

# Chapter 2

# DISPLAYING INFORMATION

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Fast Track!*



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**Objectives**

You will learn:

- Displaying information about system, sub system, environment, types, and processors.
- Panel layout and navigation in Endeavor.
- Display elements and component lists.
- The function of an Endeavor FOOTPRINT.
- Endeavor LOAD MODULE.

---

**1 Starting Endeavor- Environment Selection**

---

```
----- Endeavor for OS/390 Environment Selection ----- Row 1 of 11
Option ==>                                         Scroll ==> PAGE

Select an environment to continue. Enter the END command to exit.
-----
 1 DEVVAL      DEVELOPMENT => VALIDATION
 2 CLAIMS     CMP DEVELOPMENT => VALIDATION
 3 MI         MANAGEMENT INFORMATION
 4 EARNINGS   EARNINGS RECORD SOFTWARE
 5 TITLE16    TITLE 16 SOFTWARE
 6 TITLE2     TITLE 2 SOFTWARE
 7 COMMON     COMMON SOFTWARE FOR ALL ENVIRONMENTS
 8 ADMIN      ADMINISTRATIVE APPLICATIONS
 9 PCCODREP   REPOSITORY FOR PC AND IWS/LAN CODE
10 OSR       OSR DEVELOPMENT => VALIDATION
11 T2PROCES  TITLE2 PROCESSING SOFTWARE
```

Access to this screen is specific to the installation.

---

## 2 Display Elements

The DISPLAY ELEMENTS function will allow viewing of the last five change levels to any element in Endeavor.

```
----- Endeavor for OS/390 Primary Options Menu -----
Option ==> 0

0  DEFAULTS      - Specify Endeavor ISPF default parameters
1  DISPLAY       - Perform Display functions
2  FOREGROUND   - Execute Foreground Actions
3  BATCH        - Perform Batch Action processing
4  PACKAGE      - Perform Foreground Package processing
5  BATCH PACKAGE - Perform Batch Package SCL Generation
U  USER MENU    - Display user option menu
T  TUTORIAL     - Display information about Endeavor
C  CHANGES     - Display summary of changes for this release of Endeavor
X  EXIT         - Exit the Endeavor dialog

                Current environment: DEVVAL

                (C) 1987,2000 Computer Associates International, Inc.
```

The path which leads to Element Display begins with the Endeavor Primary Options Menu screen.

- Select option 1 DISPLAY to begin.
- From the DISPLAY OPTIONS MENU panel, select 1 ELEMENT to browse any element in the system.

---

**3 Action Processing**

Four different types of action processing can be performed from the CA-Endeavor Primary Options Menu:

Option 2	FOREGROUND	Provides the capability for executing foreground actions.
Option 3	BATCH	Provides the capability for generating SCL to perform actions in batch.
Option 4	PACKAGE	Provides the capability for performing package processing.
Option 5	BATCH PACKAGE	Provides the capability for generating SCL to perform package functions in batch.

---

## 4 Display Elements/Component Lists

---

```

----- Display Elements/Component Lists -----
OPTION ==>

blank - Display selection list      B - Browse element current level
S - Display summary of levels      C - Display changes current level
M - Display element master info    H - Display history current level

Enter SX, BX, CX or HX to display component list information

LIST OPTIONS:
FROM ENDEVOR:
ENVIRONMENT ==> DEVVAL              DISPLAY PROC GRP NAME ==> N (Y/N)
SYSTEM      ==> TRAINING           DISPLAY LIST           ==> Y (Y/N)
SUBSYSTEM   ==>                   WHERE CCID EQ         ==>
ELEMENT     ==>                   WHERE PROC GRP EQ     ==>
TYPE       ==>                   DISPLAY SYS/SBS LIST ==> N (Y/N)
STAGE      ==> D                  BUILD USING MAP       ==> N (Y/N)
                                D - DEVLIBS      V - VALLIBS

```

On the Display Elements/Component lists menu, it is recommended that as many components of the FROM ENDEVOR section of this screen be completed as possible. The more complete the information that is entered from this screen, the fewer the number of screens that will be presented for further selection.

The option selection blank - Display selection list can be left empty. This reason is that there will be uncertainty regarding the ELEMENT name and TYPE. By leaving these fields blank on the FROM ENDEVOR section, there will be a list of elements to choose from consisting of all types.

Most of the entries in the Display elements/component lists menu, except for the ELEMENT field, are saved in the TSO profile. These values will be carried over from function to function and signon to signon.

5 ELEMENT SELECTION LIST

Place a B (browse) next to the element that is to be displayed and press the ENTER key.

Other options also available are: S (Summary), M (Master), C (Changes), and H (History).

```

----- ELEMENT SELECTION LIST ----- Row 1 of 55
COMMAND ==>                                SCROLL ==> PAGE

----- DATES -----
ELEMENT  TYPE      ENVIRON  S SYSTEM  SUBSYSTEM  VV.LL  CURRENT  GENERATE
ATTRIBS  COPYLIB  DEVVAL  D TRAINING  ENDCLASS  01.00  26JAN09  26JAN09
BENEFIT  COPYLIB  DEVVAL  D TRAINING  ENDCLASS  01.00  04AUG09  04AUG09
COB85B   COPYLIB  DEVVAL  D TRAINING  ENDCLASS  01.00  01AUG09  01AUG09
EA04LINK COPYLIB  DEVVAL  D TRAINING  ENDCLASS  01.00  03AUG10  03AUG10
ED02CTL  CLC85    DEVVAL  D TRAINING  ENDCLASS  01.00  04AUG09  04AUG09
ED02C00  CC85NA   DEVVAL  D TRAINING  ENDCLASS  01.00  08DEC09  08DEC09
ED02C00  LNK85C   DEVVAL  D TRAINING  ENDCLASS  01.00  08DEC09  08DEC09
ED02C07  CC85NA   DEVVAL  D TRAINING  ENDCLASS  01.00  09APR09  09APR09
EE00WS   COPYLIB  DEVVAL  D TRAINING  ENDCLASS  01.00  18OCT10  18OCT10
EM00CTL  CLC85    DEVVAL  D TRAINING  ENDCLASS  01.00  04AUG10  04AUG10
EM00C00  CC85NA   DEVVAL  D TRAINING  ENDCLASS  01.17  27JUL09  07NOV09
EM00GCA  COPYLIB  DEVVAL  D TRAINING  ENDCLASS  01.10  01AUG09  03AUG09
ESATRBCA COPYLIB  DEVVAL  D TRAINING  ENDCLASS  01.00  03APR09  03AUG09
ESATRBWS COPYLIB  DEVVAL  D TRAINING  ENDCLASS  01.00  03APR09  03AUG09
ESMESWS  COPYDRMS DEVVAL  D TRAINING  ENDCLASS  01.02  09MAY09  03AUG09
EU08LINK COPYLIB  DEVVAL  D TRAINING  ENDCLASS  01.01  04AUG09  04AUG09
EU09CALL COPYLIB  DEVVAL  D TRAINING  ENDCLASS  01.01  24SEP09  24SEP09
FRAN     BC85NA   DEVVAL  D TRAINING  ENDCLASS  01.01  25MAR10  25MAR10
    
```

6 Endeavor's ELEMENT DISPLAY

```

-----
BROWSE      $7103.C1#2TMPL.ESY51.LIST                Line 00000000 Col 001 080
Command ==>                                         Scroll ==> PAGE
***** Top of Data *****
*****
**
** ELEMENT BROWSE                                     25MAR09 15:06 **
**
** ENVIRONMENT:  DEVVAL          SYSTEM: TRAINING     SUBSYSTEM: ENDCLASS **
** ELEMENT:     SIMPLE         TYPE:  BC85NA         STAGE ID:  D      **
**
*****
----- SOURCE LEVEL INFORMATION -----
-----
VV.LL SYNC USER      DATE      TIME      STMTS CCID          COMMENT
-----
01.00      $7103      25MAR09 08:21          19 123            123
GENERATED  $7103      25MAR09 09:30          123              123

+00      000100 ID DIVISION.

```

This panel displays the banner page for Endeavor's ELEMENT DISPLAY. The detailed element information within the banner and the SOURCE LEVEL INFORMATION summary is on the bottom portion of the page.

By paging down from the previous banner screen, the source code for this element will be visible.

```

-----
BROWSE      $7103.C1#2TMPL.ESY51.LIST                Line 00000020 Col 001 080
Command ==>                                         Scroll ==> PAGE
+00      000200 PROGRAM-ID.  SIMPLE.
+00      000300 ENVIRONMENT DIVISION.
+00      000400 CONFIGURATION SECTION.
+00      000500 INPUT-OUTPUT SECTION.
+00      000600 FILE-CONTROL.
+00      000700 DATA DIVISION.
+00      000800 WORKING-STORAGE SECTION.
+00      000900
+00      001000 01 STUFF.
+00      001100 05 FLD          PIC 99 VALUE ZEROS.
+00      001200 PROCEDURE DIVISION.
+00      001300 DISPLAY 'START PROGRAM'.
+00      001400 PERFORM ADDCTR 15 TIMES.
+00      001500 DISPLAY 'END PROGRAM'.
+00      001600 STOP RUN.
+00      001700 ADDCTR.
+00      001800 ADD 1 TO FLD.
+00      001900 DISPLAY FLD.

```



---

**7 Change Levels**

The first three columns show the current CHANGE LEVEL for each line of code. A percent sign (%) precedes all changes that occurred after the base level.

Deleted lines are not displayed in the BROWSE (B) mode. Deleted lines may be displayed by viewing the element in HISTORY (H) mode.

By displaying the same element in HISTORY (H) mode, any deleted lines are flagged with a minus sign (-) prefixed to the change level for the deletion.

---

## 8 Display System Names

The path which leads to the SYSTEM DISPLAY of system names begins with the Endeavor Primary Options Menu screen.

```
----- SYSTEM DISPLAY -----  
OPTION ==>  
  
    blank - Display system definition  
ENVIRONMENT ==> DEVVAL  
SYSTEM      ==> TRAINING
```

From the DISPLAY OPTIONS MENU panel, select 5 SYSTEM. Fill in the ENVIRONMENT name and leave the SYSTEM field blank. Press ENTER to display the current list of systems.

---

**9 SYSTEM DEFINITION**

---

```
DISPLAY ----- SYSTEM DEFINITION -----
COMMAND ==>

CURRENT ENV:  DEVVAL
NEXT   ENV:  DEVVAL

SYSTEM:      TRAINING
TITLE:      SYSTEM FOR USE DURING ONLINE QCEM CLASSES
NEXT SYSTEM: TRAINING
UPDATED:    05AUG09 07:33 BY $2547

GENERAL OPTIONS:
COMMENT:    Y (Y/N)  CCID:    Y (Y/N)
REQ ELM JUMP ACKNOWLEDGEMENT:  Y (Y/N)

SIGN-IN/SIGN-OUT OPTIONS:          LAST SYSTEM BACKUP:
ACTIVATE OPTION:    Y (Y/N)          DATE:
VALIDATE DATA SET:  N (Y/N)          TIME:

PROCESSOR TRANSLATION OUTPUT LIBRARIES:
STAGE 1 LOAD LIBRARY:  SSA.DA161.ENDV.PRC1LOAD
STAGE 1 LIST LIBRARY:
STAGE 2 LOAD LIBRARY:  SSA.DA161.ENDV.PRC1LOAD
```

The SYSTEM SELECTION LIST screen displays the current list of systems in use for the environment selected. Additional information about a particular system can be designated by placing an S (Select) next to the SYSTEM name and pressing the ENTER key.

The SYSTEM DEFINITION panel is the last screen displayed in this flow. The output loadlib names are located close to the bottom of the screens.

---

## 10 Display Subsystem Names

The path which leads to the Display of subsystem names also begins with the Endeavor PRIMARY OPTIONS MENU screen.

Select option 1 DISPLAY to begin this flow.

From the DISPLAY OPTIONS MENU panel, select 6 SUBSYSTEM.

If the information is available, fill in the ENVIRONMENT name and the SYSTEM.

Leave the SUBSYSTEM field blank and press ENTER to display the current list of subsystem names.

```
----- SUBSYSTEM DISPLAY -----  
OPTION  ===>  
  
    blank - Display subsystem definition  
  
ENVIRONMENT  ===> DEVVAL  
SYSTEM       ===> TRAINING  
SUBSYSTEM    ===>
```

Type the letter S (select) next to the subsystem name that is to be reviewed and press the ENTER key.

The SUBSYSTEM DEFINITION panel presents the current information for the SUBSYSTEM that has been selected from the previous screen.

```
----- SUBSYSTEM SELECTION LIST ----- Row 1 of 1
COMMAND ==>                                SCROLL ==> PAGE

CURRENT ENV:  DEVVAL      SYSTEM:  TRAINING
NEXT      ENV:  DEVVAL      SYSTEM:  TRAINING

SUBSYSTEM SUBSYSTEM TITLE
ENDCLASS  ONLINE QCEM ENDEVOR EXERCISE WORK AREA
***** Bottom of data *****
```

```
DISPLAY ----- SUBSYSTEM DEFINITION -----
COMMAND ==>

CURRENT ENV:  DEVVAL      SYSTEM:  TRAINING
NEXT      ENV:  DEVVAL      SYSTEM:  TRAINING

SYSTEM TITLE:          SYSTEM FOR USE DURING ONLINE QCEM CLASSES

SUBSYSTEM:             ENDClass
TITLE:                 ONLINE QCEM ENDEVOR EXERCISE WORK AREA
NEXT SUBSYSTEM:       ENDClass

UPDATED:              31JUL09 13:54 BY $4089
```

---

## 11 Display Element Types

The path which leads to the Display of Element Types also begins with the Endeavor Primary Options Menu screen.

Select option 1 DISPLAY to begin this flow.

From the DISPLAY OPTIONS MENU panel, select 7 TYPE.

```
----- TYPE DISPLAY -----
OPTION  ==>

      blank - Display type definition

ENVIRONMENT ==> DEVVAL

SYSTEM      ==> TRAINING

TYPE        ==>

STAGE       ==> D          D - DEVLIBS  V - VALLIBS
```

Fill in the ENVIRONMENT name and the SYSTEM if that information is available. Leave the TYPE field blank and a list of the current TYPES in use in this ENVIRONMENT will be presented. Fill in as much information as is possible and press ENTER to process this screen.

```

----- TYPE SELECTION LIST ----- Row 1 of 17
COMMAND ==> SCROLL ==> PAGE

CURRENT ENV:  DEVVAL      STAGE ID:  D   SYSTEM:  TRAINING
NEXT      ENV:  DEVVAL      STAGE ID:  V   SYSTEM:  TRAINING

TYPE      TYPE DESCRIPTION
COPYLIB   COBOL COPYLIBS WRITTEN BY APPLICATION PROGRAMMERS
COPYDRMS  COBOL COPYLIBS GENERATED BY DRMS OPERATIONS
CCMAP     COPYLIBS FOR MAPS GENERATED BY BMS/GT
MACROLIB  ALC MACROS DEVELOPED BY APPLICATIONS PERSONNEL
CAMAP     ALC MACROS FOR MAPS GENERATED BY BMS/GT
BALC      BATCH ALC SOURCE CODE - RENT
COBA85B   BATCH PROGRAMS WRITTEN IN ANSI85 COBOL II (R3)
BC85NB    BATCH VS COBOL II - RENT,NOOPT,DATA (24)
BC85NA    BATCH VS COBOL II - RENT,NOOPT
CALC      CICS COMM LVL ALC - RENT
CC85NB    CICS COMM LVL VS COBOL II - NOOPT,DATA (24)
CC85NA    CICS COMM LVL VS COBOL II - NOOPT
LNKCA85B  LINK DECKS FOR BATCH VS COBOL II (R3) PROGRAMS
BLALC     BATCH LINKDECK FOR ALC ONLY - LET,LIST,RENT,XREF
CLALC     CICS LINKDECK FOR ALC ONLY - LET,LIST,RENT,XREF
CLC85     CICS LINKDECK FOR VS COBOL II - LET,LIST,RENT,XREF
    
```

Type the letter S (select) next to the ELEMENT TYPE that is to be reviewed and press the ENTER key.

The TYPE DEFINITION panel presents the current information for the ELEMENT TYPE that has been selected from the previous screen.

```

DISPLAY ----- TYPE DEFINITION -----
COMMAND ==>

CURRENT ENV:  DEVVAL      STAGE ID:  D   SYSTEM:  TRAINING  TYPE:    CC85NA
NEXT      ENV:  DEVVAL      STAGE ID:  V   SYSTEM:  TRAINING  TYPE:    CC85NA

DESCRIPTION:      CICS COMM LVL VS COBOL II - NOOPT
UPDATED:          05JUN09 11:23 BY $4089

----- ELEMENT OPTIONS -----
FWD/REV/IMG DELTA: F (F/R/I) COMPRESS BASE/ENCRYPT NAME:    Y (Y/N)
DFLT PROC GRP:    CC85NA  REGRESSION PCT:      75  REGR SEV:      W (I/W/C/E)
SOURCE LENGTH:   80      COMPARE FROM:      7  COMPARE TO:    72
AUTO CONSOL:     N      LANGUAGE:      COBOL  PV/LB LANG:    COBOL
REMOVE/CONSOL AT LVL: 0      HOME OPSYS:      (W/M)
LVLS TO REMOVE/CONSOL: 0      WS FILE EXT:

----- COMPONENT LIST OPTIONS -----
FWD/REV DELTA:    F (F/R) AUTO CONSOL:    Y (Y/N) CONSOL AT LVL:    96
LVLS TO CONSOL:  49

----- LIBRARIES -----
BASE/IMAGE LIBRARY:  ENDV.OAPPLDEV.COBOL1.BASE
DELTA LIBRARY:       ENDV.OAPPLDEV.COBOL1.DELTA
INCLUDE LIBRARY:
SOURCE O/P LIBRARY:
    
```

## 12 FOOTPRINT

A FOOTPRINT is a set of encrypted data placed by Endeavor processors in generated source, object, or load modules.

FOOTPRINTS contain location and event information from the Master Control File record for the element, including:

Site ID	Environment	Stage number
System	Subsystem	Type
Element name	Version and level	Date and time the output was created.

```

----- DISPLAY OPTIONS MENU -----
OPTION ==> 2

1  ELEMENT          - Display element/component list information
2  FOOTPRINT        - Display footprinted members and compressed listings
3  SITE             - Display site information
4  STAGE            - Display stage information
5  SYSTEM           - Display system definitions
6  SUBSYSTEM        - Display subsystem definitions
7  TYPE             - Display type definitions
8  PROCESSOR GROUP  - Display processor group definitions
9  APPROVER GROUP   - Display approver groups
A  RELATE GROUP     - Display inventory area/approver group relationships
E  ENVIRONMENT      - Display information about the current environment
    
```



13 ENDEVOR LOAD MODULE

Endeavor uses footprints to keep source code synchronized with executables. Footprints can be used for displaying information about the source associated with an executable.

The LIBRARY SELECTION LIST panel will offer a member list when a member name has not been specified on the previous screen.

Make the selection by typing I (DISPLAY LOAD MODULE CSECTS AND Endeavor FOOTPRINTS) on the line directly in front of the member name that is to be chosen.

```

- ----- ENDEVOR LOAD MODULE IDR DISPLAY ----- Row 1 of 3
Command ==>                                     Scroll ==> CSR

Library: SYSE.RD.MERA.ALL.LOADB                    Member: COBPA003

Options:
  B - Browse element          C - Show changes only          S - Show change summary
  H - Show change history     M - Show Master Record

----- F O O T P R I N T -----|
CSECT  SYSTEM  SUBSYSTEM  ELEMENT TYPE  S  VV.LL  DATE  TIME LD
*LOADMOD  PRCSTES2  PRCSTES2  COBPA003  COBOLB  1  01.09  ddmmmyy 15:54
COBPA003  PRCSTES2  PRCSTES2  COBPA003  COBOLB  1  01.09  ddmmmyy 15:54
IGZEBST
***** Bottom of data *****

```