



Interactive System Productivity Facility (ISPF)

ISPF Users Boot Camp - Part 1 of 2



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Agenda

- **Overview**
 - ↓ What is ISPF?
 - ↓ Components of ISPF?
- **The ISPF user interface**
 - ↓ Starting ISPF
 - ↓ Primary Option Menu
 - ↓ Panel format
 - ↓ Navigating in ISPF
 - ↓ Using commands and function keys
 - ↓ Getting help
 - ↓ Split screen mode
 - ↓ Ending ISPF

Agenda...

- **ISPF Primary Options**

- ↓ Settings – change the look and feel of ISPF

- ↓ View – look at data without changing it

- ↓ Edit – update and create data

- ↓ Utilities – perform system utility and data set management functions

- ↓ Others

- Command, Foreground, Batch, Dialog Test, IBM Products, SCLM, Workplace

- **How to learn more**

What is ISPF?

- **Interactive System Productivity Facility**

- ↓ A set of panels, functions, and utilities that help you:

- Manage data stored in z/OS data sets
- Develop interactive applications called *dialogs*

- ↓ An extension to TSO/E (Time Sharing Option of z/OS)

- ↓ Provides services that complement those provided by TSO/E

- ↓ Provides services to dialogs (applications) during their execution

ISPF is a multifaceted development tool set for the z/OS operating system. Since 1975, MVS programmers have used ISPF for host-based application development productivity. ISPF forms the basis of many TSO applications and provides extensive programmer oriented facilities as well.

TSO/E is a base element of the z/OS operating system that allows you to interactively work with the system. It is a tool with which you can:

- Develop and maintain programs in languages such as assembler, COBOL, FORTRAN, PASCAL, PL/I, REXX, and CLIST
- Process data
- Access the MVS operating system
- Communicate with other TSO/E users
- Create an office environment

ISPF can be seen as an extension to TSO/E. ISPF runs under TSO/E, and sometimes the acronym TSO/ISPF is used to describe the facility provided by these closely associated subsystems. The services provided by ISPF complement those of the host TSO/E system to provide full-screen interactive processing.

ISPF is similar to a control program or access method in that it provides services to dialogs (applications) during their execution. A dialog is the interaction between a person and a computer. It helps a person who is using an interactive display terminal to exchange information with a computer.

Components of ISPF

▪ **Dialog Manager**

↓ Provides services to dialogs and end users.

↓ Composed of six elements:

- Functions
- Panels
- Messages
- Tables
- File tailoring skeletons
- Dialog variables

Notes for slide 5

Dialog Manager provides services to dialogs and end-users. A *dialog* is the interaction between a person and a computer. It helps a person who is using an interactive display terminal to exchange information with a computer. The user starts an interactive application through an interface that the system provides. The dialog with the user begins with the computer displaying a panel and asking for user interaction. It ends when the task for which the interactions were initiated is completed. Dialog Manager is composed of six elements:

Functions: A function is a command procedure or a program that performs processing requested by the user. It can invoke ISPF dialog services to display panels and messages, build and maintain tables, generate output data sets, and control operational modes. They can be written as:

- REXX or CLIST command procedures
- Programs

Panel definitions: A panel definition is a programmed description of the panel. It defines both the content and format of a panel. Most panels prompt the user for input. The user's response can identify which path is to be taken through the dialog, as on a selection panel. The response can be interpreted as data, as on a data-entry panel.

Message definitions: Message definitions specify the format and text of messages to users. A message can confirm that a user-requested action is in progress or completed, or it can report an error in the user's input.

Table: Tables are two-dimensional arrays that contain data and are created by dialog processing. They can be created as a temporary data repository, or they can be retained across sessions. A retained table can also be shared among several applications. The type and amount of data stored in a table depends on the nature of the application.

File tailoring skeletons: Skeletons work like a fill-in-the-blank exercise. They take dialog variables and put them into a data set containing statements that control the output format. The output data set can be used to drive other processes. File skeletons are frequently used to produce job data sets for batch execution.

Dialog variables: ISPF services use variables to communicate information among the various elements of a dialog application. ISPF provides a group of services for variable management. Variables can vary in length from zero to 32K bytes.

Dialog Manager also controls the interaction of the dialog's elements. You could think of it as an extension of the host operating system. For example, ISPF can issue requests for:

- panels to be displayed, or
- screens to be formatted.

It can verify, process, and store input, and it can create output. ISPF can also function as a simplified data management system for small amounts of data stored in tables.

Dialog Manager also provides library access services that help you perform system utility functions on ISPF libraries or data sets. An edit recovery service helps you recover the changes you made to a data set before a system failure. The edit interface and browse interface services allow you to provide I/O to edit or browse data that is not in either a sequential or a partitioned data set (PDS).

Components of ISPF...

▪ **Program Development Facility (PDF)**

↓ Provides services to assist the dialog or application developer.

↓ Includes services such as:

- EDIT
- BROWSE
- VIEW

↓ Includes utilities to:

- Display and print library and data set member lists
- Compare data sets and search for strings of data
- Move, copy, and print library and data set members

Notes for slide 6

ISPF Program Development Facility (PDF) provides services to assist the dialog or application developer. These include the edit and browse functions, data set and catalog utilities, TSO command interfaces, and library access services that can be combined in a dialog with any of the ISPF services. The library access services carry out functions involving members of a programming library. These functions include adding, finding, and deleting members, and displaying member lists.

PDF component services consist of BRIF (Browse Interface), BROWSE, EDIF (Edit Interface), EDIREC (edit recovery for EDIF), EDIT, VIEW, VIIF, and EDREC (edit recovery for EDIT and VIEW), along with the library access services.

BRIF Provides browse functions for data accessed through dialog-supplied I/O routines. It allows you to browse data other than partitioned data sets or sequential files, such as subsystem data and in-storage data, and to preprocess the data being browsed.

BROWSE Can be used to look at any ISPF library, concatenation of ISPF libraries, or data set that can be allocated by using the LMINIT service, and certain other data types not supported by ISPF. You can browse host data sets on the workstation or workstation files on the host.

EDIF Provides edit functions for data accessed through dialog-supplied I/O routines. It allows you to edit data other than partitioned data sets or sequential files, such as subsystem data and in-storage data, and to preprocess the data being browsed.

EDIREC Initializes an edit recovery table (ISREIRT) for use by the EDIF service and determines whether recovery from the EDIF service is pending.

EDIT Can be used to look at any ISPF library, concatenation of ISPF libraries, or data set that can be allocated by using the LMINIT service. The EDIT service provides an interface to the PDF editor and bypasses the display of the Edit Entry Panel on the host. You can also edit host files on the workstation or workstation files on the host.

EDREC Initializes an edit or view recovery table, determines whether recovery is pending, and takes the action specified by the first argument.

VIEW Functions exactly like the EDIT service, with the following exceptions:

- You must use the REPLACE or CREATE primary command to save data.
- When you enter the END primary command after altering a file in VIEW mode, you will be prompted to either save the changes or exit without saving them.

VIIF Provides edit functions for data accessed through dialog-supplied I/O routines. It enables you to view data other than partitioned data sets or sequential files, such as subsystem data and in-storage data, and to preprocess the data being viewed.

Components of ISPF...

▪ **Software Configuration Library Manager (SCLM)**

↓ Consists of two functional components:

- Library Manager – used to manage source code
- Configuration Manager – used to track all of the software components of an application, and how they fit together.

↓ SCLM-managed data stored and maintained in ISPF libraries (PDS)

↓ Used in the development of z/OS-based applications that employ traditional languages such as COBOL and PL/I

↓ Can be used in conjunction with SCLM Developer Toolkit for the development of Java/J2EE applications.

Software Configuration Library Manager (SCLM) is a software tool that helps you develop complex software applications. Throughout the development cycle, SCLM automatically controls, maintains, and tracks all of the software components of the application. You can lock the version being edited in a private library and then promote it. Use SCLM to create, control, maintain, and track software components for a project.

SCLM provides Library Management capabilities used to manage source code, such as for the Versioning and Auditing of changes, and Promotion which moves source from one set of staging libraries to the next.

SCLM provides Configuration Management capabilities, to track how all of the pieces of an application fit together - not just source, but objects, loads, test cases, documentation and other items. The Build function tracks and invokes the necessary compilers, assemblers and linkage editors.

SCLM-managed data is maintained and controlled on z/OS. The SCLM project database consists of a series of related ISPF libraries (partitioned data sets). These contain source and non-source software components. SCLM project definition and control information is contained in an assembled and linked PROJDEFS data set. SCLM project cross-reference and accounting data sets are VSAM clusters.

Components of ISPF...

- **Client/Server – Workstation Agent (WSA) Component**

- ↓ Enables you to run ISPF on a programmable workstation

- ↓ Provides distributed editing for:

- Editing host files on the workstation
 - Editing workstation files on the host

- ↓ Dialogs can use GUI functions such as:

- Push buttons
 - Check boxes
 - Screen resizing
 - GIF images

The Client/Server component, also known as the ISPF Workstation Agent (WSA) allows the users of ISPF applications to use a workstation running Windows or UNIX to display the panels of an ISPF application. It does this using the Graphical User Interface of the workstation. Because of this, there is no requirement to change your existing ISPF applications to run in a GUI environment.

Workstations can communicate with the host using either Transmission Control Protocol/Internet Protocol (TCP/IP) or Advanced Program-to-Program Communications (APPC). Functional enhancements to ISPF allow application developers to improve the appearance of the display on the GUI device.

Supported functions include:

- Push buttons
- Check boxes
- Action bars
- Mnemonics
- Unavailable choices
- Title bars
- Screen resizing

The WSA also allows you to edit host data on your workstation and workstation data on the host. In ISPF this is called *distributed editing*.

Starting ISPF

- Log on to TSO

```
----- TSO/E LOGON -----
Enter LOGON parameters below:
Userid   ==> SIROED
Password ==>
Procedure ==> ISPFPROC
Acct Nbr ==> IBMGSA
Size     ==> 64000
Perform  ==>
Command  ==>

RACF LOGON parameters:
New Password ==> _
Group Ident  ==>

Enter an 'S' before each option desired below:
-Nomail      -Nonnotice  -Reconnect   -OIDcard

PF1/PF13 ==> Help   PF3/PF15 ==> Logoff  PA1 ==> Attention  PA2 ==> Reshow
You may request specific help information by entering a '?' in any entry field
```

- When the READY prompt appears, type ISPF or PDF and press Enter

```
INMR003I You have no messages or data sets to receive.
READY
ispf_
```

To start ISPF:

- Log on to TSO.
When the READY prompt appears, type ISPF or PDF and press Enter.
- If your installation has established an alias for ISPF, such as SPF, you can enter that instead.

The ISPF and PDF commands are aliases of ISPF module ISRPCP. When you run ISRPCP or one of its aliases with no parameters, ISPF is started through this command:

ISPSTART PANEL(default_primary_panel) NEWAPPL(ISR)

The default primary panel is usually ISR@PRIM, the ISPF Primary Option Menu .

You can specify any of the ISPSTART parameters when invoking ISPF, PDF, or ISRPCP. However, if you do this you must ensure that you specify *all* the parameters that ISPSTART needs to run your application in the correct environment. This is because only those parameters you specify are passed to ISPSTART. For example, if you specify:

ISPF NEWAPPL(ABC)

ISPF is invoked with this command:

ISPSTART NEWAPPL(ABC)

Note that in this case ISPF does not pass PANEL(ISR@PRIM), part of its normal default string, to ISPSTART. Because the ISPSTART command generated does not contain a PANEL(...), PGM(...) or CMD(...) keyword, there is no primary panel to display.

Primary Option Menu

The Primary Option Menu panel is the first panel you see when you start ISPF

```

Menu  Utilities  Compilers  Options  Status  Help
-----
                    ISPF Primary Option Menu

0  Settings      Terminal and user parameters      User ID . . : SIROED
1  View          Display source data or listings   Time. . . . : 14:45
2  Edit          Create or change source data      Terminal. . : 3278
3  Utilities     Perform utility functions         Screen. . . : 1
4  Foreground   Interactive language processing   Language. . : ENGLISH
5  Batch        Submit job for language processing Appl ID . . : ISR
6  Command      Enter TSO or Workstation commands TSO logon  : ISPF
7  Dialog Test  Perform dialog testing            TSO prefix: SIROED
9  IBM Products IBM program development products System ID  : ISD1
10 SCLM         SW Configuration Library Manager  MVS acct. : IBMGSA
11 Workplace   ISPF Object/Action Workplace     Release . . : ISPF 5.6

Enter X to Terminate using log/list defaults

Option ==> _____
F1=Help      F2=Split    F3=Exit     F4=Left     F5=Right    F6=Expand
F7=Backward  F8=Forward  F9=Swap     F10=Actions F12=Cancel

```


The ISPF Primary Option Menu panel is the first panel that displays when you start ISPF. If your installation has a customized ISPF Primary Option Menu, the menu might not contain all of options shown here, or it might contain certain installation-specific options.

The options available on the default ISPF Primary Option Menu are:

- 0 Settings** displays and changes selected ISPF parameters, such as terminal characteristics and function keys.
- 1 View** displays data using the View or Browse function. You can use View or Browse to look at (but not change) large data sets.
- 2 Edit** allows you to create or change source data such as program code and documentation using the ISPF full-screen editor.
- 3 Utilities** perform library and data set maintenance tasks, such as moving or copying library or data set members, displaying or printing data set names and volume table of contents (VTOC) information, comparing data sets, and searching for strings of data.
- 4 Foreground** calls IBM language processing programs in the foreground.
- 5 Batch** calls IBM language processing programs as batch jobs. ISPF generates Job Control Language (JCL) based on information you enter and submits the job for processing.
- 6 Command** calls TSO commands, CLISTs, or REXX EXECs under ISPF.
- 7 Dialog Test** tests individual ISPF dialog components, such as panels, messages, and dialog functions (programs, commands, menus).
- 9 IBM Products** allows you to select other installed IBM program development products on your system.
- 10 SCLM** controls, maintains, and tracks all of the software components of an application.
- 11 Workplace** gives you access to the ISPF Workplace, which combines many of the ISPF functions onto one object-action panel.
- X EXIT** leaves ISPF using the log and list defaults.

Panel format

- ↓ A panel is a predefined display image that you see on a display screen
- ↓ ISPF formats all panels to fit on a 24-line by 80-character screen
- ↓ ISPF has three basic types of panels:
 - Menus (selection panels)
 - Data-entry panels
 - Scrollable data panels

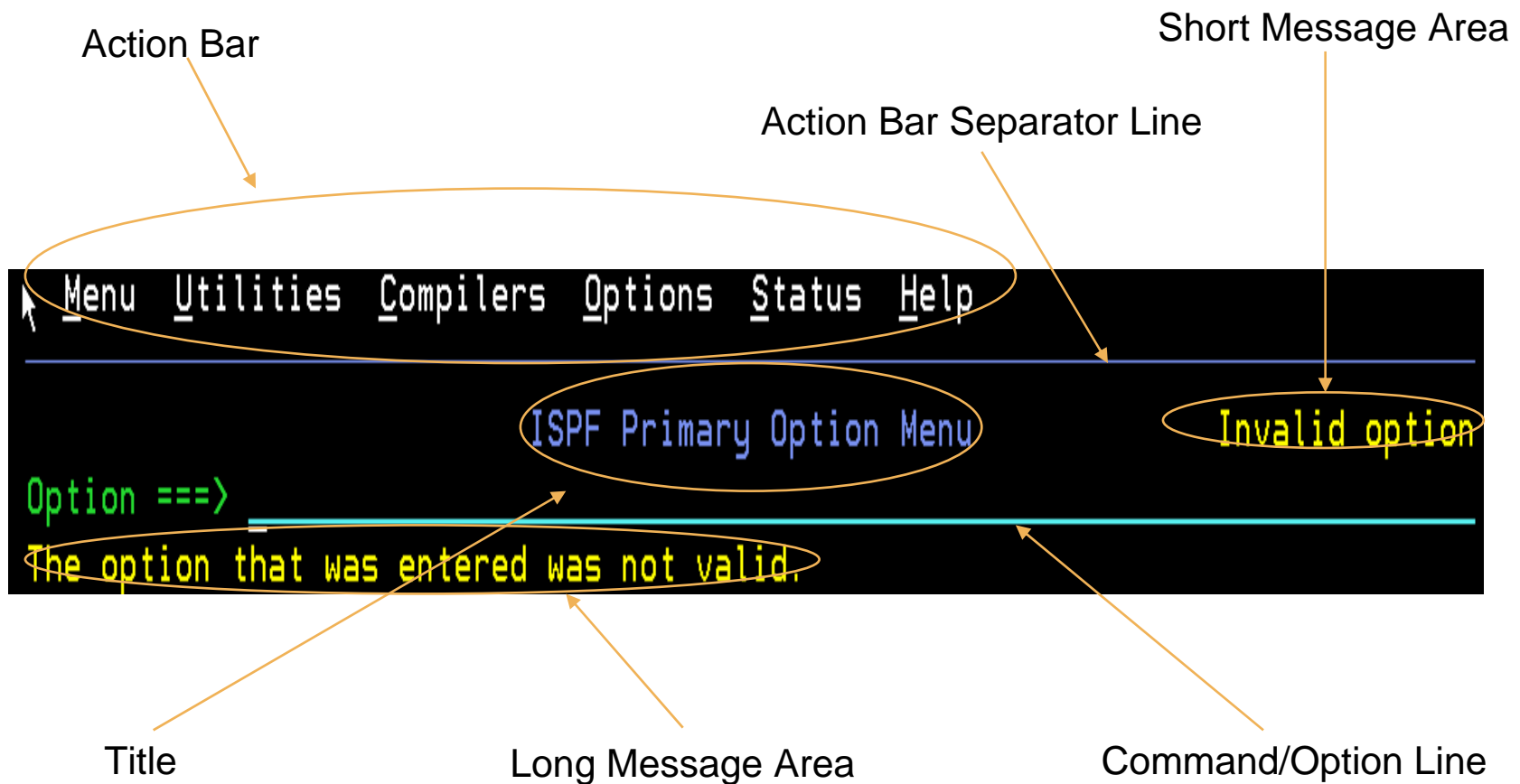
A *panel* is a predefined display image that you see on a display screen. ISPF formats all panels to fit on a 24-line by 80-character screen. On a 3278 Model 3 or 4, data that you can scroll occupies the full length of the screen (32 or 43 lines). On a 3278 Model 5, ISPF normally displays information in *default mode*; that is, 24 lines by 80 characters, with the same size characters as other models. "Browse" and "Edit" data that is wider than 80 characters is displayed with the smaller *native mode* characters, that is, up to 132 per line. You can use the Settings option (0) to override the automatic switching of modes.

When using ISPF, you see three basic types of panels:

- Menus (selection panels)
- Data-entry panels
- Scrollable data displays.

Panel format ...

If the command/option line is positioned at the top of the screen, the first lines of the panel are generally formatted as shown:



The Action Bar area (line 1) contains action bar choices that may be selected by positioning the cursor on the action bar choice and pressing Enter. A pull-down menu will then appear. Action bars give you one way to move through ISPF. Most ISPF panels have action bars at the top; the choices appear on the screen in white by default.

The Action Bar Separator area (line 2) is a visual divider between the action bar and the rest of the panel.

The Title area (line 3) identifies the function being performed and, where appropriate, library or data set information.

The Short Message area (line 3) is used to indicate:

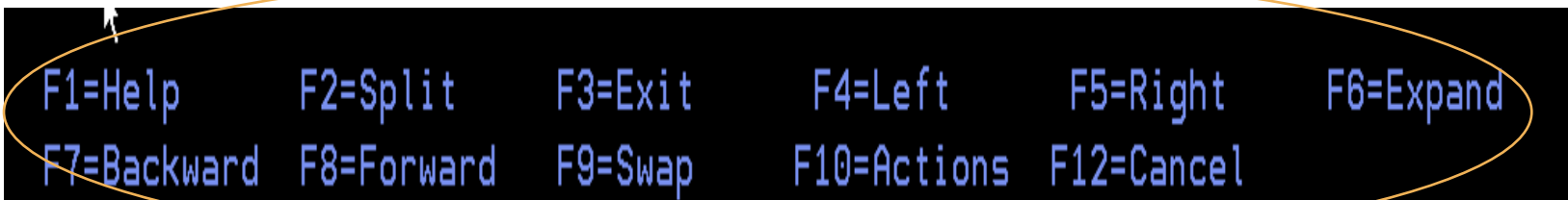
- Current line (browse) and column positions (browse, view and edit)
- Current row position in table display
- Successful completion of a processing function
- Error conditions (can be accompanied by audible alarm)

The Command/Option line may appear next (line 4) or near the bottom of the panel. The command line is used to enter a command. On a menu (selection panel), it may be used to enter either a command or an option.

The Long Message area displays an explanation of error conditions when you enter the HELP command.

Panel format ...

And the last lines of the panel generally display the function keys:

A screenshot of the ISPF interface showing two lines of function keys. The first line contains F1=Help, F2=Split, F3=Exit, F4=Left, F5=Right, and F6=Expand. The second line contains F7=Backward, F8=Forward, F9=Swap, F10=Actions, and F12=Cancel. A yellow oval highlights the entire text area, and a yellow arrow points from the text 'Function Keys' below to the center of the oval.

```
F1=Help    F2=Split    F3=Exit    F4=Left    F5=Right    F6=Expand  
F7=Backward F8=Forward  F9=Swap    F10=Actions F12=Cancel
```

Function Keys

The Function Keys area displays settings for the function keys. These settings are controlled through the Function keys pull-down on the action bar on the ISPF Settings panel.

Panel format ...

But, if the command/option line is positioned at the bottom of the screen, the first lines of the screen are generally formatted as shown:

```
Menu Utilities Compilers Options Status Help
```

```
ISPF Primary Option Menu
```

```
Invalid option
```

And the last lines are generally formatted like this:

```
The option that was entered was not valid.
```

```
Option ==>
```

```
F1=Help      F2=Split     F3=Exit      F4=Left      F5=Right     F6=Expand
```

```
F7=Backward  F8=Forward   F9=Swap      F10=Actions  F12=Cancel
```


The position of the command line and the long message area is controlled by the ISPF parameters on the ISPF Settings panel.

Command line at bottom

Specifies that the command line is to appear at the bottom of each logical screen. If you have specified that the panel should be displayed in CUA mode, the command line placement defaults to the bottom. If you deselect this field, the command line appears as specified in the panel definition statements. Unless indicated in the panel definition, it appears at the top of the panel. When you select the Command line at bottom option, the following changes take place:

- The command line moves to the last line of the logical screen or the line above the function keys depending on the CUA mode setting.
- Each line that follows the command line shifts up one line.
- The long message overlays the line above the new command line location.

Panel display CUA mode

Specifies that panels be displayed in CUA mode. This selection also affects how the long message line, command line, and function keys are displayed.

Panel format - menus

A menu, or selection panel, allows you to type a number or letter in the Option field and press Enter to select one of the listed items.

This example shows the selection of option 0 (Settings) from the ISPF Primary Option menu.

Menu choices

```
Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==> 0
0 Settings Terminal and user parameters
1 View Display source data or listings
2 Edit Create or change source data
```

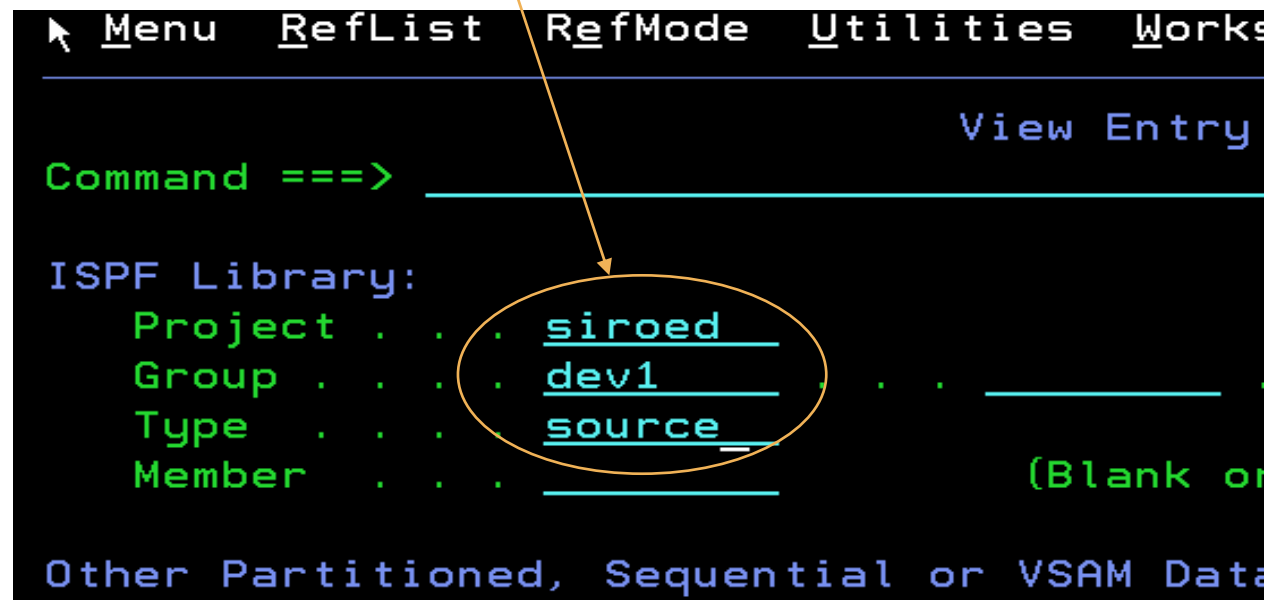
A menu, or selection panel, allows you to type a number or letter in the Option field and press Enter to select one of the listed items. The number or letter can be typed in either uppercase or lowercase. Allowable numbers and letters are shown in high intensity. You can also enter ISPF commands.

A typical dialog organization starts with display of the highest menu, called the primary option menu. User options selected from the primary option menu can result in the call of a function or the display of a lower-level menu. Each lower-level menu can also cause functions to receive control or still other menus to be displayed.

Panel format – data-entry panels

A data-entry panel is a panel on which you specify information.

This example shows the entry of ISPF library information in the View Entry panel.



```

└─┬─ Menu  RefList  RefMode  Utilities  Works
   │
   │                                         View Entry
   │
   │ Command ==> _____
   │
   │ ISPF Library:
   │   Project . . . siroed
   │   Group   . . . dev1
   │   Type    . . . source
   │   Member . . . _____ (Blank or
   │
   │ Other Partitioned, Sequential or VSAM Data
```

A data-entry panel is a panel on which you specify information, such as data set names, job statement parameters, and language processing options. If you do not enter a required value or if you enter inconsistent values, ISPF prompts you with a message.

Some data-entry fields retain their previous values. If so, the next time you use the panel, you do not have to type them again. Just press Enter. If you do not want those values, type over them and then press Enter.

The retained values come from your user profile, which ISPF automatically builds and maintains across sessions.

Panel format – scrollable data panels

Information is displayed in scrollable format when there is too much data to fit on the logical screen, as in this example of a Browse panel.

You control the scroll amount using the Scroll field.

You can use these scroll commands to scroll up and down.

And you can use these scroll commands to scroll left and right.

```

Menu  Utilities  Compilers  Help
-----
BROWSE  SIROED.DEV1.SOURCE (FLM01MD1) - 01.00      Line 00000000 Col 001 080
Command ==> _____ Scroll ==> PAGE
***** Top of Data *****
*****                                00010000
* ROUTINE INITIALIZATION                * 00020000
*                                       * 00021000
* 5647-A01 (C) COPYRIGHT IBM CORP. 1987 * 00022000
*                                       * 00023000
*****                                00030000
FLM01MD1 CSECT                          * 00040000
  B      28 (R15)                        * BRANCH AROUND ID/DATE/TIME * 00050000
  DC    CL8'FLM01MD1'                    * MODULE ID                 * 00060000
  DC    CL8'&SYSDATE'                    * ASSEMBLY DATE            * 00070000
  DC    CL8'&SYSTIME'                    * ASSEMBLY TIME           * 00080000
  STM   R14,R12,12(R13)                  * SAVE ALL REGS BUT R13   * 00090000
  LR    R4,R13                            * SAVE R13 IN R4          * 00100000
  LR    R12,R15                           * GET PROGRAM PTR         * 00110000
  LM    R0,R12,20(R13)                   * RESTORE R0-R12         * 00120000
  BR    R14                               * RETURN TO CALLER       * 00130000
*                                       *                          * 00140000
F1=Help  F2=Split  F3=Exit  F5=Rfind  F7=Up    F8=Down  F9=Swap
F10=Left F11=Right F12=Cancel
    
```

Information is displayed in scrollable format when there is too much data to fit on the logical screen. You can scroll up and down or left and right using scroll commands. When scrolling is allowed, a scroll amount is commonly displayed at the top of the screen. This amount determines the number of lines, or columns, scrolled with each use of a scroll command. To change the scroll amount, move the cursor to the scroll field and type over the displayed amount. Valid scroll amounts are:

ZXSMIN-ZXSMAX

The minimum and maximum scroll values. If you specify a scroll amount of **0**, no scrolling occurs.

PAGE Specifies scrolling by one page. For scrolling purposes, a *page* is defined as the amount of information currently visible on the logical screen.

DATA For up and down scrolling, specifies scrolling by one line less than a page. For left and right scrolling, it is one column less than a page.

HALF Specifies scrolling by half a page.

MAX Specifies scrolling to the top, bottom, left margin, right margin, beginning of field or end of field, depending upon which scrolling command is used and the current cursor position.

CSR Specifies scrolling based on the current position of the cursor. The line or column indicated by the cursor is moved to the top, bottom, left margin, or right margin of the screen, depending upon which scrolling command is used.

Navigating in ISPF

You can navigate (move around) in ISPF using the following methods:

- ↓ Using the command/option line
- ↓ Selecting a choice from one of the pull-downs on the action bar
- ↓ Selecting one of the point-and-shoot fields

Navigating in ISPF – using the command/option line

From a menu you can type an option selection number or letter.

In this example, we're selecting the Utilities option.

```

Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==> 3
0 Settings      Terminal and user parameters      User ID  : SIROED
1 View          Display source data or listings  Time    : 09:15
2 Edit          Create or change source data     Terminal: 3278
3 Utilities     Perform utility functions        Screen  : 1
4 Foreground   Interactive language processing  Language: ENGLISH
5 Batch         Submit job for language processing Appl ID : ISR
6 Command      Enter TSO or Workstation commands TSO logon: ISPF
7 Dialog Test  Perform dialog testing          TSO prefix: SIROED
9 IBM Products IBM program development products System ID: ISD1
10 SCLM        SW Configuration Library Manager MVS acct.: IBMGSA
11 Workplace   ISPF Object/Action Workplace    Release : ISPF 5.6

Enter X to Terminate using log/list defaults

F1=Help   F2=Split   F3=Exit   F4=Left   F5=Right   F6=Expand
F7=Backward F8=Forward F9=Swap   F10=Actions F12=Cancel
    
```

```

Menu Help
Utility Selection Panel
Option ==>
1 Library      Compress or print data set. Print index listing. Print,
                rename, delete, browse, edit or view members
2 Data Set     Allocate, rename, delete, catalog, uncatalog, or display
                information of an entire data set
3 Move/Copy    Move, or copy members or data sets
4 Dslist       Print or display (to process) list of data set names.
                Print or display VTOC information
5 Reset        Reset statistics for members of ISPF library
6 Hardcopy     Initiate hardcopy output
7 Transfer     Download ISPF Client/Server or Transfer data set
8 Outlist      Display, delete, or print held job output
9 Commands     Create/change an application command table
11 Format       Format definition for formatted data Edit/Browse
12 SuperC      Compare data sets (Standard Dialog)
13 SuperCE     Compare data sets Extended (Extended Dialog)
14 Search-For  Search data sets for strings of data (Standard Dialog)
15 Search-ForE Search data sets for strings of data Extended (Extended Dialog)
F1=Help   F2=Split   F3=Exit   F4=Left   F5=Right   F6=Expand
F7=Backward F8=Forward F9=Swap   F10=Actions F12=Cancel
    
```



The Utilities menu is displayed.

Navigating in ISPF – using the command/option line...

To bypass secondary option selections, type two selections separated by a period.

In this example, we're selecting option 4 from the Utilities menu.

```

Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==> 3.4
0 Settings Terminal and user parameters User ID : SIROED
1 View Display source data or listings Time : 09:15
2 Edit Create or change source data Terminal : 3278
3 Utilities Perform utility functions Screen : 1
4 Foreground Interactive language processing Language : ENGLISH
5 Batch Submit job for language processing Appl ID : ISR
6 Command Enter TSO or Workstation commands TSO logon : ISPF
7 Dialog Test Perform dialog testing TSO prefix: SIROED
9 IBM Products IBM program development products System ID : ISD1
10 SCLM SW Configuration Library Manager MVS acct. : IBMGSA
11 Workplace ISPF Object/Action Workplace Release : ISPF 5.6

Enter X to Terminate using log/list defaults

F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```

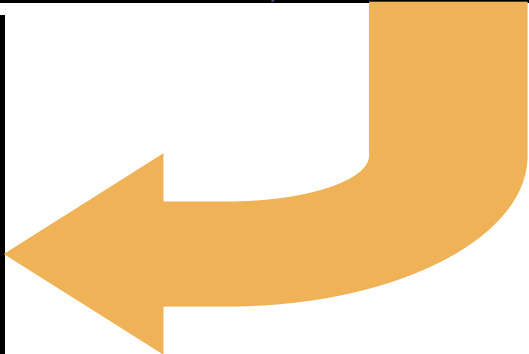
```

Menu RefList RefMode Utilities Help
Data Set List Utility
Option ==>
blank Display data set list P Print data set list More: +
V Display VTOC information PV Print VTOC information

Enter one or both of the parameters below:
Dsname Level . . . SIROED
Volume serial . . .

Data set list options
Initial View . . . 1 1. Volume Enter "/" to select option
2. Space / Confirm Data Set Delete
3. Attrib / Confirm Member Delete
4. Total / Include Additional Qualifiers
/ Display Catalog Name

When the data set list is displayed, enter either:
"/" on the data set list command field for the command prompt pop-up,
an ISPF line command, the name of a TSO command, CLIST, or REXX exec, or
F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```



The Data Set List Utility panel is displayed.

Many options have a secondary list of options. To bypass the second menu, type two selections, separating them with a period, on the ISPF Primary Option Menu. For example, entering 3.4 on the ISPF Primary Option Menu is the same as entering 3 on the ISPF Primary Option Menu and 4 on the Utility Selection Panel.

An even faster way to select an option is to bypass both the ISPF Primary Option Menu and the secondary menus. To do this, include your options in the ISPF (or alias) command. For example:

- **ISPF 2** To go directly to the Edit option.
- **ISPF 3.4** To go directly to the Data Set List utility (3.4).

Navigating in ISPF – using the command/option line...

From any panel, you can type an ISPF command on the command/option line.

In this example, we're entering the SETTINGS command.

```

Menu RefList RefMode Utilities Help
Data Set List Utility
Option ==> settings
blank Display data set list P Print data set list
V Display VTOC information PV Print VTOC information
Enter one or both of the parameters below:
Dsname Level . . . SIROED
Volume serial . . .
Data set list options
Initial View . . . 1
1. Volume Enter "/" to select option
2. Space / Confirm Data Set Delete
3. Attrib / Confirm Member Delete
4. Total / Include Additional Qualifiers
/ Display Catalog Name
When the data set list is displayed, enter either:
"/" on the data set list command field for the command prompt pop-up,
an ISPF line command, the name of a TSO command, CLIST, or REXX exec, or
F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```

```

Log/List Function keys Colors Environ Workstation Identifier Help
ISPF Settings
Command ==>
Options Print Graphics
Enter "/" to select option Family printer type 2
- Command line at bottom Device name . . .
/ Panel display CUA mode Aspect ratio . . . 0
- Long message in pop-up
/ Tab to action bar choices
/ Tab to point-and-shoot fields
/ Restore TEST/TRACE options
- Session Manager mode General
/ Jump from leader dots Input field pad . . B
- Edit PRINTDS Command Command delimiter . ;
/ Always show split line
- Enable EURO sign
Member list options
Enter "/" to select option
/ Scroll member list
F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```



The ISPF Settings panel is displayed.

Navigating in ISPF – using the command/option line...

Use the jump (=) function to jump directly to any valid option from the primary option menu currently in effect.

Here we're jumping from the Settings panel to the Library Utility panel.

```

Log/List  Function keys  Colors  Environ  Workstation  Identifier  Help
-----
ISPF Settings
Command ==> 3.1
Options
Enter "/" to select option
- Command line at bottom
Z Panel display CUA mode
- Long message in pop-up
Z Tab to action bar choices
Z Tab to point-and-shoot fields
- Restore TEST/TRACE options
Z Session Manager mode
- Jump from leader dots
- Edit PRINTDS Command
Z Always show split line
- Enable EURO sign

Print Graphics
Family printer type 2
Device name . . . .
Aspect ratio . . . 0

General
Input field pad . . B
Command delimiter . 1

Member list options
Enter "/" to select option
Z Scroll member list
F1=Help  F2=Split  F3=Exit  F4=Left  F5=Right  F6=Expand
F7=Backward  F8=Forward  F9=Swap  F10=Actions  F12=Cancel
    
```

```

Menu  RefList  Utilities  Help
-----
Library Utility
Option ==>
blank Display member list      I Data set information      B Browse member
C Compress data set           S Short data set information D Delete member
X Print index listing         E Edit member               R Rename member
L Print entire data set       V View member               P Print member

Enter "/" to select option
Z Confirm Member Delete
- Enhanced Member List

ISPF Library:
Project . . . SIROED
Group . . . . DEV1
Type . . . . SOURCE
Member . . .
New name . .

Other Partitioned or Sequential Data Set:
Data Set Name . . .
Volume Serial . . . (If not cataloged)

F1=Help  F2=Split  F3=Exit  F4=Left  F5=Right  F6=Expand
F7=Backward  F8=Forward  F9=Swap  F10=Actions  F12=Cancel
    
```



The jump function allows you to go directly to any valid option from the primary option menu currently in effect. To use the jump function, enter the option on the command line or in the command field of any panel, preceded by an equal sign and followed by a blank. For example: **Command ==> =3.1** takes you directly to the first suboption of option 3 on the primary option menu in effect.

The action is as follows:

- If not entered on a primary option menu, the jump function causes repeated END commands to be simulated until a primary option menu is encountered. What follows the equal sign is then used on the primary option menu, and pressing of the Enter key is simulated. The primary option menu is not displayed.
- If entered on a primary option menu, the jump function equal sign is ignored and the specified option is selected.

For convenience, you can enter a jump function in two other places:

- Any field that is preceded by an arrow. The arrow must consist of at least two equal signs followed by a greater-than sign (==>). Also, the arrow must immediately precede the input attribute byte.

Any field preceded by leader dots (that is, ... or . .). ISPF looks at the three characters preceding the field; they must be either three consecutive dots or two dots separated by a blank.

Navigating in ISPF – using the action bar

The action bar provides another means of navigating.

When you position the cursor on an action bar choice and press enter, a pull-down menu is displayed. Enter the number of the pull-down choice you want.

```

Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==>
0 Settings      Terminal and user parameters      User ID . . : SIROED
1 View          Display source data or listings   Time . . . : 07:22
2 Edit          Create or change source data      Terminal . : 3278
3 Utilities     Perform utility functions         Screen . . : 1
4 Foreground   Interactive language processing   Language . : ENGLISH
5 Batch        Submit job for language processing Appl ID . . : ISR
6 Command      Enter TSO or Workstation commands TSO logon : ISPF
7 Dialog Test  Perform dialog testing            TSO prefix: SIROED
9 IBM Products IBM program development products System ID  : ISD1
10 SCLM        SW Configuration Library Manager MVS acct. : IBMGSA
11 Workplace   ISPF Object/Action Workplace     Release . . : ISPF 5.6

Enter X to Terminate using log/list defaults

F1=Help      F2=Split    F3=Exit     F4=Left     F5=Right    F6=Expand
F7=Backward  F8=Forward  F9=Swap     F10=Actions F12=Cancel
    
```

```

Menu Utilities Compilers Options Status Help
1. Settings      Primary Option Menu
2. View
3. Edit
4. ISPF Command Shell
5. Dialog Test...
6. Other IBM Products...
7. SCLM
8. ISPF Workplace
9. Status Area...
10. Exit
9 IBM Products  IBM program development products
10 SCLM         SW Configuration Library Manager
11 Workplace    ISPF Object/Action Workplace

Enter X to Terminate using log/list defaults

F1=Help      F2=Split    F3=Exit     F4=Left     F5=Right    F6=Expand
F7=Backward  F8=Forward  F9=Swap     F10=Actions F12=Cancel
    
```



Action bars provide another means of navigating in ISPF. An action bar is the area at the top of an ISPF panel that contains choices that give you access to actions available on that panel. When you select an action bar choice, ISPF displays a pull-down menu.

A pull-down menu is a list of numbered choices extending from the selection you made on the action bar. The action bar selection is highlighted. You can select an action either by typing in its number and pressing Enter or by selecting the action with your cursor. ISPF displays the requested panel. If your choice contains an ellipsis (...), ISPF displays a pop-up window. When you exit this panel or pop-up, ISPF closes the pull-down and returns you to the panel from which you made the initial action bar selection.

To select a choice from a pull-down menu, type its number in the entry field (underlined) and press Enter or select the choice. To cancel a pull-down menu without making a selection, press F12 (Cancel).

Note: If a choice displays in blue (the default) with an asterisk as the first digit of the selection number, the choice is unavailable and cannot be selected. This could be because recursive selection is not permitted or because the choice represents the current state.

Navigating in ISPF – using the action bar...

You can use the ACTIONS command (or function key) with or without a mnemonic to move the cursor to the action bar. When you enter the command and press Enter, the corresponding pull-down menu is displayed.

```

Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==> actions o
0 Settings      Terminal and user parameters      User ID . . : SIROED
1 View          Display source data or listings     Time . . . : 07:22
2 Edit          Create or change source data        Terminal . : 3278
3 Utilities     Perform utility functions           Screen . . : 1
4 Foreground    Interactive language processing     Language . : ENGLISH
5 Batch         Submit job for language processing   Appl ID . . : ISR
6 Command       Enter TSO or Workstation commands   TSO logon : ISPF
7 Dialog Test   Perform dialog testing              TSO prefix: SIROED
9 IBM Products  IBM program development products    System ID  : ISD1
10 SCLM         SW Configuration Library Manager    MVS acct.  : IBMGSA
11 Workplace    ISPF Object/Action Workplace       Release . . : ISPF 5.6

Enter X to Terminate using log/list defaults

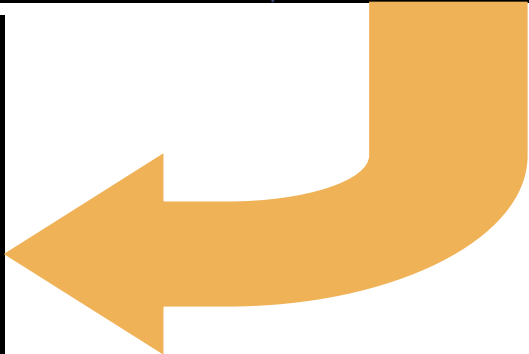
F1=Help      F2=Split      F3=Exit      F4=Left      F5=Right     F6=Expand
F7=Backward  F8=Forward    F9=Swap      F10=Actions  F12=Cancel
    
```

```

Menu Utilities Compilers Options Status Help
Option ==>
= 1. General Settings
  2. CUA Attributes...
  3. Keylists...
  4. Point-and-Shoot...
  5. Colors...
  6. Dialog Test appl ID...
0 Settings      Terminal a          ID . . : SIROED
1 View          Display so         . . . : 07:22
2 Edit          Create or          inal . : 3278
3 Utilities     Perform ut        en . . : 1
4 Foreground    Interactive language processing   Language . : ENGLISH
5 Batch         Submit job for language processing  Appl ID . . : ISR
6 Command       Enter TSO or Workstation commands  TSO logon : ISPF
7 Dialog Test   Perform dialog testing              TSO prefix: SIROED
9 IBM Products  IBM program development products    System ID  : ISD1
10 SCLM         SW Configuration Library Manager    MVS acct.  : IBMGSA
11 Workplace    ISPF Object/Action Workplace       Release . . : ISPF 5.6

Enter X to Terminate using log/list defaults

F1=Help      F2=Split      F3=Exit      F4=Left      F5=Right     F6=Expand
F7=Backward  F8=Forward    F9=Swap      F10=Actions  F12=Cancel
    
```



There are several ways to move the cursor to the action bar:

- Use the cursor movement keys to manually place the cursor on an action bar choice.
- Type `ACTIONS` on the command line and press Enter to move the cursor to the first action bar choice.
- Press F10 (Actions) or the Home key to move the cursor to the first action bar choice.
- If mnemonics are defined for action bar choices, you can enter the `ACTIONS` command and the mnemonic letter that corresponds to an underscored letter in the action bar choice text, or you can enter the mnemonic letter that corresponds to an underscored letter in the action bar choice text, and press the function key assigned to the `ACTIONS` command. This results in the display of the pull-down menu for that action bar choice

Navigating in ISPF – using point-and-shoot fields

Point-and-shoot text fields are cursor-sensitive. Position the cursor on the field and press Enter.

Here we're selecting the View option from the Primary Option Menu.

```

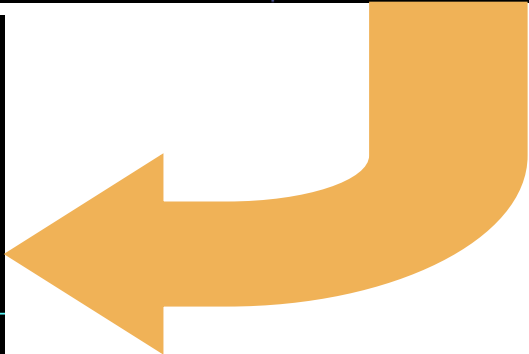
Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==>
0 Settings      Terminal and user parameters      User ID  : SIROED
1 View         Display source data or listings   Time    : 10:46
2 Edit         Create or change source data      Terminal: 3278
3 Utilities    Perform utility functions         Screen  : 1
4 Foreground   Interactive language processing   Language: ENGLISH
5 Batch        Submit job for language processing Appl ID  : ISR
6 Command      Enter TSO or Workstation commands TSO logon: ISPF
7 Dialog Test  Perform dialog testing           TSO prefix: SIROED
9 IBM Products IBM program development products System ID: ISD1
10 SCLM        SW Configuration Library Manager MVS acct.: IBMGSA
11 Workplace   ISPF Object/Action Workplace     Release : ISPF 5.6

Enter X to Terminate using log/list defaults

F1=Help   F2=Split   F3=Exit   F4=Left   F5=Right   F6=Expand
F7=Backward F8=Forward F9=Swap   F10=Actions F12=Cancel
    
```

```

Menu RefList RefMode Utilities Workstation Help
View Entry Panel
Command ==>
ISPF Library:
Project . . . SIROED
Group . . . DEV1
Type . . . SOURCE
Member . . . (Blank or pattern for member selection list)
Other Partitioned, Sequential or VSAM Data Set:
Data Set Name . . .
Volume Serial . . . (If not cataloged)
Workstation File:
File Name . . .
Options
Initial Macro . . . - Confirm Cancel/Move/Replace
Profile Name . . . / Browse Mode
Format Name . . . - View on Workstation
Data Set Password . . . / Warn on First Data Change
F1=Help   F2=Split   F3=Exit   F4=Left   F5=Right   F6=Expand
F7=Backward F8=Forward F9=Swap   F10=Actions F12=Cancel
    
```



Point-and-shoot text fields are cursor-sensitive; if you select a field, the action described in that field is performed. For example, if you select Option 1, View, ISPF displays the View Entry panel.

Note: If you have entered a command on the command line, this command is processed before any point-and-shoot command unless you are running in GUI mode.

Note: You can use the Tab key to position the cursor to point-and-shoot fields by selecting the "Tab to point-and-shoot fields" option on the ISPF Settings panel (Option 0).

Using commands and function keys

ISPF provides commands for commonly used functions. You can enter a command by:

- ↓ Typing the command in the command/option field and then pressing Enter
- ↓ Pressing a function (F) key that has been assigned a command
- ↓ Selecting a pull-down choice from an action bar
- ↓ Selecting a point-and-shoot field on a panel

Using commands and function keys...

ISPF provides over 80 system commands. Some of the more commonly used commands include:

ACTIONS	END	PANELID	START
CANCEL	EXIT	PHSFOW	SWAP
CRETRIEV	KEYS	RETRIEVE	TSO
DTEST	NRETRIEV	SPLIT	TUTOR

Included in these system commands are the scroll commands:

BACKWARD*	BOTTOM**	DOWN	FORWARD**
LEFT	RIGHT	TOP*	UP

* Alias for the UP command

** Alias for the DOWN command

ISPF also supports user or site commands, application commands, and function commands.

In addition to ISPF system commands, there are several other types of commands in ISPF:

User or Site commands	Defined by the site administrator (in the ISPF Configuration table) and available to a user, in addition to the system commands.
Application commands	Available to a user throughout the processing of an application.
Function commands	Meaningful only while using a particular function within an application.

System, user, site, and application commands are defined by using command tables. The DM component processes these commands. System, user, site, and application command processing is generally transparent to the dialog functions. For example, HELP is a system command.

Function commands include all commands that are processed by a dialog function. For example, the NUMBER command within the ISPF Editor (option 2) is a function command.

Using commands and function keys...

```

Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==> dslist *;bottom_
-----
0 Settings      Terminal and user parameters      User ID  : SIROED
1 View          Display source data or listings   Time    : 06:02
2 Edit          Create or change source data      Terminal: 3278
3 Utilities     Perform utility functions         Screen  : 1
4 Foreground   Interactive language processing   Language: ENGLISH
5 Batch        Submit job for language processing Appl ID : ISR
6 Command      Enter TSO or Workstation commands TSO logon: ISPF
7 Dialog Test  Perform dialog testing           TSO prefix: SIROED
9 IBM Products IBM program development products System ID: ISD1
10 SCLM        SW Configuration Library Manager MVS acct.: IBMGSA
11 Workplace   ISPF Object/Action Workplace     Release : ISPF 5.6

Enter X to Terminate using log/list defaults

F1=Help  F2=Split  F3=Exit  F4=Left  F5=Right  F6=Expand
F7=Backward F8=Forward F9=Swap  F10=Actions F12=Cancel
    
```

You can enter multiple commands in a single interaction. ISPF processes the commands as if you had entered them one after the other.

Separate stacked commands with a delimiter character (default is a semicolon).



```

Menu Options View Utilities Compilers Help
DSLIST - Data Sets Matching SIROED.*
Command ==>
-----
Command - Enter "/" to select action      Message      Volume
-----
SIROED.SIROED.FMN510.TSTLOAD             D$US03
SIROED.SRCHDSL.LIST                      D$US48
SIROED.SRCHFOR.LIST                      D$US12
SIROED.SYS2.BROADCAST                    D$US06
SIROED.TEST.ARCHDEF                      D$US02
SIROED.TEST.LARGE.RRDS                   *VSAM*
SIROED.TEST.LARGE.RRDS.DATA              D$US36
SIROED.TEST.LMAP                         D$US01
SIROED.TEST.LOAD                         D$US20
SIROED.TEST.OBJ                          D$US03
SIROED.TEST.QSAM.ODO                     D$US08
SIROED.TEST.SOURCE                       D$US03
SIROED.TEST.SOURCLST                     D$US03
SIROED.TESTDATA.QSAM.VB                  D$US08
***** End of Data Set list *****
F1=Help  F2=Split  F3=Exit  F5=Rfind  F7=Up    F8=Down  F9=Swap
F10=Left F11=Right F12=Cancel
    
```

You can stack commands to be run by entering a special delimiter between the commands. For example, entering: **==> dslist *;bottom** causes the DSLIST command to run first. When it completes, the data set list is scrolled to the bottom. The default delimiter is a semicolon. Use the Settings option (0) to change the delimiter.

Commands cannot be stacked following the:

- HELP command. HELP processing deletes any remaining commands in the stack.
- RETRIEVE command.

Using commands and function keys...

Function keys are used to simulate command entry:

- ↓ Use the function keys for command entry to save time and reduce typing errors.
- ↓ Default function key definitions are already assigned to many of the frequently used system commands.
- ↓ Function key assignments and labels for an application panel can be defined and stored within a keylist. Most ISPF panels have keylists.
- ↓ You can type information into the command/option field before pressing a function key. The key definition is concatenated ahead of whatever you typed into the command/option field to form the complete command.

Under ISPF, function keys are not automatically assigned to special functions. You equate each function key to a character string. When you press a function key, it simulates command entry. The processing is the same as if you had typed the character string in the command field and pressed the Enter key.

Note: On a 3270 display, the horizontal divider line that separates the logical screens is not considered part of either logical screen. If the cursor is placed on this horizontal divider line and a function key is pressed, the result is the same as if the ENTER key was pressed and the cursor is positioned on the active logical screen's command line.

A dialog function cannot distinguish the difference between a command entered by a function key and a command entered by typing in the command field. If the character string with which the function key is equated is longer than the screen's command field, the string is truncated without warning.

If you type information on the command line and then press a function key, the function key definition, followed by a blank, is concatenated ahead of the contents of the command field. For example, suppose F7 is equated to the character string **UP**. If you type **4** in the command field and then press F7, the results are exactly the same as if you had typed **UP 4** in the command field and pressed the Enter key.

Function keys can be displayed at the bottom of a panel. Using the FKA or PFSHOW command, you can display either the long or short form of the keys, or remove the keys from the panel.

Using commands and function keys...

```

File
-----
PRIVATE          ISR Keylist ISRSAB Change          Row 1 to 10 of 24
Command ==> _____ Scroll ==> PAGE

Make changes and then select File action bar.

Keylist Help Panel Name . . . ISRSABH

Key      Definition          Format  Label
F1 . . . HELP                SHORI  Help
F2 . . . SPLIT               LONG   Split
F3 . . . EXIT                SHORI  Exit
F4 . . . LEFT                SHORI  Left
F5 . . . RIGHT              SHORI  Right
F6 . . . EXPAND              SHORI  Expand
F7 . . . BACKWARD           LONG   Backward
F8 . . . FORWARD            LONG   Forward
F9 . . . SWAP                LONG   Swap
F10 . . . ACTIONS           SHORI  Actions
F1=Help      F2=Split    F3=Exit    F4=Left    F5=Right
F6=Expand    F7=Backward F8=Forward F9=Swap    F10=Actions
    
```

Function keys can be changed from the Settings menu or by entering the KEYS command from a command line.

Or you use the Keylist Utility. You can invoke the Keylist Utility from the Settings menu or by entering the KEYLIST command from a command line.

```

File View
-----
Keylist Utility for ISR          Row 1 to 12 of 16
Command ==> _____ Scroll ==> PAGE

0
0
1  Actions:  N=New  E=Edit  V=View  D=Delete  /=None
2
3
4  Keylist  Type
5  =  ISRHELP  SHARED
6  -  ISRHLP2  SHARED
7  -  ISRNAB   SHARED
8  -  ISRNSAB  SHARED
9  -  ISRREFL  SHARED
10 -  ISRREFO  SHARED
11 -  ISRSAB   PRIVATE *** Currently active keylist ***
12 -  ISRSCRVT SHARED
13 -  ISRSLAPP SHARED
14 -  ISRSNAB  SHARED
15 -  ISRSPBC  SHARED
16 -  ISRSPEC  SHARED
F1=Help      F2=Split    F3=Exit    F4=Left    F5=Right
F6=Expand    F7=Backward F8=Forward F9=Swap    F10=Actions
    
```


You can define function key values three ways:

- Use the KEYS command to display the Keylist Utility panel or, if you're not using keylists, the PF Key Definitions and Labels panel, then change the function keys for the panel you are on.
- If you're using keylists, use the KEYLIST command or select the "Keylist settings" choice from the Function keys pull-down on the ISPF Settings panel.
- If you're using keylists but need to change the non-keylist function keys, use the ZKEYS command or select the "Non-Keylist PF Key settings" choice from the Function keys pull-down on the ISPF Settings panel.

Using commands and function keys...

Most ISPF panels have action bars. The action bar is the area at the top of an application panel that contains action bar choices for the panel.

When you select an action bar choice, a pull-down menu of pull-down choices is displayed.

The image shows three overlapping screenshots of the ISPF interface:

- Top-left screenshot:** Shows the 'ISPF Primary Option Menu' with an action bar at the top containing 'Menu', 'Utilities', 'Compilers', 'Options', 'Status', and 'Help'. A list of options is visible, including 'Settings', 'View', 'Edit', 'Utilities', 'Foreground', 'Batch', 'Command', 'Dialog Test', 'IBM Products', 'SCLM', and 'Workplace'. A yellow oval highlights the 'Menu' action bar choice.
- Middle-left screenshot:** Shows the 'ISPF Settings' panel with an action bar containing 'Log/List', 'Function keys', 'Colors', 'Environ', 'Workstation', 'Identifier', and 'Help'. A yellow oval highlights the 'Function keys' action bar choice.
- Bottom-right screenshot:** Shows a pull-down menu for 'Function keys' with a list of options: '1. Non-Keylist PF Key settings', '2. Keylist settings...', '3. Tailor function key display', '4. Show all function keys', '5. Show partial function keys', '6. Remove function key display', '7. Use private and shared', '8. Use only shared', '9. Disable keylists', and '*0. Enable keylists'. A yellow oval highlights the 'Function keys' action bar choice in the screenshot above it.

Action bars give you another way to move through ISPF. Most ISPF panels have action bars at the top; the choices appear on the screen in white by default.

The action bar is the area at the top of an application panel that contains action bar choices for the panel.

An action bar choice represents a group of related choices that appear in the pull-down associated with the action bar choice.

When you select an action bar choice, the associated pull-down appears directly below the action bar choice.

Pull-downs contain choices that, when selected, perform actions that apply to the contents of the panel.

Using commands and function keys...

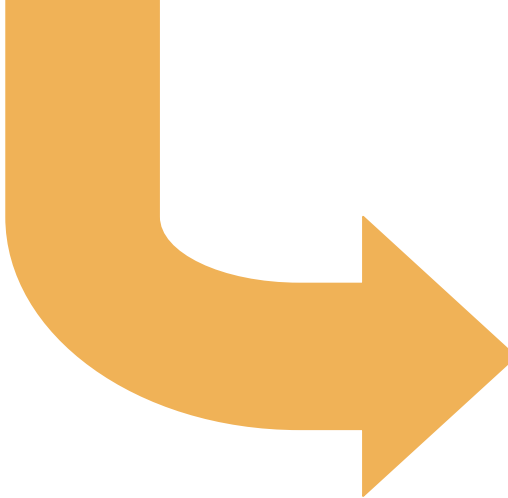
```

Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==>
0 Settings      Terminal and user parameters      User ID  : SIROED
1 View          Display source data or listings    Time    : 13:48
2 Edit          Create or change source data       Terminal: 3278
3 Utilities     Perform utility functions          Screen  : 1
4 Foreground   Interactive language processing    Language: ENGLISH
5 Batch        Submit job for language processing  Appl ID : ISR
6 Command      Enter TSO or Workstation commands  TSO logon: ISPF
7 Dialog Test  Perform dialog testing             TSO prefix: SIROED
9 IBM Products IBM program development products  System ID: ISD1
10 SCLM        SW Configuration Library Manager   MVS acct.: IBMGSA
11 Workplace   ISPF Object/Action Workplace       Release : ISPF 5.6

Enter X to Terminate using log/list defaults

F1=Help   F2=Split  F3=Exit  F4=Left  F5=Right  F6=Expand
F7=Backward F8=Forward F9=Swap  F10=Actions F12=Cancel
    
```

Point-and-shoot fields are text fields on a panel that are cursor-sensitive. If you position the cursor on a point-and-shoot field and press Enter, the action described in that field is performed.



```

Menu Help
Utility Selection Panel
Option ==>
1 Library      Compress or print data set. Print index listing. Print,
                rename, delete, browse, edit or view members
2 Data Set     Allocate, rename, delete, catalog, uncatalog, or display
                information of an entire data set
3 Move/Copy    Move, or copy members or data sets
4 Dslist       Print or display (to process) list of data set names.
                Print or display VTOC information
5 Reset        Reset statistics for members of ISPF library
6 Hardcopy     Initiate hardcopy output
7 Transfer     Download ISPF Client/Server or Transfer data set
8 Outlist      Display, delete, or print held job output
9 Commands     Create/change an application command table
11 Format       Format definition for formatted data Edit/Browse
12 SuperC      Compare data sets (Standard Dialog)
13 SuperCE     Compare data sets Extended (Extended Dialog)
14 Search-For  Search data sets for strings of data (Standard Dialog)
15 Search-ForE Search data sets for strings of data Extended (Extended Dialog)
F1=Help   F2=Split  F3=Exit  F4=Left  F5=Right  F6=Expand
F7=Backward F8=Forward F9=Swap  F10=Actions F12=Cancel
    
```

Many ISPF panels also have point-and-shoot text fields, which appear in turquoise by default. Point-and-shoot text fields are cursor-sensitive; if you select a field, the action described in that field is performed. For example, if you select Option 3, Utilities, on the ISPF Primary Option Menu, the Utility Section panel is displayed.

If you have entered a command on the command line, this command is processed before any point-and-shoot command.

You can use the Tab key to position the cursor to point-and-shoot fields by selecting the "Tab to point-and-shoot fields" option on the ISPF Settings panel (Option 0).

Getting help

The HELP command shows you:

- ↓ General information about an ISPF system command or option
- ↓ General information about an ISPF panel
- ↓ More information about a message that has been displayed in the upper-right corner of the screen

If you enter the TUTOR command without a parameter, the general tutorial help panel is displayed.

```
Tutorial ----- ISPF Tutorial ----- Tutorial
Command ==> _____

          |-----|
          | ISPF Dialog Manager |
          |-----|
          | Tutorial           |

This tutorial provides on-line information about the features and operations
of ISPF. You may view the tutorial sequentially, or you may choose selected
topics from lists displayed on many of the tutorial pages.

The table of contents lists major topics. Subsequent pages contain additional
lists that lead you to more specific levels of detail. You can also select
topics from the tutorial index.

The following panel describes how to use this tutorial.

  Press ENTER to proceed to the next page, or
  Enter the UP command to go directly to the table of contents, or
  Enter the END command to return to the primary option menu.

F1=Help      F2=Split    F3=Exit      F4=Resize    F5=Exhelp    F6=Keyshelp
F7=PrvTopic  F8=NxtTopic  F9=Swap     F10=PrvPage F11=NxtPage F12=Cancel
```

The HELP command (F1/13) shows you general information about an ISPF system command, ISPF option, or panel, or offers more information about a message that has been displayed in the upper-right corner of the screen.

For short messages, HELP displays a one-line explanation. To get further information, enter the HELP command a second time for the appropriate section of the tutorial. Long messages display (by default) in a pop-up window. Enter END (F3/15) or RETURN (F4/16) to return to the screen that you were viewing when you entered the HELP command.

The following types of help panels are available:

- Field-level help** Provides help panels for individual fields on application panels. When the user enters the Help command, ISPF displays the help panel defined for the field on which the cursor is located.
- Message help** Provides help for ISPF messages.
- Panel help** Provides help for ISPF panels.
- Tutorial** Describes the ISPF product. The tutorial is shipped with the ISPF product.

The TUTOR command calls the ISPTUTOR program to display specified tutorial panels. To display a particular tutorial panel, enter the TUTOR command along with the panel identifier of the desired tutorial panel as a parameter. If you issue the TUTOR command without a parameter, the general tutorial help panel (ISP00000) is displayed.

Split screen mode

You can use the SPLIT command to divide your 3270 display into two or more logical screens.

The position of the cursor defines the new logical screen.

```

Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==> split

0 Settings      Terminal and user parameters      User ID . : SIROED
1 View          Display source data or listings    Time. . . : 17:20
2 Edit          Create or change source data       Terminal. : 3278
3 Utilities     Perform utility functions         Screen. . : 1
4 Foreground   Interactive language processing    Language. : ENGLISH
5 Batch        Submit job for language processing  Appl ID . : ISR
6 Command      Enter TSO or Workstation commands  TSO logon : ISPF
7 Dialog Test  Perform dialog testing             TSO prefix: SIROED
9 IBM Products IBM program development products System ID : ISD1
10 SCLM        SW Configuration Library Manager   MVS acct. : IBMGSA
11 Workplace   ISPF Object/Action Workplace      Release . : ISPF 5.6

Enter X to Terminate using log/list defaults

F1=Help      F2=Split    F3=Exit     F4=Left     F5=Right    F6=Expand
F7=Backward  F8=Forward  F9=Swap     F10=Actions F12=Cancel
    
```

```

Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==>
More: +
0 Settings      Terminal and user parameters      User ID . : SIROED
1 View          Display source data or listings    Time. . . : 17:20
2 Edit          Create or change source data       Terminal. : 3278
F1=Help      F2=Split    F3=Exit     F4=Left     F5=Right    F6=Expand
F7=Backward  F8=Forward  F9=Swap     F10=Actions F12=Cancel
Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==>
More: +
0 Settings      Terminal and user parameters      User ID . : SIROED
1 View          Display source data or listings    Time. . . : 17:21
2 Edit          Create or change source data       Terminal. : 3278
3 Utilities     Perform utility functions         Screen. . : 2
4 Foreground   Interactive language processing    Language. : ENGLISH
5 Batch        Submit job for language processing  Appl ID . : ISR
F1=Help      F2=Split    F3=Exit     F4=Left     F5=Right    F6=Expand
F7=Backward  F8=Forward  F9=Swap     F10=Actions F12=Cancel
    
```

Each logical screen is treated as a separate ISPF session.

There might be times when you want to select another ISPF function without ending the current function. ISPF provides the ability to "split" the display screen into two or more logical screens that operate independently of one another.

You enter split-screen mode by using the SPLIT command. You also use this command to reposition the horizontal line that separates the two logical screens on a 3270 display. On a 3270 display the location of the cursor identifies the active logical screen. On a 3270 display, the horizontal divider line that separates the logical screens is not considered part of either logical screen. If the cursor is placed on this horizontal divider line and a function key is pressed, the result is the same as if the ENTER key was pressed and the cursor is positioned on the active logical screen's command line.

When the SPLIT command is entered without a parameter, if only one screen is currently being used, the physical display is divided into two logical screens with a divider at the cursor. If two or more screens exist, the divider line is moved, but no new screen is started.

When the SPLIT NEW command is entered, a new logical screen is added each time the command is given, until the maximum number is reached. After the limit is reached, a message appears when the command is issued again. Each new logical screen is added below the cursor, where the split line appears. If two or more screens already exist, the new one replaces the screen in which the SPLIT command was *not* entered.

The maximum number of screens available to you depends on the value of the MAXIMUM_NUMBER_OF_SPLIT_SCREEN keyword in the ISPF Configuration table. ISPF ships with a default figure of 8. Support for up to 32 split screens is available for all terminal types except the 3290.

On a 3270, only two logical screens are ever displayed. Although a 3270 terminal can only display two screens at one time, there can be other screens that are not visible.

Split screen mode...

Position the cursor at the top or bottom of the screen to get a “full-screen” logical screen.

```

Menu RefList RefMode Utilities Help
Data Set List Utility
Option ==> split
blank Display data set list P Print data set list
V Display VTOC information PV Print VTOC information
More: +
Enter one or both of the parameters below:
Dsname Level . . . SIROED
Volume serial . . .
Data set list options
Initial View . . . 1
1. Volume Enter "/" to select option
2. Space / Confirm Data Set Delete
3. Attrib / Confirm Member Delete
4. Total / Include Additional Qualifiers
/ Display Catalog Name
When the data set list is displayed, enter either:
"/" on the data set list command field for the command prompt pop-up,
an ISPF line command, the name of a TSO command, CLIST, or REXX exec, or
F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```

```

Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==>
0 Settings Terminal and user parameters User ID . : SIROED
1 View Display source data or listings Time . . . : 17:45
2 Edit Create or change source data Terminal . : 3278
3 Utilities Perform utility functions Screen . . : 1
4 Foreground Interactive language processing Language . : ENGLISH
5 Batch Submit job for language processing Appl ID . : ISR
6 Command Enter TSO or Workstation commands TSO logon : ISPF
7 Dialog Test Perform dialog testing TSO prefix: SIROED
9 IBM Products IBM program development products System ID : ISD1
10 SCLM SW Configuration Library Manager MVS acct. : IBMGSA
11 Workplace ISPF Object/Action Workplace Release . : ISPF 5.6
Enter X to Terminate using log/list defaults
F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```

In Settings (option 0), the **Always show split line** option specifies that the split line in split screen mode, as seen on a 3270 display, should always be shown. The default for this option is that the option is selected. By deselecting this option, the split line does not display when the screen is split at the top or the bottom of the screen.

Split screen mode...

Although you can have multiple logical screens, only one logical screen is ever active and, on a 3270, only two logical screens are displayed.

New logical screens

Split screen mode...

Only one logical screen is ever active. You can change the active logical screen by using the SWAP command.

```

Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==>
F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
Menu RefList RefMode Utilities Help
Data Set List Utility
Option ==>
blank Display data set list P Print data set list More: +
V Display VTOC information PV Print VTOC information
Enter one or both of the parameters below:
Dsname Level . . . SIROED
Volume serial . . .
Data set list options
Initial View . . . 1 1. Volume Enter "/" to select option
F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```

```

Menu Utilities Compilers Options Status Help
ISPF Primary Option Menu
Option ==> swap
F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
Menu RefList RefMode Utilities Help
Data Set List Utility
Option ==>
blank Display data set list P Print data set list More: +
V Display VTOC information PV Print VTOC information
Enter one or both of the parameters below:
Dsname Level . . . SIROED
Volume serial . . .
Data set list options
Initial View . . . 1 1. Volume Enter "/" to select option
F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```

SWAP without a parameter toggles between the current logical screen and the other screen displayed.

Although you can alternately use any logical screen, only one of the logical screens is considered active at a time. The location of the cursor identifies the active screen. You make a screen active by using the SWAP command and its parameters to choose the desired screen.

When you enter the SWAP command without a parameter, if only one screen exists, this command has no effect. If more than one screen exists, this command moves the cursor between the two logical screens that are displayed.

The SWAP command allows a parameter to be specified so you can swap to a specific screen. The parameters on the SWAP command are LIST, PREV, NEXT, *screen_name*, and *n*.

Entering SWAP PREV changes the display to the next lower screen number from the one where the command is entered. Repeatedly issuing the same command causes each lower-numbered screen to display until screen number 1 is reached, then the counter wraps back to screen number 32 (or your installation's maximum number).

Entering SWAP NEXT changes display to the next higher screen number from the one where the command is entered. Repeatedly issuing the same command causes each higher-numbered screen to display until screen number 32 (or your maximum) is reached, then the counter wraps back to screen number 1.

Entering SWAP *screen_name* changes display to the screen named *screen_name* if it is active. Screens can be named using the SCRNAME command.

Entering SWAP *n* changes the display to the screen numbered *n* if it is active.

Split screen mode...

SWAP LIST will display a list of all the logical screens.

The "*" indicates the current logical screen.

The "-" indicates the screen opposite the current logical screen.

Position the cursor at the logical screen you want to swap to and press Enter.

ID	Name	Panelid	Applid	Sessi
2	VIEW	ISRBR001	ISR	3270
1*	DSLIST	ISRUDLP	ISR	3270
3-		ISR@PRIM	ISR	3270

SWAP LIST displays the ISPF Task list. You can choose which logical screen to swap to form this list.

Select an ISPF screen to switch to by positioning the cursor to an input field and pressing Enter.

The "*" indicates the current logical screen.

The "-" indicates the screen opposite the current logical screen.

A screen name may be assigned to a screen with the SCRNAME command.

Start a new logical screen by selecting 'Start a new screen' or start an application in a new logical screen by selecting 'Start a new application' and entering an application name in the Application Name input field. Any application name and parameters that are valid for the ISPF START command are valid in this field. If additional space is needed, press the Expand PF key while the cursor is in this field and a popup window will be displayed containing a longer input field.

Ending ISPF

To end ISPF from the ISPF Primary Option Menu, you can use the:

- ↓EXIT command (F3)
- ↓END command
- ↓RETURN command
- ↓Exit option (X)

If you are not on the ISPF Primary Option Menu, you can still leave ISPF immediately by using the jump function =X.

In split-screen mode, taking these actions only ends ISPF on the current logical screen.

```

Menu  RefList  RefMode  Utilities  Help
-----
                                Data Set List Utility
Option ==> =X
-----
blank Display data set list          P Print data set list
V Display VTDC information          PV Print VTDC information
-----
Enter one or both of the parameters below:
Dsname Level . . . SIROED
Volume serial . . .
-----
Data set list options
Initial View . . . 1
1. Volume          Enter "/" to select option
2. Space          / Confirm Data Set Delete
3. Attrib         / Confirm Member Delete
4. Total         / Include Additional Qualifiers
                  / Display Catalog Name

When the data set list is displayed, enter either:
"/" on the data set list command field for the command prompt pop-up,
an ISPF line command, the name of a TSO command, CLIST, or REXX exec, or
F1=Help  F2=Split  F3=Exit  F4=Left  F5=Right  F6=Expand
F7=Backward  F8=Forward  F9=Swap  F10=Actions  F12=Cancel

```

To end ISPF from the ISPF Primary Option Menu, you can use the:

- EXIT command (F3)
- END command
- RETURN command
- Exit option (X)

If you are not on the ISPF Primary Option Menu, you can use the *jump function* to immediately leave ISPF from any panel by entering =X. There are two exceptions:

- If you are using any of the Dialog Test options (7.1-7.T) or the SCLM options (10.1-10.6), entering =X returns you to the ISPF Primary Option Menu.
- If you are at the Dialog Test or SCLM Primary Option Menu, enter either X or =X to return to the ISPF Primary Option Menu, then enter X or =X to end ISPF.

If the display screen is split, taking one of the actions listed above ends ISPF on the active logical screen only.

ISPF Primary Options – Settings (Option 0)

The Settings option allows you to configure your ISPF session by changing parameters such as:

- ↓ ISPF list/log data sets handling
- ↓ List data set characteristics
- ↓ Function key assignments
- ↓ Keylist settings
- ↓ Default colors
- ↓ Point-and-shoot color/highlighting
- ↓ Placement of command line
- ↓ Terminal characteristics

```

Log/List  Function keys  Colors  Environ  Workstation  Identifier  Help
ISPF Settings
Command ==>
Options
Enter "/" to select option
Command line at bottom
Z Panel display CUA mode
Z Long message in pop-up
Z Tab to action bar choices
Z Tab to point-and-shoot fields
Z Restore TEST/TRACE options
- Session Manager mode
Z Jump from leader dots
- Edit PRINTDS Command
Z Always show split line
- Enable EURO sign
Print Graphics
More: +
Family printer type 2
Device name . . . . .
Aspect ratio . . . . 0
General
Input field pad . . B
Command delimiter . . |
Member list options
Enter "/" to select option
    
```

```

Log/List  Function keys  Colors  Environ  Workstation  Identifier  Help
ISPF Settings
Command ==>
Z Scroll member list
- Allow empty member list
- Allow empty member list (nomatch)
Z Empty member list for edit only
Terminal Characteristics
Screen format 2  1. Data  2. Std  3. Max  4. Part
Terminal Type 3  1. 3277  2. 3277A  3. 3278  4. 3278A
5. 3290A  6. 3278T  7. 3278CF  8. 3277KN
9. 3278KN 10. 3278AR 11. 3278CY 12. 3278HN
13. 3278HO 14. 3278IS 15. 3278L2 16. BE163
17. BE190 18. 3278TH 19. 3278CU 20. DEU78
21. DEU78A 22. DEU78T 23. DEU90A 24. SW116
25. SW131 26. SW500 27. 3278GR 28. 3278L1
F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```

The Settings option allows you to display and change a variety of ISPF parameters at any time during the ISPF session. Changes remain in effect until you change the parameter again, and ISPF saves them from session to session.

This chapter explains how to use the fields on the ISPF Settings panel and the action bar choices. Some of the things you can specify are:

- Terminal characteristics
- Default options for processing the ISPF list and log data sets
- Function key assignments
- Placement of command lines
- List data set characteristics
- GDDM graphic print parameters
- Keylist modifications
- Dialog Test option
- Default colors
- Values of CUA panel elements
- Point-and-shoot color and highlight changes
- ENVIRON command options

This facility can be started from any command line with the SETTINGS command, from the **Settings** choice on the Menu pull-down on any action bar where it is available, or by selecting option 0 on the ISPF Primary Option Menu. Typically, the Settings facility should be included as an option on an application's primary option menu or as a choice on a pull-down on an application's primary option menu.

ISPF Primary Options – Settings (Option 0)...

ISPF supports screen sizes from 24x80 characters to 62x160 characters. On 327x terminals, you can change the screen format.

```

Log/List Function keys Colors Environ Workstation Identifier Help
ISPF Settings
Command ==>
More: -
/ Scroll member list
- Allow empty member list
- Allow empty member list (nomatch)
/ Empty member list for edit only

Terminal Characteristics
Screen format 2 1. Data 2. Std 3. Max 4. Part
Terminal Type 3 1. 3277 2. 3277A 3. 3278 4. 3278A
5. 3290A 6. 3278T 7. 3278CF 8. 3277KN
9. 3278KN 10. 3278AR 11. 3278CY 12. 3278HN
13. 3278HO 14. 3278IS 15. 3278L2 16. BE163
17. BE190 18. 3278TH 19. 3278CU 20. DEU78
21. DEU78A 22. DEU78T 23. DEU90A 24. SW116
25. SW131 26. SW500 27. 3278GR 28. 3278L1

elp F2=Split F3=Exit F4=Left F5=Right F6=Expand
ackward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```

```

Log/List Function keys Colors Environ Workstation Identifier Help
ISPF Settings
Command ==>
Options
Enter "/" to select option
- Command line at bottom
/ Panel display CUA mode
- Long message in pop-up
/ Tab to action bar choices
/ Tab to point-and-shoot fields
/ Restore TEST/TRACE options
- Session Manager mode
/ Jump from leader dots
- Edit PRINTDS Command
/ Always show split line
- Enable EURO sign
Print Graphics
Family printer type 2
Device name . . . .
Aspect ratio . . . @
General
Input field pad . . @
Command delimiter . ;

Member list options
Enter "/" to select option
/ Scroll member list
- Allow empty member list
- Allow empty member list (nomatch)
/ Empty member list for edit only

Terminal Characteristics
Screen format 3 1. Data 2. Std 3. Max 4. Part
Terminal Type 3 1. 3277 2. 3277A 3. 3278 4. 3278A
5. 3290A 6. 3278T 7. 3278CF 8. 3277KN
9. 3278KN 10. 3278AR 11. 3278CY 12. 3278HN
13. 3278HO 14. 3278IS 15. 3278L2 16. BE163
17. BE190 18. 3278TH 19. 3278CU 20. DEU78
21. DEU78A 22. DEU78T 23. DEU90A 24. SW116
25. SW131 26. SW500 27. 3278GR 28. 3278L1

F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```

Changing the screen format from Std to Data allows more data to be displayed.

The Terminal Characteristics portion of the ISPF Settings panel allows you to specify values for the screen format and terminal type.

Screen format

Specification of screen format applies only to 327x and 3290 terminals (or a terminal emulator set to a mode that emulates a 327x or 3290 terminal). ISPF ignores screen format for other types of terminal.

Data Format is based on data width.

Std Format is always 24 x 80 characters.

Max Format is determined by the maximum data width and height of the terminal or emulator.

Part Format uses hardware partitions (3279 only)

Terminal type

If you are using a terminal emulator, select the type of terminal that is being emulated (more than likely, a 3278 or 3278x). Specification of a terminal type allows ISPF to recognize valid (displayable) characters. You should keep in mind that the terminal type value that you specify to ISPF might not be the actual terminal type. For example, if your terminal is a 3279, you specify 3278 because a 3279 terminal has the same character set as a 3278. The keyboard character sets for the specified terminal and the actual terminal are always compatible.

ISPF Primary Options – Settings (Option 0)...

Use the Log/List action bar choice to specify how your log and list data sets are handled when you end ISPF.

The image displays three overlapping screenshots of the ISPF Settings menu, illustrating the configuration of Log and List data set defaults.

Left Screenshot: Log Data Set Defaults

- Log/List Function keys Colors Environ Workstation Identifier Help
- Log Data Set Defaults
- 1. Log Data set defaults
- 2. List Data set defaults
- 3. List Data set characteristics
- 4. JCL...
- Command line at bottom
- / Panel display CUA mode
- Long message in pop-up
- / Tab to action bar choices
- / Tab to point-and-shoot fields
- / Restore TEST/TRACE options
- Session Manager mode
- / Jump from leader dots
- Edit PRINTDS Command
- / Always show split line
- Enable EURO sign
- Member list options
- Enter "/" to select option
- / Scroll member list
- F1=Help F2=Split F3=Exit
- F7=Backward F8=Forward F9=Swap

Middle Screenshot: Log Data Set Defaults

- Log/List Function Keys Colors Environ Workstation Identifier Help
- ISPF Settings
- Log Data Set Defaults
- Process option 2
- 1. Print data set and delete
- 2. Delete data set (without printing)
- 3. Keep data set (append subsequent information to same data set)
- 4. Keep data set and allocate new data set
- Batch SYSOUT class A
- Local printer ID or writer-name
- Local SYSOUT class
- Lines per page 60
- Primary pages 10
- Secondary pages 10
- Log Message ID (/ = Yes)
- F1=Help F2=Split F3=Exit
- F9=Swap F12=Cancel
- Enter "/" to select option
- / Scroll member list
- F1=Help F2=Split F3=Exit F4
- F7=Backward F8=Forward F9=Swap F10

Right Screenshot: List Data Set Defaults

- Log/List Function keys Colors Environ Workstation Identifier Help
- ISPF Settings
- List Data Set Defaults
- Process option 2
- 1. Print data set and delete
- 2. Delete data set (without printing)
- 3. Keep data set (append subsequent information to same data set)
- 4. Keep data set and allocate new data set
- Batch SYSOUT class A
- Local printer ID or writer-name
- Local SYSOUT class
- Lines per page 60
- Primary pages 100
- Secondary pages 200
- F1=Help F2=Split F3=Exit F7=Backward F8=Forward
- F9=Swap F12=Cancel
- Enter "/" to select option
- / Scroll member list
- F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
- F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel

ISPF helps you get hardcopy listings of source modules, and maintains a log of significant user activities. These items are kept in data sets called the list data set and the log data set, respectively. When needed, the two data sets are allocated automatically. They are temporary data sets named:

prefix.userid.SPFn.LIST

prefix.userid.SPFLOGn.LIST

prefix The data set prefix in your TSO profile. Used only if it is different from your user ID.

userid Your user ID.

n A number from 0 to 9.

If you have specified in your TSO profile a data set prefix that differs from your user ID, the data set names begin with your data set prefix, followed by your user ID. Once generated, these data sets remain open throughout your ISPF session. However, even though they are open, you can still process them by using the ISPF LIST and LOG commands.

The Log/List pull-down on the ISPF Settings panel action bar allows you to specify the log and list data set defaults that are used when you terminate ISPF by issuing the RETURN or END command or by entering an **X** on the ISPF Primary Option Menu command line.

You can use the log settings to specify how the ISPF log data set is allocated, formatted, and processed, and you can use the list settings to specify how the ISPF list data set is allocated, formatted, and processed. The options available on these panels are also displayed on the ISPF termination panel (if you exit by using the END command), and on the LIST/LOG command panels.

ISPF Primary Options – View (Option 1)

The View option allows you to view data in partitioned data sets or sequential data sets.

```

Menu RefList RefMode Utilities Workstation Help
View Entry Panel
Command ==> _____ More: +
ISPF Library:
Project . . . . . SIROED
Group . . . . . DEV1
Type . . . . . SOURCE
Member . . . . . FLM01MD1 (Blank or pattern for member selection list)
Other Partitioned, Sequential or VSAM Data Set:
Data Set Name . . . . . _____
Volume Serial . . . . . _____ (If not cataloged)
Workstation File:
File Name . . . . . _____
Options
Initial Macro . . . . . _____ - Confirm Cancel/Move/Replace
Profile Name . . . . . _____ - Browse Mode
Format Name . . . . . _____ - View on Workstation
Data Set Password . . . . . _____ / Warn on First Data Change
F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```

When you view a data set, you can use edit commands, but changes to the data are not saved when you end.

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
VIEW SIROED.DEV1.SOURCE(FLM01MD1) - 01.01 Columns 00001 00072
Command ==> _____ Scroll ==> CSR
***** Top of Data *****
==MSG> -Warning- The UNDO command is not available until you change
==MSG> your edit profile using the command RECOVERY ON.
000100 *****
000200 * ROUTINE INITIALIZATION *
000210 * *
000220 * 5647-A01 (C) COPYRIGHT IBM CORP. 1987. *
000230 * *
000300 *****
000400 FLM01MD1 CSECT *
000500 B 28(R15) * BRANCH AROUND ID/DATE/TIME *
000600 DC CL8'FLM01MD1' * MODULE ID *

Data changes cannot be saved in a View session. Use Edit if you want to be
able to save your changes. Using the REPLACE command to write data from a
VIEW session can overwrite changes which were made to the data set after the
VIEW session began because VIEW does not provide ENQ protection at the
beginning of the VIEW session.

F8=Down F9=Swap F10=Left F11=Right F12=Cancel
    
```

View allows you to display source data or output listings. With View, members of partitioned data sets, or DASD-resident sequential data sets can be displayed, and updated using Edit primary and line commands. Changes to data are not saved.

ISPF Primary Options – View (Option 1)...

The View option also allows you to browse data in PDS members or sequential data sets.

```

Menu RefList RefMode Utilities Workstation Help
View Entry Panel
Command ==> _____
More:
ISPFLibrary:
Project . . . . . SIROED
Group . . . . . DEV1
Type . . . . . SOURCE
Member . . . . . flm01md1 (Blank or pattern for member selection list)

Other Partitioned, Sequential or VSAM Data Set:
Data Set Name . . . . .
Volume Serial . . . . . (If not cataloged)

Workstation File:
File Name . . . . .

Initial Macro . . . . .
Profile Name . . . . .
Format Name . . . . .
Data Set Password . . . . .

Options
  Z Confirm Cancel/Move/Replace
  Z Browse Mode
  Z View on Workstation
  Z Warn on First Data Change

F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```

```

Menu Utilities Compilers Help
BROWSE SIROED.DEV1.SOURCE (FLM01MD1) - 01.00 Line 00000000 Col 001 080
Command ==> _____ Scroll ==> PAGE
***** Top of Data *****
* ROUTINE INITIALIZATION * 00010000
* * 00020000
* * 00021000
* 5647-A01 (C) COPYRIGHT IBM CORP. 1987 * 00022000
* * 00023000
*****
FLM01MD1 CSECT * 00030000
B 28 (R15) * BRANCH AROUND ID/DATE/TIME * 00040000
DC CL8'FLM01MD1' * MODULE ID * 00050000
DC CL8'&SYSDATE' * ASSEMBLY DATE * 00060000
DC CL8'&SYSTEMTIME' * ASSEMBLY TIME * 00070000
STM R14,R12,12 (R13) * SAVE ALL REGS BUT R13 * 00080000
LR R4,R13 * SAVE R13 IN R4 * 00090000
LR R12,R15 * GET PROGRAM PTR * 00100000
LM R0,R12,20 (R13) * RESTORE R0-R12 * 00110000
BR R14 * RETURN TO CALLER * 00120000
* * 00130000
* * 00140000
F1=Help F2=Split F3=Exit F5=Rfind F7=Up F8=Down F9=Swap
F10=Left F11=Right F12=Cancel
    
```

Browse mode is different than view mode:

- ↓ You cannot use edit commands in browse mode.
- ↓ You can browse larger data sets.
- ↓ Performance is usually better.

Browse also allows you to display data or output listings. With Browse, members of partitioned data sets, or DASD-resident sequential data sets can be displayed, and can be scrolled forward, backward, left, or right. Browse can be selected from the View Entry Panel.

In many ways browse can be considered a subset of edit. Browse is used instead of edit for three major reasons:

- There is no risk of accidentally changing data.
- Larger data can be handled since only the records that need to be read for the display are in main storage.
- Performance will normally be better because all of the data is not read into main storage.

ISPF Primary Options – View (Option 1)...

The data set being viewed or browsed can be an ISPF library.

An ISPF library is a cataloged PDS (or PDSE) with a three-level name consisting of a project, group, and type.

You can concatenate up to four PDSs with the same project and type identifiers.

If you don't specify a member name, a list of members is displayed.

```

Menu RefList RefMode Utilities Workstation Help
View Entry Panel
Command ==> _____ More: +
ISPF Library:
Project . . . . . SIROED
Group . . . . . DEV1 . . . . . TEST . . . . . RELEASE . . . . .
Type . . . . . SOURCE
Member . . . . . (Blank or pattern for member selection list)
Other Partitioned, Sequential or VSAM Data Set:
Data Set Name . . . . .
Volume Serial . . . . . (If not cataloged)
Workstation File:
File Name . . . . .
Initial Macro . . . . . Options
Profile Name . . . . . / Confirm Cancel/Move/Replace
Format Name . . . . . / Browse Mode
Data Set Password . . . . . / View on Workstation
F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```

```

Menu Functions Utilities Help
BROWSE SIROED.DEV1.SOURCE Row 00001 of 00006
Command ==> _____ Scroll ==> PAGE
Name Prompt Lib Size Created Changed ID
. FLM01EQU 1 21 2004/01/30 2006/07/05 09:31:58 SIROED
. FLM01MD1 1 19 2004/01/30 2006/07/05 09:54:07 SIROED
. FLM01MD3 3 0 2004/01/30 2004/01/30 12:49:06 SCLM
. FLM01MD4 3 0 2004/01/30 2004/01/30 12:49:07 SCLM
. FLM01MD5 3 0 2004/01/30 2004/01/30 12:49:07 SCLM
. FLM01MD6 3 0 2004/01/30 2004/01/30 12:49:07 SCLM
**End**
F1=Help F2=Split F3=Exit F5=Rfind F7=Up F8=Down F9=Swap
F10=Left F11=Right F12=Cancel
    
```

An ISPF library is a cataloged partitioned data set with a three-level data set name in this format: 'project.group.type'.

To specify an ISPF library, enter the library name in the following fields:

ISPF Library:

Project . .

Group . . .

Type

Member . . . (Blank or pattern for member selection list)

Project The common identifier for all ISPF libraries belonging to the same programming project. This name must be your user ID unless you are using a specific project name that has been predefined in the MVS master catalog.

Group The identifier for a particular set of ISPF libraries, that is, the level of the libraries within the library hierarchy. For example, the group name of your private library could be PRIVATE or perhaps your first name, such as Joe.

Type The identifier for the type of information in the ISPF library, such as PL/I, SCRIPT, or PANELS.

You can also enter a member name on many panels. If the member name is left blank or a pattern is entered, a member selection list is displayed.

Whenever the first Group field is accompanied by three additional fields horizontally across the screen, you can enter a *library concatenation sequence*, which is a series of group names chained together. ISPF searches these groups in the sequence that you enter them.

ISPF Primary Options – View (Option 1)...

You can scroll through the member list to find the member you want to view or browse. Select the member using an S line command.

```

Menu  Functions  Utilities  Help
BROWSE  SIROED.DEV1.SOURCE                               Row 00001 of 00006
Command ==>                                           Scroll ==> PAGE
Name      Prompt  Lib   Size  Created      Changed      ID
. FLM01E0U      1     21  2004/01/30  2006/07/05 09:31:58  SIROED
. FLM01MD1      1     19  2004/01/30  2006/07/05 09:54:07  SIROED
S FLM01MD3      3      0  2004/01/30  2004/01/30 12:49:06  SCLM
. FLM01MD4      3      0  2004/01/30  2004/01/30 12:49:07  SCLM
. FLM01MD5      3      0  2004/01/30  2004/01/30 12:49:07  SCLM
. FLM01MD6      3      0  2004/01/30  2004/01/30 12:49:07  SCLM
**End**

F1=Help  F2=Split  F3=Exit  F5=Rfind  F7=Up    F8=Down  F9=Swap
F10=Left F11=Right F12=Cancel
    
```

If you specified a concatenation of ISPF libraries, the member can be in any library of the concatenation.

```

Menu  Utilities  Compilers  Help
BROWSE  SIROED.RELEASE.SOURCE (FLM01MD3) - 01.00   Line 00000000 Col 001 030
Command ==>                                           Scroll ==> PAGE
***** Top of Data *****
* ROUTINE INITIALIZATION * 00010000
* * 00020000
* * 00021003
* 5847-A01 (C) COPYRIGHT IBM CORP. 1987 * 00022003
* * 00023003
***** 00030000
FLM01MD3 CSECT * 00040001
B 28 (R15) * BRANCH AROUND ID/DATE/TIME * 00050000
DC CL8'FLM01MD3' * MODULE ID * 00060001
DC CL8'&SYSDATE' * ASSEMBLY DATE * 00070000
DC CL8' &SYSTIME' * ASSEMBLY TIME * 00080000
STM R14,R12,12 (R13) * SAVE ALL REGS BUT R13 * 00090000
LR R4,R13 * SAVE R13 IN R4 * 00100000
LR R12,R15 * GET PROGRAM PTR * 00110000
LM R0,R12,20 (R13) * RESTORE R0-R12 * 00120000
BR R14 * RETURN TO CALLER * 00130000
* * 00140000

F1=Help  F2=Split  F3=Exit  F5=Rfind  F7=Up    F8=Down  F9=Swap
F10=Left F11=Right F12=Cancel
    
```


ISPF Primary Options – View (Option 1)...

The data set being viewed or browsed can also be any PDS, with or without a member name, or a sequential data set.

If you specify both an ISPF library name and an other data set name, the other data set name takes precedence.

```

Menu RefList RefMode Utilities Workstation Help
ISRBR001          View Entry Panel
Command ==> _____ More: *
ISPF Library:
Project . . . . . SIROED
Group . . . . . DEV1      TEST      RELEASE
Type . . . . . SOURCE
Member . . . . .          (Blank or pattern for member selection list)
Other Partitioned, Sequential or VSAM Data Set:
Data Set Name . . . . 'isp.sispsamp(flmdtlc)'
Volume Serial . . . . .          (If not cataloged)
Workstation File:
File Name . . . . . _____
Options
Initial Macro . . . . . _____ - Confirm Cancel/Move/Replace
Profile Name . . . . . _____ / Browse Mode
Format Name . . . . . _____ - View on Workstation
Data Set Password . . . . . _____ / Warn on First Data Change
F1=Help   F2=Split   F3=Exit   F4=Left   F5=Right   F6=Expand
F7=Backward F8=Forward F9=Swap   F10=Actions F12=Cancel
    
```

```

Menu Utilities Compilers Help
ISRBR00A  ISP.SISPSAMP (FLMDTLC)          Line 00000000 Col 001 080
Command ==> _____ Scroll ==> PAGE
***** Top of Data *****
/*Start of REXX Specifications*****
/*
/* MODULE-NAME      = FLMDTLC
/* DESCRIPTIVE-NAME = SCLM Build Translator - DTL Processor
/*
/*          5647-A01 (C) COPYRIGHT IBM CORP 1990, 1999
/*
/* STATUS      = OS/390 R8
/*
/* FUNCTION = This program is called from SCLM builds of ISPF
/*           Dialog Tag Language to invoke the DTL Conversion
/*           Utility.
/*
/* NOTES =
/* 1. The ISPDTL profile is dynamically generated by this exec.
/* 2. Output panel, message, and table library members will be
/*    tracked by SCLM.
F1=Help   F2=Split   F3=Exit   F5=Rfind   F7=Up     F8=Down   F9=Swap
F10=Left  F11=Right  F12=Cancel
    
```

You can view or browse any partitioned or sequential data set by specifying the data set name in the **Other Partitioned or Sequential Data Set** field. **Data Set Name** can be any fully qualified data set name, such as **'USERID.SYS1.ASM'**. You can include either a TSO user prefix or user ID as the first-level qualifier of the data set name. If you omit the single quotes and if you have created a TSO user prefix, that prefix is automatically added to the beginning of the data set name. If you omit the single quotes and if you do not have a TSO user prefix, no prefix is added, and the name is used exactly as it appears.

If you include your user prefix or user ID, enclose the data set name with apostrophes. If you include the apostrophe at the beginning of the data set name but omit the one at the end, ISPF inserts it for you.

Note: ISPF does not support multivolume data sets or partitioned data sets with record format FBS or VBS.

For partitioned data sets, a member name enclosed in parentheses can follow the data set name. For example: **'ISP.SISPSAM(FLMDTLC)'**. If you include the parenthesis at the beginning of the member name but omit the one at the end, ISPF inserts it for you.

When you omit the member name and parentheses or use a pattern ISPF displays a member list.

Note: For Edit, Browse, and View, a VSAM set can be specified if your site's ISPF has been configured for with the name of a VSAM edit/browse product such as File Manager for z/OS.

ISPF Primary Options – Edit (Option 2)

The Edit option allows you to edit and change data in partitioned data set or sequential data sets.

```

Menu RefList RefMode Utilities Workstation Help
Edit Entry Panel
Command ==> _____
ISPF Library:
Project . . . . . SIROED
Group . . . . . DEV1
Type . . . . . SOURCE
Member . . . . . flm01md1 (Blank or pattern for member selection list)
Other Partitioned, Sequential or VSAM Data Set:
Data Set Name . . . . . _____
Volume Serial . . . . . _____ (If not cataloged)
Workstation File:
File Name . . . . . _____
Options
Initial Macro . . . . . _____ - Confirm Cancel/Move/Replace
Profile Name . . . . . _____ - Mixed Mode
Format Name . . . . . _____ - Edit on Workstation
Data Set Password . . . . . _____ - Preserve VB record length
F1=Help F2=Split F3=Exit F4=Left F5=Right F6=Expand
F7=Backward F8=Forward F9=Swap F10=Actions F12=Cancel
    
```

Depending upon your site's configuration, when you edit an SCLM-managed PDS member, you get a warning or you may not be able to edit the member.

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT SIROED.DEV1.SOURCE (FLM01MD1) - 01.00
Command ==> _____ SCLM warning
***** Top of Data *****
==MSG -CAUTION- Saving this member will invalidate the SCLM accounting
==MSG information. Refer to the edit tutorial for further details.
==MSG -Warning- The UNDO command is not available until you change
==MSG your edit profile using the command RECOVERY ON.
000100 *****
000200 * ROUTINE INITIALIZATION *
000210 * *
000220 * 5647-A01 (C) COPYRIGHT IBM CORP. 1987 *
000230 * *
000300 *****
000400 FLM01MD1 CSECT *
000500 B 28 (R15) * BRANCH AROUND ID/DATE/TIME *
000600 DC CL8'FLM01MD1' * MODULE ID *
000700 DC CL8'&SYSDATE' * ASSEMBLY DATE *
000800 DC CL8'&SYSTIME' * ASSEMBLY TIME *
000
001
F1 The member being edited may belong to an SCLM controlled project.
F8=Down F9=Swap F10=Left F11=Right F12=Cancel
    
```

The ISPF editor is a full screen editor. You can use the ISPF editor to create, display, and change data stored in ISPF libraries or other partitioned or sequential data sets with the following characteristics:

Record Format (RECFM):

- Fixed or variable (non-spanned)
- Blocked or unblocked
- With or without printer control characters

Logical Record Length (LRECL):

- From 1 to 32760, inclusive, for fixed-length records
- From 5 to 32756, inclusive, for variable-length records.

Note: For variable-length records, the amount of editable data in each record is 4 bytes less than the logical record length.

When attempting to edit a member in an SCLM controlled project, you should use ISPF option 10.2 (the SCLM EDIT interface). If you use the option 2 edit interface, ISPF will first determine if the project specified is SCLM controlled, and if it is, either a warning message will be displayed or the edit will not be allowed, depending on the setting of the ISPF configuration table.

ISPF Primary Options – Edit (Option 2)...

When you edit an empty data set or non-existent PDS member, the editor displays empty lines for you to input data.

```

Menu RefList RefMode Utilities Workstation Help
Edit Entry Panel
Command ==> _____
ISPF Library:
Project . . . . . SIROED
Group . . . . . DEMO
Type . . . . . SOURCE
Member . . . . . newmem (Blank or pattern for member selection list)
Other Partitioned, Sequential or VSAM Data
Data Set Name . . . . .
Volume Serial . . . . . (If not ca
Workstation File:
File Name . . . . .
Initial Macro . . . . .
Profile Name . . . . .
Format Name . . . . .
Data Set Password . . . . .
F1=Help F2=Split F3=Exit F4=
F7=Backward F8=Forward F9=Swap F10=
    
```

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT SIROED.DEMO.SOURCE(NEWMEM) - 01.00 Columns 00001 00072
Command ==> _____ Scroll ==> CSR
***** Top of Data *****
==MSG> -Warning- The UNDO command is not available until you change
==MSG> your edit profile using the command RECOVERY ON.
***** This is a new PDS member. _
*****
F1=Help F2=Split F3=Exit F5=Rfin
F8=Down F9=Swap F10=Left F11=Right
    
```

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT SIROED.DEMO.SOURCE(NEWMEM) - 01.00 Columns 00001 00072
Command ==> _____ Scroll ==> CSR
***** Top of Data *****
==MSG> -Warning- The UNDO command is not available until you change
==MSG> your edit profile using the command RECOVERY ON.
000001 THIS IS A NEW PDS MEMBER.
***** Bottom of Data *****
F1=Help F2=Split F3=Exit F5=Rfind F6=Rchange F7=Up
F8=Down F9=Swap F10=Left F11=Right F12=Cancel
    
```

Before you can edit a new sequential data set, you must allocate space for it. When you specify an empty sequential data set or nonexistent member of a partitioned data set, the first edit display contains several empty lines between the **Top of Data** and **Bottom of Data** message lines. The editor replaces the quote marks on the left of the panel with sequence numbers when you type information on the lines.

ISPF Primary Options – Edit (Option 2)...

You can customize your edit environment. Customization settings are stored in edit profiles.

In the previous example, we saw text that was entered in lower case was converted to uppercase.

This is because caps mode is on. You can see whether caps mode is on or off, along with other edit mode information, by displaying the edit profile with the PROFILE command.

Special "=PROF>" lines will be displayed. These lines indicate the current setting of the various profile modes.

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT      SIROED.DEMO.SOURCE(NEWMEM) - 01.00          Columns 00001 00072
Command ==> profile                                     Scroll ==> CSR
***** Top of Data *****
==MSG> -Warning- The UNDO command is not available until you change
==MSG> your edit profile using the command RECOVERY ON.
000001 THIS IS A NEW PDS MEMBER.
***** Bottom of Data *****

File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT      SIROED.DEMO.SOURCE(NEWMEM) - 01.00          Columns 00001 00072
Command ==> profile                                     Scroll ==> CSR
***** Top of Data *****
=PROF> ...SOURCE (FIXED - 80)...RECOVERY OFF WARN...NUMBER OFF...
=PROF> ...CAPS ON...HEX OFF...NULLS ON STD...TABS OFF...
=PROF> ...AUTOSAVE ON...AUTONUM OFF...AUTOLIST OFF...STATS ON...
=PROF> ...PROFILE UNLOCK...IMACRO NONE...PACK OFF...NOTE ON...
=PROF> ...HILITE DEFAULT CURSOR FIND...
==MSG> -Warning- The UNDO command is not available until you change
==MSG> your edit profile using the command RECOVERY ON.
000001 THIS IS A NEW PDS MEMBER.
***** Bottom of Data *****

F1=Help      F2=Split    F3=Exit     F5=Rfind    F6=Rchange  F7=Up
F8=Down     F9=Swap     F10=Left   F11=Right   F12=Cancel

```


ISPF defaults control much of the editing environment. However, you can use line and primary commands to change number and statistical fields on a data display panel and to determine how the data appears.

The current settings of edit modes, together with the current MASK, TABS, and BOUNDS definition lines, are maintained in an edit profile which can be displayed at any time via the PROFILE primary command. When the profile is changed, it is automatically updated in your user profile library.

Edit profiles are used to retain information that controls your edit session, including:

- The current setting of edit modes (NUMBER, CAPS, NULLS, etc.), and
- The current contents of the MASK, TABS, and BOUNDS definition lines.

Each profile is normally identified with a data set type (the last qualifier in the data set name). This allows different mode settings and different MASK, TABS, and BOUNDS to be saved and used as the initial settings for different types of source data. For example, if you edit a data set with a name ending in COBOL, edit will use your COBOL profile. Similarly, your CNTL profile will be used for CNTL data sets. If you want to use a profile other than the one that edit would select for you, enter the profile name in the field that is provided on the edit entry panel.

Edit automatically creates a profile the first time that you attempt to reference it. The first time that you edit COBOL data, for example, a COBOL profile is created, and will be remembered. If you enter a new profile name on the edit entry panel, a new profile of that name will be created and remembered. If you already have the maximum number of edit profiles, your least-recently used profile will be deleted to make room for the new profile.

Edit automatically remembers the current setting for each mode in the profile. If you change from NUMBER OFF to NUMBER ON, you are telling edit to start generating sequence numbers. Edit then automatically remembers that NUMBER mode is on, so the next time that you edit with the same profile, NUMBER mode will be on. In other words, the profile always contains the last setting that you used for an edit mode or for special lines, such as MASK or TABS.

ISPF Primary Options – Utilities (Option 3)

The Utilities option provides a variety of functions for library, data set, and catalog maintenance.

```

Menu Help
                                Utility Selection Panel
Option ==>
1 Library      Compress or print data set. Print index listing. Print,
                rename, delete, browse, edit or view members
2 Data Set     Allocate, rename, delete, catalog, uncatalog, or display
                information of an entire data set
3 Move/Copy    Move, or copy members or data sets
4 Dslist       Print or display (to process) list of data set names.
                Print or display VTOC information
5 Reset        Reset statistics for members of ISPF library
6 Hardcopy     Initiate hardcopy output
7 Transfer     Download ISPF Client/Server or Transfer data set
8 Outlist      Display, delete, or print held job output
9 Commands     Create/change an application command table
11 Format       Format definition for formatted data Edit/Browse
12 SuperC      Compare data sets (Standard Dialog)
13 SuperCE     Compare data sets Extended (Extended Dialog)
14 Search-For Search data sets for strings of data (Standard Dialog)
15 Search-ForE Search data sets for strings of data Extended (Extended Dialog)
F1=Help      F2=Split    F3=Exit    F4=Left    F5=Right    F6=Expand
F7=Backward  F8=Forward  F9=Swap   F10=Actions F12=Cancel
    
```

You can access the utilities either from option 3 on the Primary Option Menu or from the Utilities action bar choice on the Primary Option Menu.

```

Menu Utilities Compilers Options Status Help
Option Menu
1. Library
2. Data set
3. Move/Copy
4. Data Set List
5. Reset Statistics
6. Hardcopy
7. Download...
8. Outlist
9. Commands...
*0. Reserved
11. Format
12. SuperC
13. SuperCE
14. Search-For
15. Search-ForE
Primary Option Menu
r parameters      User ID . . : SIROED
ata or listings   Time . . . : 13:45
source data       Terminal. . : 3278
functions         Screen . . : 1
uage processing   Language. . : ENGLISH
anguage processing Appl ID . . : ISR
kstation commands TSO logon : ISPF
esting           TSO prefix: SIROED
lopment products System ID . : ISD1
Library Manager  MVS acct. : IBMGSA
on Workplace     Release . . : ISPF 5.6
Enter X to Terminate using log/list defaults
F1=Help      F2=Split    F3=Exit    F4=Left    F5=Right    F6=Expand
F7=Backward  F8=Forward  F9=Swap   F10=Actions F12=Cancel
    
```

The Utilities option provides a variety of functions for library, data set, and catalog maintenance. Among others, these include:

Library Utility (Option 3.1)

Maintains partitioned data sets.

Data Set Utility (Option 3.2)

Allocates, deletes, renames, catalogs, and uncatalogs data sets.

Move/Copy Utility (Option 3.3)

Copies or moves data from one data set to another.

Data Set List Utility (Option 3.4)

Display or prints lists of ISPF libraries, data sets, or volume table of contents (VTOC) information.

Download Data Set to Workstation Utility (Option 3.7)

Uploads or downloads data sets from the host environment to your workstation.

SuperC Utility (Option 3.12) and **SuperCE Utility** (Option 3.13)

Compares data sets.

Search-For Utility (Option 3.14) and **Search-ForE Utility** (Option 3.15)

Searches data sets.

ISPF Table Utility (Option 3.16)

Processes ISPF tables.

ISPF Primary Options – Utilities (Option 3)...

The Data Set Utility allows you to allocate a new data set.

```

Menu RefList Utilities Help
Data Set Utility
Option ==> a
A Allocate new data set          C Catalog data set
R Rename entire data set        U Uncatalog data set
D Delete entire data set        S Short data set information
blank Data set information      V VSAM Utilities

ISPF Library:
Project . . . SIROED           Enter "/" to select option
Group . . . DEMO              / Confirm Data Set Delete
Type . . . SOURCE

Other Partitioned, Sequential or VSAM Data Set:
Data Set Name . . . new.dataset
Volume Serial . . .           (If not cataloged, required for option "C")

Data Set Password . . .      (If password protected)

F1=Help   F2=Split   F3=Exit   F4=Left   F5=Right   F6=Expand
F7=Backward F8=Forward F9=Swap   F10=Actions F12=Cancel

```

When you allocate a new data set you need to specify all the data set attributes. The Data Set Utility remembers many of these attributes from one invocation to the next.

```

Menu RefList Utilities Help
Allocate New Data Set
Command ==>
Data Set Name . . . : SIROED.NEW.DATASET
Management class . . . PRIMARY (Blank for default management class)
Storage class . . . PRIMARY (Blank for default storage class)
Volume serial . . . (Blank for system default volume) **
Device type . . . (Generic unit or device address) **
Data class . . . (Blank for default data class)
Space units . . . TRACK (BLKS, TRKS, CYLS, KB, MB, BYTES
or RECORDS)
Average record unit . . . (M, K, or U)
Primary quantity . . . 1 (In above units)
Secondary quantity . . . 50 (In above units)
Directory blocks . . . 10 (Zero for sequential data set) *
Record format . . . FB
Record length . . . 80
Block size . . .
Data set name type . . . (LIBRARY, HFS, PDS, or blank) *
F1=Help   F2=Split   F3=Exit   F4=Left   F5=Right   F6=Expand
F7=Backward F8=Forward F9=Swap   F10=Actions F12=Cancel

```


Other options

ISPF provides numerous other options. You can use these options to:

- ↓Foreground (option 4)
Run language compilers and certain other programs in foreground under ISPF.
- ↓Batch (option 5)
Run language compilers and certain other programs as batch jobs.
- ↓Command (option 6)
Run TSO commands, CLISTs and REXX execs.
- ↓Dialog Test (option 7)
Test your ISPF dialog entities (functions, panels, variables, messages, tables, skeletons) and complete ISPF applications.
- ↓IBM Products (option 9)
Invoke other IBM program development products.
- ↓SCLM (option 10)
Access the Software Configuration and Library Manager (SCLM) .
- ↓Workplace (option 11)
Access the ISPF Object/Action Workplace which combines many of the ISPF functions onto one object-action interface.

To allocate a new sequential or partitioned data set on a direct access device, fill in the following fields of the data set utility panel:

- Enter A in the option field.
- Enter the new library or data set name in the appropriate fields.

You will then be shown the Allocate New Data Set panel, on which the input fields have been pre-entered. ISPF remembered these values from your most recent use of either:

- Allocate new data set, or
- Display data set information.

How to Learn More

- **Get your hands dirty!**

- ↓ Use ISPF

- The editor
- The Data Set List Utility
- The HELP facilities
 - HELP command (PF1)
 - Tutorial (TUTOR command)

- **Read the manuals**

- ↓ SC34-4822-09: ISPF User's Guide, Volume 1

- ↓ SC34-4823-09: ISPF User's Guide, Volume 2

- ↓ SC34-4820-09: ISPF Edit and Edit Macros

- **z/OS Basic Skills Info Center**

- ↓ <http://publib.boulder.ibm.com/infocenter/zos/basics/index.jsp>

This presentation has only scratched the surface in terms of the features and capabilities of ISPF's editor and data set utilities. There is plenty more to learn!

The best way to learn more is to use ISPF. Play with the editor to find out more about its capabilities and features. Use the Data Set List Utility as the place where you manage your data sets. It provides interfaces to many other ISPF data set utilities so you will soon get familiar with these as well. There is lots of information available online through the ISPF HELP facilities. The ISPF tutorial is a hierarchy of panels which allows you to easily navigate through a vast amount of helpful information relating to ISPF. The tutorial can be invoked using the TUTOR command. From any panel within ISPF you can enter the HELP command to learn more about that particular panel and its function.

The ISPF manuals are an obvious source of information. The ISPF User's Guide Volume I provides introductory information about using ISPF. The ISPF User's Guide Volume II provides specific information on each of the ISPF options. The ISPF Edit and Edit Macros manual describes how to use the ISPF editor.