

ISPF and JCL on z/OS (5 Day)

Benefits

Students who complete this course will be able to accomplish work using TSO/ISPF in the z/OS environment, including the full screen editor, job submission and monitoring facilities, the utility functions, and productivity features such as command stacking and split screen processing. They will also be able code essential JCL statements to submit batch jobs, run some batch utilities and basic SORT work. They are also introduced to procedures and SET, INCLUDE, and JOBLIB statements, among others.

Audience

Programmers, analysts, and users who need to know how to use ISPF/PDF to edit data, run jobs, maintain data sets, or use applications written to run under ISPF/PDF, and who need to create or maintain JCL to accomplish these tasks.

Prerequisites

A basic understanding of computer concepts. Although a programming background is not required, people with such a background will generally get the most out of this course.

Major Topics Include

- Introduction to TSO/ISPF
- 3270 Terminals
- Data sets and libraries
- Member lists
- Editing data sets
- Creating and deleting data sets
- Edit line commands
- Finding and changing data
- Data Set Utility
- Library Utility
- Split screen(s)
- Data Set List Utility
- Compare and SearchFor Utility
- Personal Lists
- z/OS organization and workflow
- JCL: rules of syntax
- JOB, EXEC, DD, OUTPUT statements
- Submitting and monitoring jobs with SDSF
- Utilities: IEFBR14, IEBGENER, IEBPTPCH, IEBCOPY
- Introduction to IDCAMS
- Conditional JCL: IF/THEN, ELSE, ENDIF, COND
- Cataloged procedures
- Symbolic parameters in procedures and in open JCL
- INCLUDE, SET, JCLLIB, EXPORT
- Private proclibs
- Sort / Merge
- GDGs

Exercises

There are 21 hands-on exercises.

ISPF and JCL on z/OS - Topical Outline

Introduction

- Overview of TSO / ISPF
- 3270 Terminals and keyboards
- Logging on and off
- ISPF Navigation
- Computer Exercise: Getting Started with ISPF / PDF

Data sets: sequential and partitioned

- Member lists
- Editing Data Sets
- Scrolling / Default scroll amount
- Line Numbering
- Edit primary commands: LOCATE, COLS, RESET, HEX, RECOVERY, UNDO, CAPS RETRIEVE
- Computer Exercise: Editing Files

Working with the 3270 keyboard

- Inserting, deleting, and repeating lines
- Moving and copying lines
- Excluding lines
- Edit line commands: I, D, R, X, F, L, M, C, A, B, O, COLS
- Editing a new file
- Computer Exercise: Working with Edit line commands

Searching for data

- Strings
- FIND
- CHANGE
- EXCLUDE, FLIP, and HIDE
- Computer Exercise: Using the FIND, CHANGE, and EXCLUDE commands

Data Set Utility

- Information
- Allocating new files
- Renaming files
- Deleting files
- Computer Exercise: Working with the Data Set Utility

Moving and copying data

- Move / copy utility
- Move / copy in Edit
- CREATE / REPLACE / COPY / MOVE
- CUT / PASTE
- EDITSET
- Computer Exercise: Moving and Copying Data

Housekeeping in ISPF

- Identifying screens

- Function Keys

- FKA and PFSHOW commands

- ZKEYS and KEYS commands

- Settings

- Log and List Data Sets

- Action Bar Items

- Computer Exercise: Managing the ISPF Environment

Productivity Features

- Split Screen

- Edit extensions

- View

- Browse

- Help and Tutorial

- Computer Exercise: Split Screen, View, and Help

Library Utility

- COMPARE command

- More Edit Line commands

- Overlay

- Splitting, flowing, and Data Entry

- Shifting text left and right

- Other line commands: HX, LC, UC, MD

- Computer Exercise: Using the Library Utility

Data Set List Utility

- Views

- Options

- Block commands

- Line commands

- DSLSET command

- DSLIST command

- Data Set List Primary commands

- Computer Exercise: Data Set Lists

Command shell

- TSO PROFILE command

- Edit SORT command

- Edit profiles

- Bounds

- Masks

- Tabs

- Highlighting

- Computer Exercise: Command Shell, Sorting and Edit Profiles

ISPF Odds and Ends

- Edit DELETE command
- Personal Lists
- REFOPEN and REFOPENL commands
- Action bar options
- DSLIST command
- NRETRIEV command
- Comparing data sets
- SUPERC and SUPERCE
- Searching within data sets -- Search-For
- Computer Exercise: Personal lists, comparing, and searching

Introduction to JCL

- Jobs
- Batch Work Flow in z/OS
- JCL Syntax
- JOB Statement
- EXEC Statement
- Reviewing Job Output
- Computer Exercise: Running a Job

Data Management in z/OS

- DD statements
- SYSIN-type Data
- SYSOUT-type Data
- Existing Data Sets
- Finding Executable Programs: JOBLIB and STEPLIB
- Reviewing output: System Display and Search Facility (SDSF)
- Computer Exercise: DD Statements, round 1

The DD Statement -- continued

- The DISP Parameter
- The UNIT, VOLUME, EXPDT, and RETPD Parameters
- New Tape Data Set Parameters: LABEL, TRTCH
- New Disk Data Set Parameters: SPACE, AVGREC, DSNTYPE
- Working with Partitioned Data Sets
- Temporary Data Sets
- Concatenation
- DD DUMMY
- SMS: DATACLAS, MGMTCLAS, STORCLAS
- Computer Exercise: DD Statements, round 2

Job Output Details

- Utilities
- IEFBR14

IEBGENER

IEBPTPCH

IDCAMS

SORT

Computer Exercise: Utilities

Conditional Step Execution

Condition Codes and Completion Codes

IF / THEN / ELSE / ENDIF Statements

JOBRC

The COND Parameter

The OUTPUT Statement

Computer Exercise: Conditional Processing

JCL Procedures

In-Stream Procedures

Cataloged Procedures

JCLLIB Statement and Private Procedure Libraries

Passing PARMs to Steps in a JCL Procedure

Computer Exercise: JCL Procedures, Round 1

JCL Procedures, Round 2

Inserts

Overrides

Computer Exercise: JCL Procedures, Round 2: Inserts and Overrides

JCL Procedures, Round 3

Symbolic Parameters

Default Values

&SYSUID

Computer Exercise: JCL Procedures, Round 3: Symbolic Parameters

Advanced Topics in JCL

The SET statement

The INCLUDE statement

Symbolic variables in in-stream data

The EXPORT statement

Nested Procedures

Generation Data Groups

Computer Exercise: Advanced Topics in JCL