

Developing Dialog Manager Applications in z/OS (5 Day)

Benefits

Students who complete this course will be able to build and maintain applications based on IBM's z/OS Dialog Manager (ISPF).

Audience

Applications and systems programmers, who need to know how to create, maintain, and support Dialog Manager applications.

Prerequisites

At the very least, the student entering this course should have experience in using ISPF/PDF, especially the editor, and in coding either TSO REXX execs or TSO CLISTs.

Major Topics Include

- Dialog variables and variable pools, including variables services
- System symbols
- Panel definition language and panel processing logic
- LIBDEF service
- DISPLAY service
- Message services
- Library Access services (LM...)
- Pop-up windows
- Scrollable fields
- SELECT service and menus
- Dialog Test
- CONTROL services
- Browse, Edit, and View interfaces
- Help panels and tutorial services
- ISPF tables and table services
- ISPF table display services
- ISPF Table Utility
- File tailoring services and skeletons
- Obtaining data set information
- Command tables and user-written commands
- Introduction to CUA (Common User Access) standards
- Creating and using action bars
- Introduction to Dialog Tag Language (DTL)
- Creating keylists using DTL
- Installing ISPF applications

Exercises: There are 15 standard and 1 optional hands-on exercises.

Developing Dialog Manager Applications in z/OS - Topical Outline

Day One

Introduction to Dialog Manager

- Dialog components
- Dialog variables
- Panel definitions
- Data set requirements
- Invoking Dialog Manager services from a CLIST or Exec
- Invoking Dialog Manager services from a program
- Dialog Testing
- Computer Exercise Setting up for Dialog Manager

Panel Definitions

- The LIBDEF Service
- User libraries
- Defining panels
- Headers and sections in a panel definition
- Panel design
- Attribute characters
- Panel definition - the)BODY section
- The)END section
- Panel layout concerns
- DISPLAY services
- Computer Exercise Defining Panels

Dialog Variables and pools

- Applications
- Variable Pools
- Function pools for execs and CLISTs
- The shared pool
- The application profile pool
- Z variables
- The system profile pool
- Variable pools relationships
- System variables
- System Symbols
- Variable services: VGET, VPUT, VERASE

Brief TSO Review

Brief REXX Review

Brief CLIST Review

Common notes

Running Dialogs from DSLIST

Computer Exercise The Case Study, Backup and Restore Functions

Day Two

Panel processing and messages

Test and Trace modes

Snapshot - quick review

Panel processing statements

Panel processing built-in functions

Control variables

Messages

Message format

Message processing

Message services

Computer Exercise The Case Study: Display an Individual Record

Basic Library Access services

Placeholder variables

DATAIDs

LMINIT

LMOPEN

LMGET

LMPUT

LMCLOSE

LMFREE

Computer Exercise The Case Study, Part 2, Second Stage: File I/O

Pop-up windows

Windows

Primary and active windows

ADDPOP service

Window frames

Defining panels with windows

Window fit

REMPOP service

Interacting with pop-ups

Messages and windows

Computer Exercise The Case Study, Third Stage: Windows

Scrollable fields

Design issues

Implementing scrollable fields

The)FIELD section

Scrollable Fields: an example

Day Three

Menus and Debugging

- Command Processing

- Jump function processing

- Menus

- The SELECT service

- Syntax for TRANS and TRUNC in a menu

- Handling lower level requests

- Primary option menus

- Master application menus

- Menus, panels, and SELECT

- Dialog Test tracing services

- Computer Exercise The Case Study, Add Menu Hierarchy

Some new services and tutorials

- Edit Models

- The CONTROL service

- Browse, Edit, and View services

- Browse, Edit, and View: working with z/OS UNIX files

- Edit recovery interface

- Tutorials

- Computer Exercise The Case Study: Add Tutorials and Browse Feature

ISPF Tables

- Table types

- Tables and keys

- Defining tables - TBCREATE

- Row variables

- Extension variables

- Working with tables

- Working with rows

- Computer Exercise The Case Study: Add A Table

Day Four

Table Display services

- Panels for table displays

- The)ATTR section for table display panels

- The)BODY section for table display panels

- The)MODEL section for table display panels

- The TBDISPL service

- Processing selected rows

- Table display variables

- TBSARG and TBSCAN

Dialog Test and tables

Computer Exercise The Case Study: Processing Selected Rows

The ISPF Table Utility

Introduction to the Table Utility

Table List Formats

Editing and Browsing Tables

Re-Structuring The Table Display

Sorting Tables

Exporting and Importing Tables

Table Utility Options

Computer Exercise: Using the Table Utility

File Tailoring services

The file tailoring process

Skeletons

File tailoring services - FTOPEN, FTINCL, FTCLOSE, FTERASE

Computer Exercise The Case Study: File Tailoring

More Library Access Services

LMCOPY, LMMOVE, LMPRINT, LMRENAME, LMERASE

Library access services to work with true libraries:

LMCOMP, LMMFIND, LMMREN, LMMREP, LMMADD, LMMDEL, LMMSTATS,
LMMLIST, LMMDISP, MEMLIST

Library access services to work with lists of data sets:

LMDINIT, LMDFREE, LMDLIST, LMDDISP

DIRLIST - Display a z/OS UNIX Directory List

Day Five

Miscellaneous Topics

Panel preprocessing

Dialog Test: the DTEST command

Obtaining data set information: QLIBDEF, QBASELIB, DSINFO

Dialog Manager and commands

Command tables

Creating command tables

Using command tables

Computer Exercise Create a User Command

Introduction to Common User Access (CUA)

The CUA standard

CUA panel formats

Using Action Bars

Working with pull-down menus

Creating action bars using panel language
Computer Exercise Adding Action Bars

Keylists

Keylists
Dialog Tag Language (DTL)
Defining keylists
The ISPD TLC utility
Using keylists
Computer Exercise Creating a Keylist

Final Topics

Using Compiled Languages for Dialogs
Tradeoffs
Installing an ISPF Application
Using ISPSTART
Read-Only Profile Pool Extensions
Optional Exercise: The Case Study: Table to Sequential File [and Back]