have learned how to add run time options using the RUN-TIME SELECT, RUN-TIME EXCLUDE, and VARIABLE IS commands. You have also learned how to create a RUN member. In the RUN member, you learned how to add run time criteria and to selectively run report requests.

QRG 1: Common Dataframes

Accounts Payable

| | |
|----------|---|
| APINVC01 | Accounts Payable Invoice, Employee documents. |
| APINVC05 | Accounts Payable Invoice Line. |
| APRECON | Accounts Payable Check Reconciliation. |
| APFHIST | Accounts Payable History |

Budgetary Control

| | |
|----------|---|
| BCAFF | Available Funds Information |
| BCADJDOC | Budgetary Control Document Information – all adjustment documents |
| BCJCDOV | Budgetary Control Journal Vouchers |
| BCPOLICY | Budgetary Control Policy |

Common Components

| | |
|---------|---|
| CITEM01 | Item Information. |
| CVEND01 | Vendor Information. |
| CPLCY01 | Common Component Policy (Paying entity, Buying entity). |
| CPLCY02 | Buying Entity Name |
| CPLCY03 | Paying Entity Name |
| CPLCY04 | FOB Codes |
| CPLCY05 | Ship To Codes |
| CPLCY06 | Ship Via Codes |
| CPLCY07 | Terms Codes |
| CPLCY08 | Units of Measure Codes |
| CPLCY30 | Requester Name |
| CPLCY31 | Buyer Name |

Financial Controller

| | |
|----------|---|
| FCARMF | Financial Controller Accounting Rules. |
| FCFSI | Financial Controller Financial Systems Interface (FSI). |
| FCAUDIT | Financial Controller Audit File. |
| C-FCASCI | In-house dataframe. ASCII version of FSI dataframe. |
| C-FCFSI | In-house dataframe. Same as FCFSI. |

Fixed Assets

| | |
|----------|----------------------------------|
| FAOASSET | Online Asset Information |
| FAOSHORT | Online Asset “short” Information |
| FAASSET | Asset Master Information |
| FASHORT | Asset Master “short” Information |

General Ledger

| | |
|----------|---|
| GLOPENYR | General Ledger Company Policy, Account Policy, Center Policy, and Current Year Balances and Prior Year Balances. If prior year is closed, the prior year balances will be zero. (If prior year is closed, use GLCLOSUR dataframe) |
| GLCLOSUR | General Ledger Closed year balances for each closed year. (5 years). |
| GLACCTPL | Account Policy |
| GLCNTRPL | Center Policy |
| GLCOMPPL | Company Policy |
| GLCURRFY | Current Fiscal Calendar Year |
| GLFISCAL | Fiscal Calendars |
| GLFYPER | Fiscal Calendar Period End Dates |
| GLMISDES | Miscellaneous Center Descriptions |
| GLRSPDES | Responsibility Center Descriptions |
| C-TM700 | In-house dataframe. Can be used for center, fund, budget code descriptions. Can also be used for fiscal calendars, edit records, reserve numbers. |
| C-MASTER | In-house dataframe. Used to derive the budget code for a company, fund fiscal year combination. |
| C-GMP11 | In-house dataframe. Same information as GLOPENYR. |
| C-GMP21 | In-house dataframe. Same information as GLCLOSUR. |
| C-GM331 | In-house dataframe. Reads the current posted transaction file (GWP12) or the period to date posted transaction file (GM311). |
| C-DETAIL | In-house dataframe. Reads the detail period to date posted transaction file. |
| C-DTAILY | In-house dataframe. Reads purged detail posted transactions. |
| C-CASH | In-house dataframe. Reads the detail period to date posted cash transaction file. |
| CASHDISB | In-house dataframe. Reads the budget code/fund cash balances. |

Inventory

| | |
|----------|--------------------------------|
| INITEM01 | Inventory Items |
| INITWHS1 | Item Warehouse Information |
| INORDER1 | Usage Order Information |
| INVTE01 | Valued Transaction Information |
| INWHSE01 | Warehouse Information |
| INFMZD | Zone Detail Information |
| INFMLF | Item Location Information |

Purchasing

| | |
|----------|------------------------------------|
| PURREQ01 | Purchasing Requisition Information |
| PURPO01 | Purchase Order Information |

QRG 2: Predefined Variables

| | |
|------------------|--|
| #INPUT-COUNT | Contains the number of primary records read. It cannot be changed. |
| #LINE-NUMBER | Contains the current line number. It cannot be changed. |
| #LINES-AVAILABLE | Contains the number of available lines on the current page, less any page footings. It cannot be changed. |
| #LINES-PER-PAGE | Contains the number of lines per page. It can only be changed by the REPORT command |
| #LINES-REMAINING | Contains the number of lines remaining on the current page. It cannot be changed. |
| #PAGE-NUMBER | Represents the current page number of the report being produced. It can be changed. It is incremented each time a page break occurs. |
| #REPORTID | Contains the report request name. It cannot be changed. |
| #SYSDATE | Contains the computer system date at the time the report request is processed. It cannot be changed. |
| #SYSTIME | Contains the time of day when the report request is processed. It cannot be changed. |

QRG 3: IE Keywords

| | | | |
|-------------|-------------|--------------|------------|
| A | | | |
| ABORT | ADMIN | ALL | ARE |
| AC | ADV | ALLOW | AS |
| ACCESS-LIST | ADVANCE | AND | ASCENDING |
| ACCESSES | AGE | ANY | AT |
| ADD | AL | APPL-RSC | |
| B | | | |
| BACKUP | BLKSI | BLOCKS | BS |
| BANNER | BLKSIZE | BOTH | BY |
| BATCH | | | |
| C | | | |
| CALL | COBOL | COMMON | CONTROL |
| CB | COLUMN | CON | COPY |
| CENTER | COLUMN-HDG | CONTAINS | CREATE |
| CHANGE | | | |
| D | | | |
| DATA | DDNAME | DESC | DMAP |
| DATA-OPTION | DDNM | DESCENDING | DN |
| DATA-VIEW | DEBUG | DESCRIPTION | DO |
| DATAFRAME | DECIMAL | DF | DSN |
| DATASTORE | DEFINE | DICT-MAINT | DUMP |
| DAYS | DEFINITIONS | DICTIONARY | DUPLICATE |
| DD | DELETE | DISPLAY-FMT | DUPLICATES |
| DDFAULT | DELETERV | DIVIDE | DV |
| E | | | |
| ELSE | ENTITY | EXCLUDE | EXPORT |
| EMPTY | EQ | EXHIBIT | EXTEND |
| EN | EQUATE | EXIT | EXTENTS |
| END | EX | EXPAND | EXTRACT |
| F | | | |
| FBA | FILLER | FOR | FROM |
| FCD | FIRST | FOREIGN-KEYS | FTS |
| FILE | FK | FORMS | FUNCTION |
| FILL-CHAR | FN | | |
| G | | | |
| GE | GIVE | GROUP | GT |
| GENERATE | GIVING | | |

| H | | | |
|--------------|-----------|-----------------|--------------|
| HEADING | HEX | | |
| I | | | |
| IDENTIFIED | IN | INDEPENDENT | INPUT |
| IF | INACTIVE | INDEX | INTO |
| IM | INCLUDE | INIT | ITEM |
| IMPORT | INCREMENT | INITIALIZE | |
| J | | | |
| JUSTIFY | | | |
| K | | | |
| KEY | KEYLN | KEYLOC | KW |
| KEYLEN | | | |
| L | | | |
| LAST | LF | LIST | LR |
| LAST-RECORD | LG | LISTFD | LRE |
| LE | LIBRARIES | LISTRV | LRECL |
| LEFT | LIBRARY | LISTUSERS | LT |
| LENGTH | LIMIT | LOCATION | LU |
| LEV | LINE | LOG | LV |
| LEVEL | LINES | LOGICAL | LVL |
| M | | | |
| MAND-CLASS | MEMBER | MGLOBAL-RSC | MODIFY |
| MAND-RANGE | MEMBERS | MOD | MODNM |
| MATCH | | | |
| N | | | |
| NE | NO-DELETE | NODMAP | NOT-PRESENT |
| NEWPAGE | NO-UPDATE | NOSPOOL | NOVIEW |
| NEXT | NO-VIEW | NOTERM | NOWARN |
| NO-ADD | NODEBUG | NOT-LAST-RECORD | |
| O | | | |
| OCCURS | OP | OR | OTHERWISE |
| ON-DELETE | OPTION | ORDER | OVER |
| ON-UPDATE | OPTIONAL | ORG | OWNED |
| ONLINE | OPTIONS | ORGANIZED | |
| P | | | |
| PAGE | PER | PREFIX | PRINT-FORMAT |
| PAGEFOOTINGS | PERFORM | PREPARE | PRINT-SERIES |
| PAGEHEADINGS | PGF | PREPLIST | PRIVATE-LIB |
| PARM | PGH | PRIME | PROC |
| PARMS | PMAP | PRINT | PROCEDURE |
| PASSWORD | POSITION | | |

| Q | | | |
|------------------|-------------|-------------|--------------|
| QU | | | |
| R | | | |
| READ | REM | REQUEST | RPT-SERIES |
| RECALL | REMAINDER | REQUESTS | RPT-VIEWING |
| RECORD | REMOVE | RESTORE | RR |
| RECORD | RENAME | RESTRICT | RS |
| RECORDGROUPS | REPLACE | RETRIEVE | RSC-FRAME |
| RECOVERY | REPORT | RIGHT | RSC-RECORD |
| REDEFINE | REPORT-VIEW | RIO | RUN |
| REFERENCES | REPORT-KEY | ROUNDED | RUN-TIME |
| RELATE | REPORTS | RPT-REQUEST | |
| S | | | |
| SCREEN | SEQUENTIAL | SOURCE | STATS |
| SEC-GROUP | SET | SP | STOP |
| SECOND | SG | SPACE | STORE |
| SECURE | SIGNON | SPACING | SUBROUTINE |
| SELECT | SIZE | SPOOL | SUMMARIZE |
| SELECTIONS | SO | STATEMENT | SYSTEM |
| SENSED | SORTSIZE | STATISTICS | SYSTEM-ADMIN |
| SEQ | | | |
| T | | | |
| TERM | THROUGH | TO | TRANSLATE |
| THEN | THRU | TOT | TYP |
| THOUSANDS | TIME | TOTAL | TYPE |
| U | | | |
| UGLOBAL-RSC | UP | UPPER-CASE | USER-RANGE |
| UNLOAD | UP-DDN | USAGE | USER-REM |
| UNS | UP-FILE | USER | USERFILES |
| UNSECURE | UP-RIO | USER-CLASS | USERS |
| USPECIFIED | UPDATE | USER-GROUP | USING |
| UNTIL | | | |
| V | | | |
| VALUE-DESC | VARIABLES | VIEW | VIEWUPDATE |
| VARIABLE | VD | VIEWCHANGE | VSAM |
| W | | | |
| WARN | WHERE | WIDTH | WORKFILE |
| WHEN | WHILE | | |

QRG 4: Reporting Commands

DEFINE PAGEHEADINGS [ADVANCE NUMBER-LINES]

```
[[ AT [ COLUMN ]] LOCATION | LITERAL . . .  
[[ AT [ COLUMN ]] LOCATION | ITEM-NAME [ AS 'PRINT FORMAT' ] . . .  
  
|NEXT LINE [ ADVANCE NUMBER-LINES ]]
```

DEFINE PAGEFOOTINGS [ADVANCE NUMBER-LINES]

```
[[ AT [ COLUMN ]] LOCATION | LITERAL . . .  
[[ AT [ COLUMN ]] LOCATION | ITEM-NAME [ AS 'PRINT FORMAT' ] . . .  
  
|NEXT LINE [ ADVANCE NUMBER-LINES ]]
```

EXCLUDE ENTITY LITERAL . . .

EXCLUDE ENTITY LITERAL | AND | ENTITY LITERAL . . .

EXCLUDE ENTITY LITERAL | OR | ENTITY LITERAL . . .

EXHIBIT | HEX | ['literal'] entity . . .

EXHIBIT | BOTH | ['literal'] entity . . .

FIRST TIME DO

statements . . .

END

IF condition [THEN]

| statements . . . |

| NEXT STATEMENT |

ELSE

| statement . . . |

| NEXT STATEMENT |

END

INITIALIZE ENTITY . . .

INPUT DATAFRAME-NAME

LAST TIME DO

STATEMENTS . . .

END

LIMIT NUMBER-OF-RECORDS

LIST [[AT [COLUMN]] LOCATION |
 | SPACE NUMBER |
 | NUMBER |
 ALL | ITEM-NAME [AS 'PRINT FORMAT']]
 [HEADING IS 'COLUMN HEADING'] . . .
 {[TOTAL | ITEM-NAME | . . .
 [BY TOTAL-LEVEL [HEADING IS 'TOTAL HEADING']] . . .
 | ADVANCE NUMBER-LINES |
 | NEWPAGE | }

NEWPAGE

ORDER BY ENTITY | DESC |

PRINT [AT [COLUMN] LOCATION] 'LITERAL' . . .
 [AT [COLUMN] LOCATION] ITEM-NAME [AS 'PRINT FORMAT'] . . .
 [+NUMBER] ITEM-NAME [AS 'PRINT FORMAT'] . . .
 [NEXT LINE]
 [NEXT LINE ADVANCE NUMBER-LINES]

RELATEDATAFRAME-NAME [BY ENTITY1]
 [FOR RECORD(S) RECORD-NAME]
 [WHERE ENTITY2 = ENTITY3]
 [AND ENTITY4 = ENTITY5]

REPORTREPORT-ID
 [WIDTH IS CHARACTERS-PER-LINE]
 [LINES LINES-PER-PAGE]
 [ASSIGN TO DD-NAME]

RUN-TIME EXCLUDE ENTITY1 . . .
 [AND ENTITY2]
 [OR ENTITY2]

RUN-TIME SELECT ENTITY1 . . .
 [AND ENTITY2]
 [OR ENTITY2]

SELECT ENTITY LITERAL . . .
SELECT ENTITY LITERAL | AND | ENTITY LITERAL . . .
SELECT ENTITY LITERAL | OR | ENTITY LITERAL . . .

TOTAL ENTITY . . .
 [BY TOTAL-LEVEL . . .]

VARIABLE IS ENTITY
VARIABLES ARE ENTITY1 ENTITY2 . . .

WHEN CHANGE OCCURS IN entity
 STATEMENTS . . .
END

WHEN CHANGE SENSED IN entity
 STATEMENTS . . .
END

WHEN ENTITY **IS** LITERAL
 [**IS** LITERAL] . . .
 [**IS** LITERAL OR LITERAL OR LITERAL . . .] . . .

WORK ITEM-NAME (LENGTH TYPE DATEFORMAT)
WORK ITEM-NAME (LENGTH TYPE DECIMALS)
WORK ITEM-NAME (LENGTH TYPE DATEFORMAT 'COLUMN HEADINGS')
WORK ITEM-NAME (LENGTH TYPE DATEFORMAT 'COLUMN HEADINGS' 'PRINT FORMAT')
WORK ITEM-NAME (LENGTH TYPE DECIMALS 'COLUMN HEADINGS' 'PRINT FORMAT')

