



## z/OS Basic Skills: Introduction to ISPF

### Unit 3: Using the ISPF utilities Module 2: Using the ISPF data set utility

```
di, 3444  
mov ax, Score  
call PrintNumber  
  
di, 219  
call DrawShape  
  
ah, 1  
call GetKey
```



```
xor di, di  
mov cx, 2000  
mov ax, 700h  
rep stosw  
  
call DrawBorders  
  
mov di, 184  
mov si, offset sNext  
call PrintText  
mov di, 272  
mov si, offset sHiScore  
call PrintText
```

```
mov al, 0- mov ah, 7  
Clear screen and set color 7  
  
mov di, 3430  
mov si, offset sStop  
call PrintText  
mov di, 450  
mov si, offset sSpeed  
call PrintText
```

```
mov di, 292  
mov ax, HiScore  
call PrintNumber  
  
mov Score, 0  
  
call ChooseGame  
  
call Rand  
mov NextShape, ax  
call NewShape  
call DrawNextShape
```



## Using the ISPF data set utility – Introduction

The ISPF utilities provide a variety of functions for library, data set, and catalog maintenance. In this module, *Using the ISPF data set utility*, we'll explore a set of options that allow you to operate on data set libraries rather than on individual members of a partitioned data set (PDS).

To help you understand this module, you should read *Understanding data sets and file systems* in the z/OS Concepts section of the z/OS basic skills information center.

Time to complete: 15 - 20 minutes

```
Menu  Utilities  Compilers  Options  Status  Help

                                ISPF Primary Option Menu

Option ==> 3

0 Settings      Terminal and user parameters      User ID   : SMCHUGH
1 View          Display source data or listings      Time.    : 15:04
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  : PDF
6 Command       Enter TSO or Workstation commands  TSO logon : IKJACCT
7 Dialog Test   Perform dialog testing           TSO prefix: SMCHUGH
9 IBM Products  IBM program development products      System ID : SC76
10 SCLM         SW Configuration Library Manager  MVS acct. : ACCNT#
11 Workplace    ISPF Object/Action Workplace    Release   : ISPF 5.7

Enter X to Terminate using log/list defaults

F1=Help  F2=Split  F3=Exit  F7=Backward  F8=Forward  F9=Swap
F10=Actions  F12=Cancel

MR a 04/015
```

## Using the ISPF data set utility – Objectives

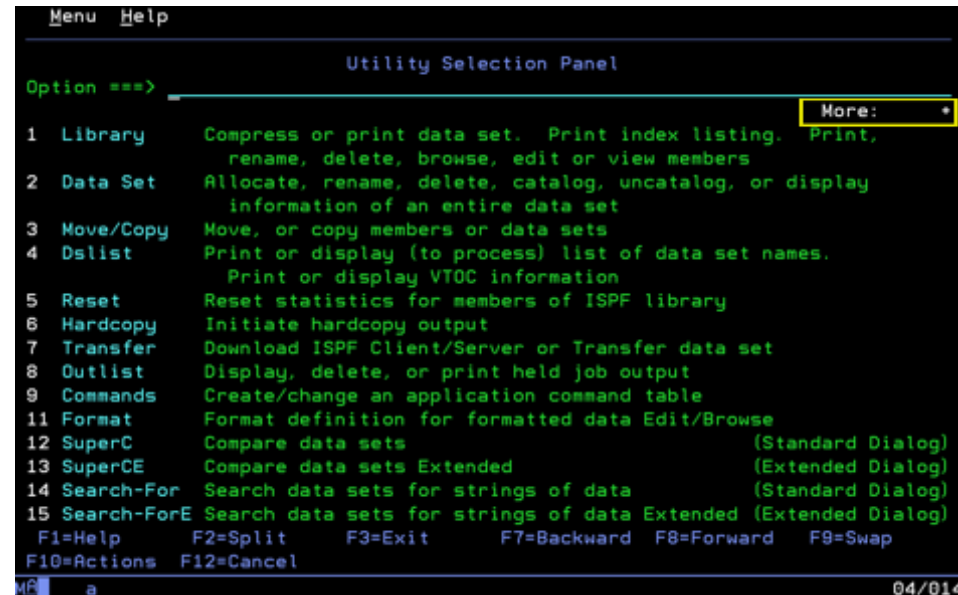
**Upon completion of this module, you should be able to:**

- Access and use the ISPF data set utility
- Select data set utility options
- Allocate new data sets
- Use the main functions of the data set utility

## Using the ISPF data set utility – Accessing the Utility Selection Panel

When you select option 3 on the Primary Options Menu, the Utility Selection Panel appears. This panel typically gives you access to many different utility options. In the series of modules about ISPF utilities, we explore some of the most commonly used utilities:

- The library utilities
- The data set utilities
- The move/copy utility
- The dslist utility
- The compare and search utilities



## Using the ISPF data set utility – Starting the ISPF data set utility

To access the data set utility, select option 2 on the Utility Selection Panel (shown here) and press the Enter key\*.

Alternatively, you can jump directly from the Primary Options Menu to the data set utility by entering 3.2 on the Primary Option Menu and pressing the Enter key\*.

\* The default Enter key for a Personal Communications (PCOMM) terminal emulator session is the right Ctrl key. If you are using a different terminal emulator, or your PCOMM keyboard has been customized, you may have a different Enter key.

```

Menu  Help

                                Utility Selection Panel

Option ==> 2_

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

MR a 04/015
  
```

## Using the ISPF data set utility – Exploring the ISPF data set utility panel

The data set utility panel, shown here, has several sections. Like most ISPF panels, this one has an action bar at the top.

The options you can select on this panel function on an entire data set.

The library and other data set section is similar to the section on the View Entry Panel or the Edit Entry Panel, with the exception that it gives you the option of confirming the deletion of a data set.

The password section allows you to enter a password to access password protected data sets.

The screenshot shows the ISPF Data Set Utility panel. It features a menu bar at the top with 'Menu', 'RefList', 'Utilities', and 'Help'. The main title is 'Data Set Utility'. Below the title, there is an 'Option ==>' section with a list of options: 'A Allocate new data set', 'R Rename entire data set', 'D Delete entire data set', 'blank Data set information', 'C Catalog data set', 'U Uncatalog data set', 'S Short data set information', and 'V VSAM Utilities'. This section is highlighted with a yellow box and labeled 'Option section'. Below this is the 'ISPF Library:' section with fields for 'Project' (SMCHUGH), 'Group' (TEST), and 'Type' (COBOL). It also includes instructions 'Enter "/" to select option' and 'Confirm Data Set Delete'. This section is highlighted with a yellow box and labeled 'Library and other data set section'. Below that is the 'Other Partitioned, Sequential or VSAM Data Set:' section with fields for 'Data Set Name' and 'Volume Serial', and a note '(If not cataloged, required for option "C")'. This section is also highlighted with a yellow box. At the bottom is the 'Data Set Password' section with a field for the password and a note '(If password protected)'. This section is highlighted with a yellow box and labeled 'Password section'. The bottom of the panel features a function key bar with 'F1=Help', 'F2=Split', 'F3=Exit', 'F7=Backward', 'F8=Forward', 'F9=Swap', 'F10=Actions', and 'F12=Cancel'. The bottom right corner shows the date '04/01'.

## Using the ISPF data set utility – Data set utility options

You can use the following options on an entire data set:

- A – allocate a new data set
- R – rename a data set
- D – delete a data set
- blank – display information about the data set
- C – catalog a data set
- U – uncatalog a data set
- S – display the short form of data set information
- V – use VSAM utilities

```

Menu  RefList  Utilities  Help

Data Set Utility

Option ==>

A Allocate new data set
R Rename entire data set
D Delete entire data set
blank Data set information

Option
section

C Catalog data set
U Uncatalog data set
S Short data set information
V VSAM Utilities

ISPF Library:
Project . . . SMCHUGH
Group . . . TEST
Type . . . COBOL
Enter "/" to select option
/ Confirm Data Set Delete

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

F1=Help F2=Split F3=Exit F7=Backward F8=Forward F9=Swap
F10=Actions F12=Cancel
MA a 04/014

```

## Using the ISPF data set utility – Getting information about a data set - simulation

You have two options for getting information about the data set specified in the library section:

- Leave the option line blank and press the Enter key to get the long form of information
- Type S on the option line and press the Enter key to get the short form of information.

To try a simulation of getting both types of information about a data set, click on the Launch button.

```

Menu  RefList  Utilities  Help

                                     Data Set Utility

Option ==> S_

  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 . . . SMCHUGH             Enter "/" to select option
Group . . . TEST                  / Confirm Data Set Delete
Type . . . COBOL

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

Data Set Password . . . (If password protected)

F1=Help    F2=Split    F3=Exit    F7=Backward  F8=Forward  F9=Swap
F10=Actions F12=Cancel

MA a 04/014

```



## Using the ISPF data set utility – Allocating a new data set

Before you can use a data set, you must create space for it and be able to link to it. You do this by allocating the data set.

1. Type A on the option line.
2. Fill in the Project, Group, and Type qualifiers for the new data set, as shown here.
3. Press the Enter key.

If the data set does not already exist, ISPF displays the Allocate New Data Set panel.

```

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 . . . MF3894           Enter "/" to select option
Group . . . PAYROLL           / Confirm Data Set Delete
Type . . . COBOL

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

F1=Help    F2=Split    F3=Exit    F7=Backward  F8=Forward  F9=Swap
F10=Actions F12=Cancel

MF  a                                     A                                     14/023

```

## Using the ISPF data set utility – The Allocate New Data Set panel

On the Allocate New Data Set panel you can set specific values for the data set. Under normal circumstances, you can leave many of the fields (such as the volume serial or generic unit) blank, and z/OS will supply default values. The volume serial number shown here is the default volume on which z/OS will store the new data set. If you want to place the new data set on a specific volume, enter the volume's serial number in that field. In the generic unit field, you can specify the type of DASD you want to use, such as 3390, or leave it blank and the system will select the default device.

The screenshot displays the 'Allocate New Data Set' panel in ISPF. The panel has a menu bar at the top with 'Menu', 'RefList', 'Utilities', and 'Help'. Below the menu bar, the title 'Allocate New Data Set' is centered. The main area contains several fields for data set allocation, each with a label and a value. The fields are: 'Data Set Name' (MFM3894.PAYROLL.COBOL), 'Management class' (blank), 'Storage class' (blank), 'Volume serial' (BH6ST2), 'Device type' (blank), 'Data class' (blank), 'Space units' (BLOCK), 'Average record unit' (blank), 'Primary quantity' (102), 'Secondary quantity' (20), 'Directory blocks' (0), 'Record format' (FB), 'Record length' (80), 'Block size' (27920), and 'Data set name type' (PDS). To the right of each field is a description of the field's purpose. At the bottom of the panel, there are function keys: F1=Help, F2=Split, F3=Exit, F7=Backward, F8=Forward, F9=Swap, F10=Actions, and F12=Cancel. The bottom status bar shows 'WA' and 'a' on the left, and '08/02E' on the right.

```

Menu  RefList  Utilities  Help

Allocate New Data Set

Command ==>

Data Set Name . . . . : MFM3894.PAYROLL.COBOL

Management class . . . . (Blank for default management class)
Storage class . . . . (Blank for default storage class)
Volume serial . . . . BH6ST2 (Blank for system default volume) **
Device type . . . . (Generic unit or device address) **
Data class . . . . (Blank for default data class)
Space units . . . . BLOCK (BLKS, TRKS, CYLS, KB, MB, BYTES
                           or RECORDS)
Average record unit . . . . (M, K, or U)
Primary quantity . . . 102 (In above units)
Secondary quantity . . 20 (In above units)
Directory blocks . . . 0 (Zero for sequential data set) *
Record format . . . . FB
Record length . . . . 80
Block size . . . . 27920
Data set name type . . PDS (LIBRARY, HFS, PDS, LARGE, BASIC, *

F1=Help  F2=Split  F3=Exit  F7=Backward  F8=Forward  F9=Swap
F10=Actions  F12=Cancel

WA a 08/02E
  
```

## Using the ISPF data set utility– Specifying space for a new data set

Use these three parameters to specify space requirements for a data set:

- Space units – the unit of measure for data set space.
- Primary quantity – the primary space to allocate in terms of the space units specified above
- Secondary quantity – additional space that ISPF uses to expand the data set if the primary space is insufficient.

You can allocate space in blocks (BLKS), tracks (TRKS), or cylinders (CYLS), megabytes (M), kilobytes (K), bytes (B), or records (R).

```

Menu  RefList  Utilities  Help

Allocate New Data Set

Command ==> _____ More: +

Data Set Name . . . : MFM3894.PAYROLL.COBOL

Management class . . . _____ (Blank for default management class)
Storage class . . . _____ (Blank for default storage class)
Volume serial . . . BH6ST2 (Blank for system default volume) **
Device type . . . _____ (Generic unit or device address) **
Data class . . . _____ (Blank for default data class)
Space units . . . BLOCK (BLKS, TRKS, CYLS, KB, MB, BYTES or RECORDS)
Average record unit . . . _____ (M, K, or U)
Primary quantity . . . 102 (In above units)
Secondary quantity . . . 20 (In above units)
Directory blocks . . . 0 (Zero for sequential data set) *
Record format . . . FB
Record length . . . 80
Block size . . . 27920
Data set name type . . . PDS (LIBRARY, HFS, PDS, LARGE, BASIC, *)

F1=Help F2=Split F3=Exit F7=Backward F8=Forward F9=Swap
F10=Actions F12=Cancel

WA a 08/02E
  
```

## Using the ISPF data set utility– Specifying space continued

The primary quantity field should contain the amount of space the data set will require. In this example, we've specified 102 block of primary space.

```
Data class . . . . . (Blank for default data class)
Space units . . . . . BLOCK (BLKS, TRKS, CYLS, KB, MB, BYTES
                             or RECORDS)
Average record unit _ (M, K, or U)
Primary quantity . . 102 (In above units)
Secondary quantity . 20 (In above units)
Directory blocks . . 0 (Zero for sequential data set) *
```

In the secondary quantity field, specify the amount of space by which to expand the primary space if the data set needs additional space. This additional space is dynamically allocated as required. The primary space can be expanded up to 15 times. After that the only way to expand the data set is copy or move it to a new data set with a larger allocation.

The average record unit shows the unit used when allocating average record length. U (default) specifies single record units (bytes). K specifies kilobyte and M specifies megabyte record units.

Determining how much space you need is a task beyond the scope of this module. For more information, refer to *DFSMS Using Data Sets*, SC26-7410.

## Using the ISPF data set utility– Setting the file expiration date

Near the bottom of the Allocate New Data Set panel, you'll find the Expiration Date entry field. Here you can specify a date when the file can be considered expired and can be deleted.

One reason to set an expiration date for a data set is to reduce the risk of accidentally deleting it in the future.

Normally, however, you do not set an expiration date for disk data sets, since it interferes with their reorganization. They cannot be deleted until after the expiration date unless a systems administrator overrides the expiration date setting.

```

Menu  RefList  Utilities  Help

Allocate New Data Set

Command ==>

Average record unit      (M, K, or U)
Primary quantity      102 (In above units)
Secondary quantity     20 (In above units)
Directory blocks       10 (Zero for sequential data set) *
Record format          FB
Record length          80
Block size             27920
Data set name type     PDS (LIBRARY, HFS, PDS, LARGE, BASIC, *
                           EXTREQ, EXTPREF or blank)
Expiration date         (YY/MM/DD, YYYY/MM/DD
Enter "/" to select option
                        YY.DDD, YYYY.DDD in Julian form
Allocate Multiple Volumes DDDD for retention period in days
                           or blank)

( * Specifying LIBRARY may override zero directory block)

( ** Only one of these fields may be specified)
F1=Help    F2=Split    F3=Exit    F7=Backward  F8=Forward  F9=Swap
F10=Actions F12=Cancel

06/025
  
```

## Using the ISPF data set utility – Allocating a new data set - simulation

Perhaps the easiest way to understand the process of allocating a data set is to do it.

To walk through the steps of creating a new data set, click on the Launch button.

```

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 . . . MF3894           Enter "/" to select option
Group . . . PAYROLL           / Confirm Data Set Delete
Type . . . COBOL

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

F1=Help    F2=Split    F3=Exit    F7=Backward  F8=Forward  F9=Swap
F10=Actions F12=Cancel

MP a A 14/023

```

## Using the ISPF data set utility– Renaming a data set

If you select the rename option, the Rename Data Set panel appears, as shown here. The data set name at the top of the screen is carried over from the initial Data Set Utility panel. Use the ISPF library fields to enter the new name for the data set.

In this example we have renamed  
MFM3894.PAYROLL.COBOL to  
MFM4000.PAYROLL.COBOL.

The screenshot shows the 'Rename Data Set' panel in ISPF. The panel has a title bar 'Rename Data Set'. Below the title bar, there is a 'Command ==>' field. The 'Data Set Name' is 'MFM3894.PAYROLL.COBOL' and the 'Volume Serial' is 'BH6ST2'. Below this, there is a prompt 'Enter new name below: (The data set will be recataloged.)'. The 'ISPF Library:' section contains three fields: 'Project' with value 'MFM4000', 'Group' with value 'PAYROLL', and 'Type' with value 'COBOL'. Below this is a section 'Other Partitioned or Sequential Data Set:' with a 'Data Set Name' field. At the bottom, there is a row of function keys: F1=Help, F2=Split, F3=Exit, F7=Backward, F8=Forward, F9=Swap, F10=Actions, and F12=Cancel. The panel is displayed on a terminal screen with a black background and green text. The bottom of the screen shows a status bar with 'MA a' on the left and '11/029' on the right.

```

-                                     Rename Data Set
0  Command ==> _____
b  Data Set Name . . : MFM3894.PAYROLL.COBOL
   Volume Serial . . : BH6ST2

   Enter new name below: (The data set will be recataloged.)

ISPF Library:
I  Project . . . MFM4000_
   Group . . . PAYROLL_
   Type . . . COBOL_

Other Partitioned or Sequential Data Set:
0  Data Set Name . . . _____

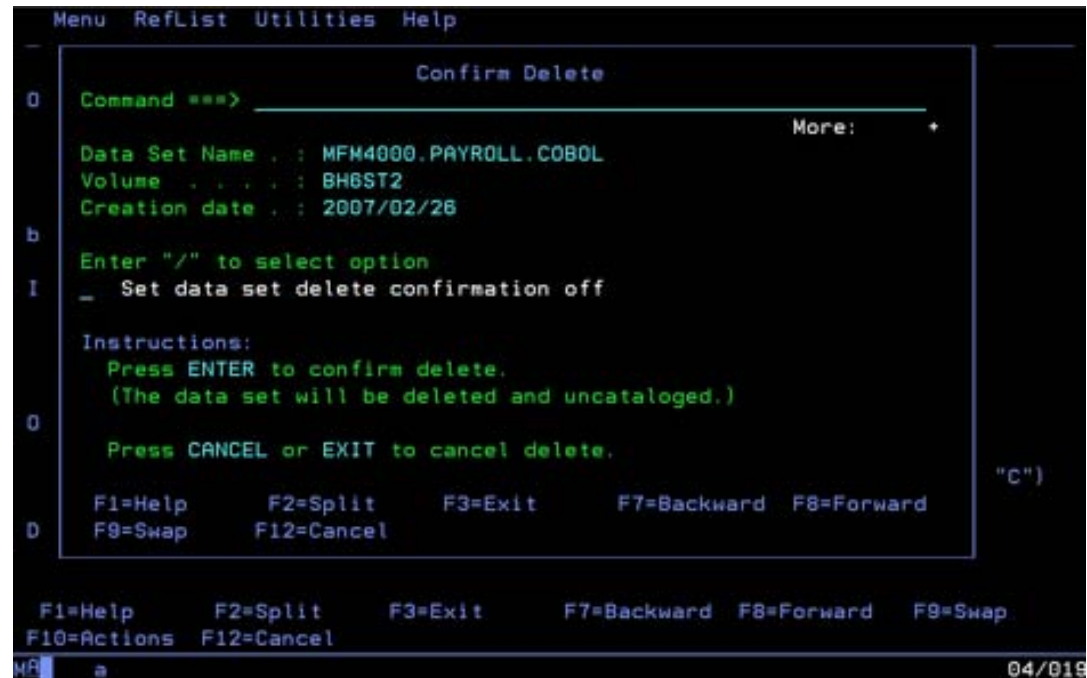
D

F1=Help    F2=Split    F3=Exit    F7=Backward  F8=Forward
F9=Swap    F10=Actions  F12=Cancel

F
MA a                                             11/029
```

## Using the ISPF data set utility– Deleting a data set

If you select the Delete option, the Confirm Delete panel appears, as shown here. To confirm the deletion, press the Enter key. The data set will be deleted and uncataloged.



The screenshot shows the ISPF 'Confirm Delete' panel. At the top, there is a menu bar with 'Menu', 'RefList', 'Utilities', and 'Help'. The panel title is 'Confirm Delete'. Below the title, there is a 'Command \*\*\*>' field. To the right of this field is a 'More: +' button. The panel displays the following information: 'Data Set Name : MFM4000.PAYROLL.COBOL', 'Volume : BH6ST2', and 'Creation date : 2007/02/28'. Below this, it says 'Enter "/" to select option'. There is a checkbox labeled 'Set data set delete confirmation off'. The 'Instructions:' section states: 'Press ENTER to confirm delete. (The data set will be deleted and uncataloged.)' and 'Press CANCEL or EXIT to cancel delete.' At the bottom, there are two rows of function key definitions: 'F1=Help F2=Split F3=Exit F7=Backward F8=Forward' and 'F9=Swap F10=Actions F12=Cancel'. The bottom status bar shows '04/019'.

```
Menu RefList Utilities Help
Confirm Delete
Command ***> More: +
Data Set Name : MFM4000.PAYROLL.COBOL
Volume : BH6ST2
Creation date : 2007/02/28
Enter "/" to select option
Set data set delete confirmation off
Instructions:
Press ENTER to confirm delete.
(The data set will be deleted and uncataloged.)
Press CANCEL or EXIT to cancel delete.
F1=Help F2=Split F3=Exit F7=Backward F8=Forward
F9=Swap F10=Actions F12=Cancel
04/019
```



## **Using the ISPF data set utility – Summary**

**In this module, Using the ISPF data set utility, you have learned:**

- **How to access the data set utility**
- **How to specify data set options**
- **How to allocate a new data set**
- **How to rename and delete data sets.**