IBM File Manager for z/OS DB2 Feature

Program number 5655-V52

Tutorial

This is the tutorial for the DB2® feature of IBM's File Manager for z/OS®, one of the IBM zSeries® problem determination tools.

File Manager DB2 version 10 tutorial

IBM

- File Manager DB2 utilities
  - Print
  - Object list
  - Copy
  - Export and import

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This section will cover the File Manager Print utility. It can be used to generate reports from DB2 tables or views.

Review print settings


```
 Process   Options   Utilities   Help

FM/DB2 (D91F)                Primary Option Menu
Command ===> 0

0   Settings      Set processing options        User ID . : TSS13
1   View          View DB2 object               System ID : STLABF6
2   Edit          Edit DB2 object               Appl ID . : FMN2
3   Utilities     Perform utility functions     Version . : 10.1.0
4   SQL           Prototype, execute and analyze SQL   Terminal  : 3278A
5   DB2I          Start DB2 Interactive         Screen  . : 1
6   Command       Enter and execute a DB2 Command      Date  . . : 2010/04/14
X   Exit          Terminate FM/DB2              Time  . . : 12:16

                                                DB2 SSID  . D91F
                                                SQL ID  . . TSS13     +
```

Enter

Review print option settings before printing from the utility panel From the File Manager DB2 primary option menu, select option 0, settings. Press Enter.

Select print utility options

```
 Process   Options   Utilities   Help
────────────────────────────────────────────────────────────────
FM/DB2 (D91F)            Set Processing Options
Command ===> 3.1
─────────────────────────────────────────────────────────────────

0  System           System options
1  View             View options
2  Edit             Edit options
3  Utilities
   3.1   Print        Print utility options
   3.3   Copy         Copy utility options
   3.4   Object List  Object list utility options
   3.7   Export       Export utility options
   3.L   Load         DB2 LOAD utility options
   3.UL  LISTDEF      DB2 Utility LISTDEF options
   3.UO  OPTIONS      DB2 Utility OPTIONS options
   3.UT  TEMPLATE     DB2 Utility TEMPLATE options
   3.UU  Unload       DB2 Unload utility options
```

Enter

From the Set Processing Options selection panel, select option 3.1 print utility options.
Press Enter.

Select print format

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```
 Process    Options    Utilities    Help
────────────────────────────────────────────────────────────────
 FM/DB2 (D91F)              Print Utility Options          Global Settings
 Command ===> _

 Processing Options:                Null Column Indicator:
    Print mode                          Display . . . . . . . _
  1  1. Table
     2. Single

  Enter "/" to select option
  _   Batch execution
  /   Use uncommitted read
  _   Print HEX representation
```

F
F3

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Print utility options panel is displayed. This panel controls the format, table or single, that the output will be printed in. This panel also can be used to select batch execution, use uncommitted read, and print HEX representation. Select Print mode 1, print output will be in Table format. Press F3 twice to return to the FM DB2 primary option menu. Then select option 3 for utilities.

Select Print

```
 Process   Options   Utilities   Help

FM/DB2 (D91F)              Utility Functions
Command ===> 1

1  Print        Print DB2 table or view
2  Objects      Create and drop DB2 objects
3  Copy         Copy data within DB2
4  Object List  Display and process DB2 object lists
5  Privileges   Manage DB2 privileges
6  Import       Import sequential or VSAM data into DB2
7  Export       Export DB2 data to sequential or VSAM data set
8  Create       Create DB2 test data
9  Utilities    DB2 utility job generation
10 Audit trail  Print audit trail report
11 Print browse Browse FM/DB2 print data set
```

Enter

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From the utility functions panel, select option 1 Print. Press Enter.

Specify print object and processing options

```
 Process    Options    Utilities    Help
─────────────────────────────────────────────────────────────
 FM/DB2 (D91F)                    Print Utility
 Command ===> _____

 DB2 Object:
    Location  . . . . . _____       Database  . . . _____  (optional)
    Owner . . . . . . . TSS13_____    +  Table Space . . _____  (optional)
    Name  . . . . . . . EMP_____    +

    Row count . . . . . ALL_____       Number of rows to print

 Template:
    Data set name . . . _____
    Member  . . . . . . _____

 Processing Options:
    Template usage                   Enter "/", "A"lways to select option
    3   1. Above                     _   Edit options
        2. Previous                  _   Edit template
        3. Generate from table
        4. Generate/Replace
 F1=Help      F2=Split     F3=Exit       F4=Expand    F6=Select    F7=B
 F8=Forward   F9=Swap      F10=Left      F11=Right    F12=Cancel         Enter
```

Use these fields to edit print utility options or edit the template

Specify the name of the object to be printed in the DB2 object fields. You can refer to a table, a view, or an alias of a table or a view. You can limit how many rows are printed in the "Row Count" field. If you set the "Row Count" to zero or ALL, as in this example, then all rows will be printed.

You can use a template to select rows and format the report. You can also change the report format, either table or single, by selecting "Edit options" under "processing options", and modifying the "print mode". Press Enter.

Rows were printed
Use PB command to view output data set

```
  Process    Options    Utilities    Help
 ──────────────────────────────────────────────────────────────────
 FM/DB2 (D91F)                   Print Utility              42 row(s) printed
 Command ===> pb_

 DB2 Object:
     Location  . . . . . _____      Database  . . . _____  (optional)
     Owner . . . . . . . TSS13_____  +  Table Space . . _____  (optional)
     Name  . . . . . . . EMP_____  +

     Row count . . . . . ALL_____      Number of rows to print

 Template:
     Data set name . . . _____
     Member  . . . . . . _____

 Processing Options:
     Template usage                      Enter "/", "A"lways to select option
     3  1. Above                         _  Edit options
        2. Previous                      _  Edit template
        3. Generate from table
        4. Generate/Replace
                                                                    ┌───────┐
                                                                    │ Enter │
                                                                    └───────┘
```

A message in the right corner of the screen indicates 42 rows have been printed. Because the print options settings are correct, the report was written to the File Manager print data set.

There is a special File Manager command, PB ("Print Browse") that displays the print data set. On the command line, type PB, and press Enter.

Print data set
Turn on program function keys

```
 Process   Options   Help

 Print Browse          TSS13.FMN.LIST                    Top of 48
 Command ===> pfshow on_                                 Scroll PAGE
                              Record AT TOP    Col 2        Format CHAR
   ---+----10---+----2----+----3----+----4----+----5----+----6----+----7----+----8
**** Top of data ****
IBM File Manager for z/OS DB2 Component
DB2 SSID: D91F    SQL ID: TSS13    Location:        Table/View: "TSS13"."EMP
EMPNO  FIRSTNME    MIDINIT LASTNAME      WORKDEPT PHONENO HIREDATE    JOB
CH(6)  VARCHAR(12) CH(1)   VARCHAR(15)   CH(3)    CH(4)   DATE        CH(8)
<---+> <---+----1-> -       <---+----1----> <->     <-->    <---+----> <---+-->
000010 CHRISTINE   I       HAAS          A00      3978    1965-01-01 PRES
000020 MICHAEL     L       THOMPSON      B01      1111    1973-10-10 MANAGER
000030 SALLY       A       KWAN          C01      4738    1975-04-05 MANAGER
000050 JOHN        B       GEYER         E01      6789    1949-08-17 MANAGER
000060 IRVING      F       STERN         D11      6423    1973-09-14 MANAGER
000070 EVA         D       PULASKI       D21      7831    1980-09-30 MANAGER
000090 EILEEN      W       HENDERSON     E11      5498    1970-08-15 MANAGER
000100 THEODORE    Q       SPENSER       E21      0972    1980-06-19 MANAGER
000110 VINCENZO    G       LUCCHESI      A00      3490    1958-05-16 SALESREP
000120 SEAN                O'CONNELL     A00      2167    1963-12-05
000130 DOLORES     M       QUINTANA      C01      4578    1971-07-28
000140 HEATHER     A       NICHOLLS      C01      1793    1976-12-15
```

Enter

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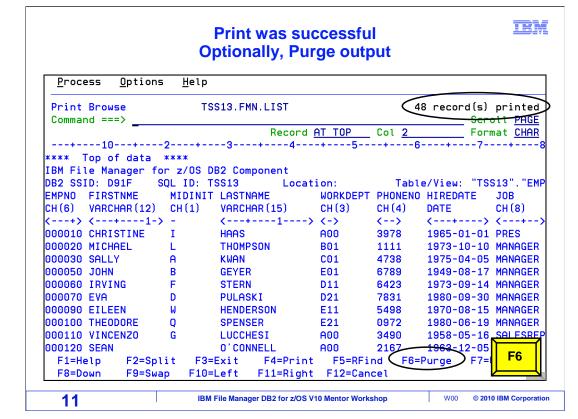
The print dataset is displayed. The name of the print dataset will appear in the top, center of the panel. The data is displayed in table format, based on the setting in the print utility options panel. No template was used, so all rows and columns were printed. A template can be used to select rows or columns.

The "PFSHOW ON" command is entered on the command line to show the program function keys. Press Enter.

Send output to SYSOUT

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```
   Process    Options    Help

   Print Browse              TSS13.FMN.LIST                    Top of 48
   Command ===> _                                             Scroll PAGE
                                  Record AT TOP     Col 2          Format CHAR
   ---+----10---+----2----+----3----+----4----+----5----+----6----+----7----+----8
 ****  Top of data  ****
 IBM File Manager for z/OS DB2 Component
 DB2 SSID: D91F    SQL ID: TSS13     Location:      Table/View: "TSS13"."EMP
 EMPNO  FIRSTNME    MIDINIT LASTNAME       WORKDEPT PHONENO HIREDATE    JOB
 CH(6)   VARCHAR(12)  CH(1)   VARCHAR(15)    CH(3)   CH(4)   DATE        CH(8)
 <---+> <---+----1-> -       <---+----1----> <-)     <-->    <---+----> <---+-->
 000010 CHRISTINE   I       HAAS           A00     3978    1965-01-01 PRES
 000020 MICHAEL     L       THOMPSON       B01     1111    1973-10-10 MANAGER
 000030 SALLY       A       KWAN           C01     4738    1975-04-05 MANAGER
 000050 JOHN        B       GEYER          E01     6789    1949-08-17 MANAGER
 000060 IRVING      F       STERN          D11     6423    1973-09-14 MANAGER
 000070 EVA         D       PULASKI        D21     7831    1980-09-30 MANAGER
 000090 EILEEN      W       HENDERSON      E11     5498    1970-08-15 MANAGER
 000100 THEODORE    Q       SPENSER        E21     0972    1980-06-19 MANAGER
 000110 VINCENZO    G       LUCCHESI       A00     3490    1958-05-16 SALESREP
 000120 SEAN                O'CONNELL      A00     2167    1963-12-05
   F1=Help     F2=Split    F3=Exit    F4=Print   F5=RFind   F6=Purge   F7=    F4
   F8=Down     F9=Swap     F10=Left   F11=Right  F12=Cancel
```

Press F4 print, to send the contents of the print dataset to SYSOUT. F4 is entered.

Print was successful
Optionally, Purge output

```
 Process   Options   Help

 Print Browse            TSS13.FMN.LIST                    48 record(s) printed
 Command ===> _____  Scroll PAGE
                                  Record AT TOP     Col 2          Format CHAR
   ---+----10---+----2----+----3----+----4----+----5----+----6----+----7----+----8
 ****  Top of data  ****
 IBM File Manager for z/OS DB2 Component
 DB2 SSID: D91F    SQL ID: TSS13    Location:        Table/View: "TSS13"."EMP
 EMPNO  FIRSTNME    MIDINIT LASTNAME        WORKDEPT PHONENO HIREDATE    JOB
 CH(6)  VARCHAR(12) CH(1)   VARCHAR(15)     CH(3)    CH(4)   DATE        CH(8)
 <---+> <---+----1-> -       <---+----1----> <-)      <-->    <---+---->  <---+-->
 000010 CHRISTINE   I       HAAS            A00      3978    1965-01-01 PRES
 000020 MICHAEL     L       THOMPSON        B01      1111    1973-10-10 MANAGER
 000030 SALLY       A       KWAN            C01      4738    1975-04-05 MANAGER
 000050 JOHN        B       GEYER           E01      6789    1949-08-17 MANAGER
 000060 IRVING      F       STERN           D11      6423    1973-09-14 MANAGER
 000070 EVA         D       PULASKI         D21      7831    1980-09-30 MANAGER
 000090 EILEEN      W       HENDERSON       E11      5498    1970-08-15 MANAGER
 000100 THEODORE    Q       SPENSER         E21      0972    1980-06-19 MANAGER
 000110 VINCENZO    G       LUCCHESI        A00      3490    1958-05-16 SALESREP
 000120 SEAN                O'CONNELL       A00      2167    1963-12-05
   F1=Help    F2=Split   F3=Exit    F4=Print   F5=RFind   F6=Purge   F7=
   F8=Down    F9=Swap   F10=Left   F11=Right  F12=Cancel
```

F6

A message is displayed in the right corner of the screen that indicates the rows have been printed. The contents of the print data set are copied to sysout. The sysout class that was specified in the print options controls the class the output is sent to. This technique is used to route the report to a physical printer.

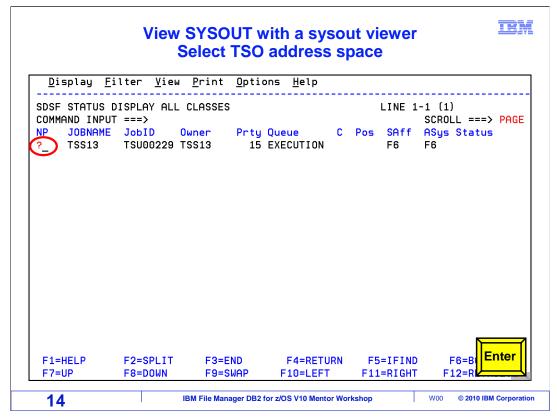Use F6 to purge the data in the dataset. F6 is entered.

Press F6 again to confirm purge request

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```
  Process    Options    Help

 Print Browse              TSS13.FMN.LIST                    Top of 48
 Command ===>  _                                            Scroll PAGE
 Press PURGE key to confirm purge request
 ---+----10---+----2----+----3----+----4----+----5----+----6----+----7----+----8
**** Top of data ****
IBM File Manager for z/OS DB2 Component
DB2 SSID: D91F    SQL ID: TSS13    Location:      Table/View: "TSS13"."EMP
EMPNO  FIRSTNME    MIDINIT LASTNAME      WORKDEPT PHONENO HIREDATE   JOB
CH(6)  VARCHAR(12) CH(1)   VARCHAR(15)   CH(3)    CH(4)   DATE       CH(8)
<---+> <---+----1-> -       <---+----1----> <-->     <-->    <---+---> <---+-->
000010 CHRISTINE   I        HAAS          A00      3978    1965-01-01 PRES
000020 MICHAEL     L        THOMPSON      B01      1111    1973-10-10 MANAGER
000030 SALLY       A        KWAN          C01      4738    1975-04-05 MANAGER
000050 JOHN        B        GEYER         E01      6789    1949-08-17 MANAGER
000060 IRVING      F        STERN         D11      6423    1973-09-14 MANAGER
000070 EVA         D        PULASKI       D21      7831    1980-09-30 MANAGER
000090 EILEEN      W        HENDERSON     E11      5498    1970-08-15 MANAGER
000100 THEODORE    Q        SPENSER       E21      0972    1980-06-19 MANAGER
000110 VINCENZO    G        LUCCHESI      A00      3490    1958-05-16 SALESREP
000120 SEAN                 O'CONNELL     A00      2167    1963-12-05
  F1=Help     F2=Split    F3=Exit    F4=Print   F5=RFind    F6=Purge    F7=
  F8=Down     F9=Swap     F10=Left   F11=Right  F12=Cancel
```

F6

Purge request requires a confirmation. Press F6 again to confirm purge of dataset contents.

Print data set purged
Returned to the Print Utility panel

```
  Process   Options   Utilities   Help
 ─────────────────────────────────────────────────────────────────
 FM/DB2 (D91F)                Print Utility              Output purged
 Command ===> _

 DB2 Object:
    Location  . . . . . _____      Database  . . . _____  (optional)
    Owner . . . . . . . TSS13_____    +  Table Space . . _____  (optional)
    Name  . . . . . . . EMP_____  +

    Row count . . . . . ALL_____    Number of rows to print

 Template:
    Data set name . . . _____
    Member  . . . . . . _____

 Processing Options:
    Template usage               Enter "/", "A"lways to select option
    3  1. Above                  _  Edit options
       2. Previous               _  Edit template
       3. Generate from table
       4. Generate/Replace
  F1=Help      F2=Split     F3=Exit     F4=Expand    F6=Select    F7=Backward
  F8=Forward   F9=Swap      F10=Left    F11=Right    F12=Cancel
```

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Purging the dataset will return back to the print utility panel.

View SYSOUT with a sysout viewer
Select TSO address space

```
  Display  Filter  View  Print  Options  Help
---------------------------------------------------------------------------
SDSF STATUS DISPLAY ALL CLASSES                          LINE 1-1 (1)
COMMAND INPUT ===>                                       SCROLL ===> PAGE
NP   JOBNAME  JobID    Owner    Prty Queue      C  Pos  SAff  ASys Status
?_   TSS13    TSU00229 TSS13      15 EXECUTION         F6    F6



















  F1=HELP      F2=SPLIT     F3=END      F4=RETURN    F5=IFIND     F6=B  Enter
  F7=UP        F8=DOWN      F9=SWAP     F10=LEFT     F11=RIGHT    F12=R
```

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Navigate to your sysout viewer. This example shows SDSF. The sysout output will be written to your TSO address space. Select your TSO ID with a "?". Press Enter.

Select SYSOUT

```
   Display  Filter  View  Print  Options  Help
 -------------------------------------------------------------------------
 SDSF JOB DATA SET DISPLAY - JOB TSS13    (TSU00229)    DATA SET DISPLAYED
 COMMAND INPUT ===>                                      SCROLL ===> PAGE
 NP    DDNAME    StepName ProcStep DSID Owner    C Dest          Rec-Cnt Page
       JESMSGLG JES2               2 TSS13    Z                      2
       JESJCL   JES2               3 TSS13    Z                    147
       JESYSMSG JES2               4 TSS13    Z                      2
  s_   SYS00037 TPROC02  TPROC02  106 TSS13    A LOCAL               48




     F1=HELP      F2=SPLIT     F3=END       F4=RETURN    F5=IFIND     F6=B
     F7=UP        F8=DOWN      F9=SWAP      F10=LEFT     F11=RIGHT    F12=R
```

Enter

Sysout is visible under the job data display. It will be in the class that was specified in the print option settings in File Manager DB2. Here it is in class A. Select the sysout entry with an "S" line command. Press Enter.
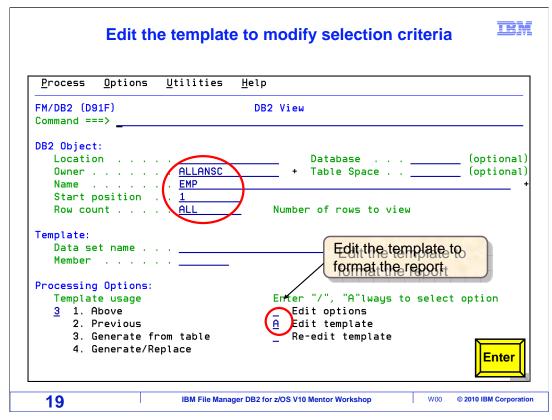
Print output viewed in SYSOUT

```
   Display  Filter  View  Print  Options  Help
 ------------------------------------------------------------------------------
 SDSF OUTPUT DISPLAY TSS13    TSU00229  DSID   106 LINE 0      COLS 02- 81
 COMMAND INPUT ===> _                                    SCROLL ===> PAGE
*********************************** TOP OF DATA ***********************************
IBM File Manager for z/OS DB2 Component
DB2 SSID: D91F    SQL ID: TSS13     Location:      Table/View: "TSS13"."EMP
EMPNO   FIRSTNME    MIDINIT LASTNAME       WORKDEPT PHONENO HIREDATE    JOB
CH(6)   VARCHAR(12) CH(1)   VARCHAR(15)    CH(3)    CH(4)   DATE        CH(8)
<---+> <---+----1-> -       <---+----1----> <-->     <-->    <---+----> <---+-->
000010 CHRISTINE   I       HAAS           A00      3978    1965-01-01 PRES
000020 MICHAEL     L       THOMPSON       B01      1111    1973-10-10 MANAGER
000030 SALLY       A       KWAN           C01      4738    1975-04-05 MANAGER
000050 JOHN        B       GEYER          E01      6789    1949-08-17 MANAGER
000060 IRVING      F       STERN          D11      6423    1973-09-14 MANAGER
000070 EVA         D       PULASKI        D21      7831    1980-09-30 MANAGER
000090 EILEEN      W       HENDERSON      E11      5498    1970-08-15 MANAGER
000100 THEODORE    Q       SPENSER        E21      0972    1980-06-19 MANAGER
000110 VINCENZO    G       LUCCHESI       A00      3490    1958-05-16 SALESREP
000120 SEAN                O'CONNELL      A00      2167    1963-12-05 CLERK
000130 DOLORES     M       QUINTANA       C01      4578    1971-07-28 ANALYST
000140 HEATHER     A       NICHOLLS       C01      1793    1976-12-15 ANALYST
  F1=HELP     F2=SPLIT     F3=END     F4=RETURN   F5=IFIND    F6=BOOK
  F7=UP       F8=DOWN      F9=SWAP    F10=LEFT    F11=RIGHT   F12=RETRIEVE
```

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Print output is displayed.

Use View to print a report

Example: Use View to format and print a report

❑ Format a report with a template

❑ Use View to verify the format

❑ Use the RP (row print) command to generate print output

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This section will cover using the View panel to format a report using a template. The format will be verified and the row print command will be used to generate print output.

Select View from the primary option menu

```
 Process   Options   Utilities   Help

FM/DB2 (D91F)                Primary Option Menu
Command ===> 1_

0   Settings     Set processing options       User ID . : TSS13
1   View         View DB2 object              System ID : STLABF6
2   Edit         Edit DB2 object              Appl ID . : FMN2
3   Utilities    Perform utility functions    Version . : 10.1.0
4   SQL          Prototype, execute and analyze SQL   Terminal  : 3278A
5   DB2I         Start DB2 Interactive        Screen  . : 1
6   Command      Enter and execute a DB2 Command      Date  . . : 2010/03/24
X   Exit         Terminate FM/DB2             Time  . . : 04:23

                                             DB2 SSID  . D91F
                                             SQL ID  . . TSS13    +


                                                              Enter
```

Select View, option 1, from the File Manager DB2 primary option menu. Press Enter.

Edit the template to modify selection criteria

```
  Process    Options    Utilities    Help
 ─────────────────────────────────────────────────────────────
 FM/DB2 (D91F)                    DB2 View
 Command ===> _____

 DB2 Object:
    Location  . . . . .  _____     Database  . . . _____  (optional)
    Owner . . . . . . .  ALLANSC_____   +  Table Space . . _____  (optional)
    Name  . . . . . . .. EMP_____  +
    Start position  . . 1_____
    Row count . . . .   ALL_____     Number of rows to view

 Template:
    Data set name . . . _____
    Member  . . . . . . _____

 Processing Options:
    Template usage                    Enter "/", "A"lways to select option
    3  1. Above                       _  Edit options
       2. Previous                    A  Edit template
       3. Generate from table         _  Re-edit template
       4. Generate/Replace
```

Edit the template to format the report.

Enter

From the DB2 View panel, select the object to be printed. Select "Edit template" option to modify the selection criteria. Press Enter.

Enter selection criteria
Deselect all columns

```
   Process    Options    Utilities    Help

FM/DB2 (D91F)              Column Selection/Edit           Line 1 of 14
Command ===>                                                Scroll PAGE
TABLE ALLANSC.EMP
-------- Row Selection Criteria ----
1 Sel  firstnme like '%JA%'
                                         Enter selection criteria
                                         De-select all columns.
Cmd Seq SHE CL# Column name              Tip: Sometimes it is easier to   A/D
            ****  Top of data  *         clear the selection for ALL of
s*    ___  S    1 EMPNO                   the columns first                 _
___ ___  S    2 FIRSTNME                                                    _
___ ___  S    3 MIDINIT      CHARACTER(1)              None               _
___ ___  S    4 LASTNAME     VARCHAR(15)               None               _
___ ___  S    5 WORKDEPT     CHARACTER(3)      Y       Null               _
___ ___  S    6 PHONENO      CHARACTER(4)      Y       Null               _
___ ___  S    7 HIREDATE     DATE              Y       Null               _
___ ___  S    8 JOB          CHARACTER(8)      Y       Null               _
___ ___  S    9 EDLEVEL      SMALLINT          Y       Null               _
___ ___  S   10 SEX          CHARACTER(1)      Y       Null               _
___ ___  S   11 BIRTHDATE    DATE              Y       Null
___ ___  S   12 SALARY       DECIMAL(9,2)      Y       Null           Enter
___ ___  S   13 BONUS        DECIMAL(9,2)      Y       Null
___ ___  S   14 COMM         DECIMAL(9,2)      Y       Null               _
```

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The Column/Selection/Edit panel is displayed.

Enter selection criteria on the Sel entry line.

Here "firstnme like '%JA%'" is entered. This will select rows where the firstnme field contains JA.

By default all the columns will be selected. This is indicated by the S in the column header SHE. To only select a few columns, deselect them all first, then select the fields to be printed.

S* is entered on the first cmd line, on the EMPNO field entry. This will de-select all the columns. Press Enter.

Select columns
Reorder fields

```
 Process   Options   Utilities   Help

FM/DB2 (D91F)              Column Selection/Edit              Line 1 of 14
Command ===> _____      Scroll PAGE
TABLE ALLANSC.EMP
------- Row Selection Criteria ---- (Use SQL/PF4 for full screen edit) -------
1 Sel: WHERE FIRSTNME LIKE '%JA%'                                          +

Cmd Seq SHE CL# Column name        Data type(length)  Null Default  Order A/D
                **** Top of data ****
            1 EMPNO              CHARACTER(6)           None        ___  _
 s   3      2 FIRSTNME                                  one         ___  _
            3 MIDINIT      Select only the columns you  one         ___  _
 ss  2      4 LASTNAME     want                         one         ___  _
     1_     5 WORKDEPT     Seq field can be used to reorder ull      ___  _
 ss         6 PHONENO      fields                        ull        ___  _
            7 HIREDATE                                   ull        ___  _
 s2         8 JOB                CHARACTER(8)        Y  Null        ___  _
            9 EDLEVEL            SMALLINT            Y  Null        ___  _
           10 SEX               CHARACTER(1)        Y  Null        ___  _
           11 BIRTHDATE          DATE                Y  Null
           12 SALARY             DECIMAL(9,2)        Y  Null        Enter
           13 BONUS              DECIMAL(9,2)        Y  Null
           14 COMM               DECIMAL(9,2)        Y  Null
```

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The S under the SHE column has been removed from all the column names.

The S is a toggle switch. S with an entry in the SHE field will deselect the column. An S in the entry field with no s in the SHE field, will select the column.

An S is now entered next to the columns to be selected. A single 's', a block SS to SS command, or S followed by a number can be used to select columns. Firstnme, Lastname, Workdept, Phoneno, Job and Edlevel are selected. All three selection techniques are demonstrated.

The Seq field is used to change the sequencing of the columns. Workdept will be in position one, Lastname will be position two, and Firstnme will be position three. All other fields will be numbered starting with four. Press F3 to save changes.

Fields have been selected and reordered
Edit two fields

Specific columns have been selected. Fields have been reordered. Column names can be modified. Use the 'e' line command to select the WORKDEPT and the JOB fields. Press Enter.

Change WORKDEPT to DEPT

IBM

```
 Process   Options   Utilities   Help
_____
FM/DB2 (D91F)              Column Attributes
Command ===> _____

Fixed Attributes:
         Column name  WORKDEPT
              Type    CHARACTER(3)
Use Attributes:
           Heading    DEPT_____
        Output width  _____
Create Attributes:
             Filler   _____
             Action   __
     Start character  _
            Pattern   _____
 Repeat user pattern  ___            YES or NO
Scrambling Options:
  Scramble Type       Enter "/" to select option
 _ 1. Random          _  Value     Column In  _____    Out  _____
   2. Repeatable Dsn  _____
   3. Translate
   4. Exit                                                    F3
```

The column attributes screen is displayed. The "Heading" field is used to change the name of the WORKDEPT field to DEPT. Press F3.

Change JOB to POSITION

```
 Process    Options    Utilities    Help
 _____
 FM/DB2 (D91F)                  Column Attributes
 Command ===> _____

 Fixed Attributes:
          Column name   JOB
                 Type   CHARACTER(8)
 Use Attributes:
              Heading   POSITION_____
         Output width   _____
 Create Attributes:
               Filler   _____
               Action   __
      Start character   _
              Pattern   _____
  Repeat user pattern   ___              YES or NO
 Scrambling Options:
  Scramble Type         Enter "/" to select option
  _ 1. Random           _  Value      Column In  _____     Out  _____
    2. Repeatable Dsn   _____
    3. Translate
    4. Exit                                                      F3
```

The column attributes screen is displayed. The "Heading" field is used to change the name of the JOB field to POSITION. Press F3.

All formatting is complete

```
 Process    Options    Utilities    Help

FM/DB2 (D91F)              Column Selection/Edit          Line 1 of 14
Command ===> _____     Scroll PAGE
TABLE ALLANSC.EMP
------- Row Selection Criteria ---- (Use SQL/PF4 for full screen edit) -------
1 Sel  WHERE FIRSTNME LIKE '%JA%'                                            +

Cmd Seq SHE CL# Column name        Data type(length)  Null Default  Order A/D
                **** Top of data  ****
____         1 EMPNO              CHARACTER(6)             None      ___  _
____   3 S   2 FIRSTNME           VARCHAR(12)              None      ___  _
____         3 MIDINIT            CHARACTER(1)             None      ___  _
____   2 S   4 LASTNAME           VARCHAR(15)              None      ___  _
____   1 S E 5 WORKDEPT           CHARACTER(3)         Y   Null      ___  _
____     S   6 PHONENO            CHARACTER(4)         Y   Null      ___  _
____         7 HIREDATE           DATE                 Y   Null      ___  _
____     S E 8 JOB                CHARACTER(8)         Y   Null      ___  _
____     S   9 EDLEVEL            SMALLINT             Y   Null      ___  _
____  __    10 SEX                CHARACTER(1)         Y   Null      ___  _
____  __    11 BIRTHDATE          DATE                 Y   Null      ___  _
____  __    12 SALARY             DECIMAL(9,2)         Y   Null
____  __    13 BONUS              DECIMAL(9,2)         Y   Null       F3
____  __    14 COMM               DECIMAL(9,2)         Y   Null
```

The Column Selection/Edit panel is redisplayed.

The selection criteria field has WHERE FIRSTNAME LIKE '%JA%' in it.

Fields have been ordered 1 WORKDEPT, 2 LASTNAME, and 3 FIRSTNME.

Only 6 fields have been selected.

All formatting is complete. Press F3 to save the template.

Save the template
Saved templates can be used again

```
                        ─────── Template Save ───────
─    Command ===> _____
F
C
T    To discard changes to your template, press PF12/Cancel.
-
1    To use changes without saving, press PF6/RunTemp.

C    To save changes, type a data set and member name below, then press      D
     PF3/Exit.

     Data set name   'TSS13.ADLAB.TEMPLATE'_____
     Member  . . .    janames_
```

F3

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F3 on the previous panel displays the Template Save panel. Enter the data set and member name to save the template. F12 will cancel, F6 will run temporary.

The name of the template library, along with a member name of janames is entered. Press F3 to save.

```
 Process    Options    Utilities    Help

 FM/DB2 (D91F)                    Table View                       Top of 3
 Command ===> fs                                             Scroll PAGE
 3 rows fetched                                              Format TABL
          DEPT   LASTNAME         FIRSTNME      PHONENO POSITION EDLEVEL
          #5     #4               #2            #6      #8           #9
          CH(3)  VARCHAR(15)      VARCHAR(12)   CH(4)   CH(8)     SMINT
          <-N    <---+----1---->  <---+----1->  <-->    <---+-->  <---+>
 ****** **** Top of data ****
 000001 D11     WALKER<          JAMES<        2986    ENGINEER     16
 000002 D21     JEFFERSON<       JAMES<        2094    CLERK        14
 000003 E21     GOUNOT<          JASON<        5698    FIELDREP     16
 ****** **** End of data ****
```

Enter

Three rows matched the selection criteria and were fetched. Only the selected columns are displayed, and in the order that was specified. Type FS on the command line to switch to format single. Press Enter.

View has switched to single format
Print rows

IBM

```
 Process   Options   Utilities   Hel
                                        The RP  (row print) line
FM/DB2 (D91F)                       T    command generates the report      1 of 3
Command ===> rp 3                                                 oll  PAGE
TABLE ALLANSC.EMP                                                 Format  SNGL
                              Top Line is 1     of 6      in Row 1

Key    Column      Data
  N    DEPT        D11           RP command will print the report in
       LASTNAME    WALKER<       the same format (SNGL or TABL)
       FIRSTNME    JAMES<        currently displayed
       PHONENO     2986
       POSITION    ENGINEER
       EDLEVEL         16
*** End of record  ***



                                                               Enter
```

28   IBM File Manager DB2 for z/OS V10 Mentor Workshop   W00   © 2010 IBM Corporation
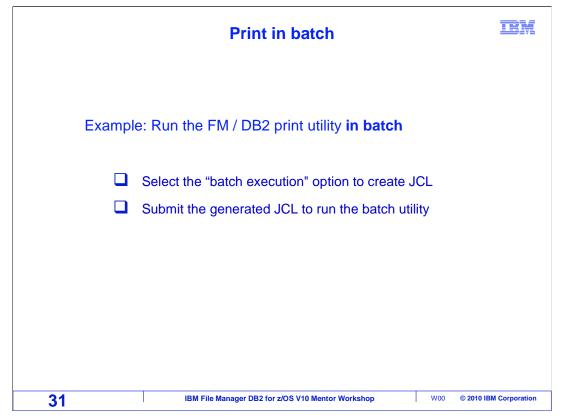
The view has switched to single format. RP 3 has been typed on the command line. This will issue the row print command, for 3 rows. RP will print the report in the same format (table or single), as is currently being displayed. Press Enter.

```
   Process    Options   U*******  ***
                        PB (Print Browse) command
   FM/DB2 (D91F)        will display the print data set     3 record(s) printed
   Command ===> pb                                                Scroll PAGE
   TABLE ALLANSC.EMP                                              Format SNGL

                                    Top Line is 1     of 6     in Row 1

   Key    Column      Data
    N     DEPT        D11
          LASTNAME    WALKER<
          FIRSTNME    JAMES<
          PHONENO     2986
          POSITION    ENGINEER
          EDLEVEL         16
   ***  End of record  ***
```

Enter

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A message displays in the right corner of the screen indicating rows have been written to the print data set. Use the PB (Print Browse) command to view the print data set. PB is entered on the command line and Enter is pressed.
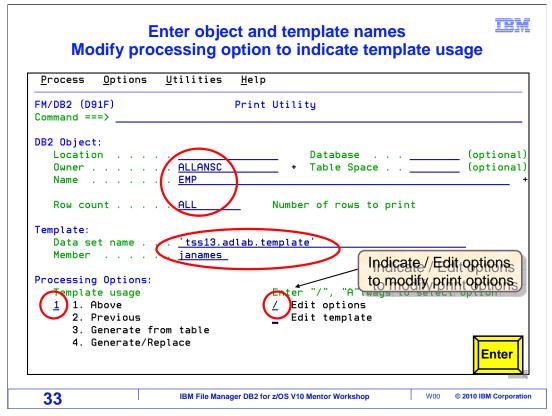
Print data set is displayed

```
 Process   Options   Help

 Print Browse              TSS13.FMN.LIST                  Top of 30
 Command ===> _____ Scroll PAGE
                              Record AT TOP    Col 2_____ Format CHAR
   ---+----10---+----2----+----3----+----4----+----5----+----6----+----7----+----8
**** Top of data ****
IBM File Manager for z/OS DB2 Component
* * * * Device , , VOLSER=                          Data Set Name: ()
* *     DSORG , RECFM , LRECL 0 BLKSIZE 0
IBM File Manager for z/OS DB2 Component
Key   Column      Data
---------------------------------------------------------------------
Printed record number - 1

  N    DEPT        D11
       LASTNAME    WALKER<
       FIRSTNME    JAMES<
       PHONENO     2986
       POSITION    ENGINEER
       EDLEVEL          16
Printed record number - 2

  N    DEPT        D21
```

F4 will send output to SYSOUT
F6 will purge print data set
F3 will return to the View panel

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The print data set is displayed. Output format is the same as the view, single. F4 will send output to SYSOUT, F6 will purge the output in the print data set, F3 will return to the view panel.

Print in batch

Example: Run the FM / DB2 print utility **in batch**

❑   Select the "batch execution" option to create JCL

❑   Submit the generated JCL to run the batch utility

The print utility can also be run as a batch job. Batch execution will be selected. File Manager will automatically generate the JCL. The batch JCL can be submitted and saved, or just saved.

Navigate to Utilities, Print

```
 Process   Options   Utilities   Help

FM/DB2 (D91F)             Primary Option Menu
Command ===> 3.1

0   Settings      Set processing options       User ID . : TSS13
1   View          View DB2 object              System ID : STLABF6
2   Edit          Edit DB2 object              Appl ID . : FMN2
3   Utilities     Perform utility functions    Version . : 10.1.0
4   SQL           Prototype, execute and analyze SQL   Terminal  : 3278A
5   DB2I          Start DB2 Interactive        Screen  . : 1
6   Command       Enter and execute a DB2 Command   Date  . . : 2010/03/24
X   Exit          Terminate FM/DB2             Time  . . : 04:32

                                               DB2 SSID  . D91F
                                               SQL ID  . . TSS13     +


                                                             Enter
```
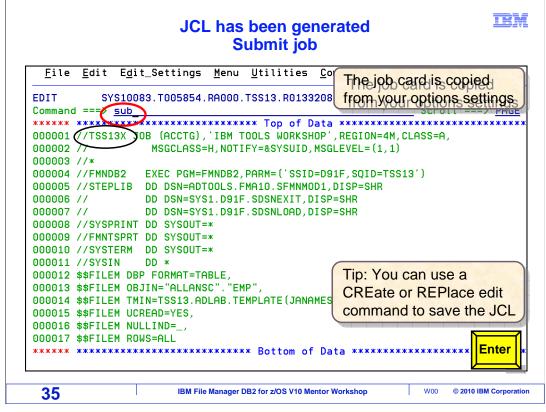
Navigate to Utilities, then print. Short cut 3.1 has been entered on the command line. This is the same as typing 3, then Enter, then 1. 3.1 will go directly to the Utilities print option panel. Press Enter.

Enter object and template names
Modify processing option to indicate template usage

Enter the object to be printed. In this example a template will be used. The template data set and member name is typed into the Template fields. The JANAMES member that was created to select names that started with JA is being used. Processing options are changed to 1 Above. Edit options are selected by entering a slash in that field. Enter is pressed.

Print options are displayed
Indicate Batch execution

```
 Process   Options   Utilities   Help
───────────────────────────────────────────────────────────────────
 FM/DB2 (D91F)              Print Utility Options
 Command ===> _

 Processing Options:              Null Column Indicator:
    Print mode                        Display . . . . . . _
    1  1. Table
       2. Single

    Enter "/" to select option
    /  Batch execution
    /  Use uncommitted read
    _  Print HEX representation




                                                          F3
```

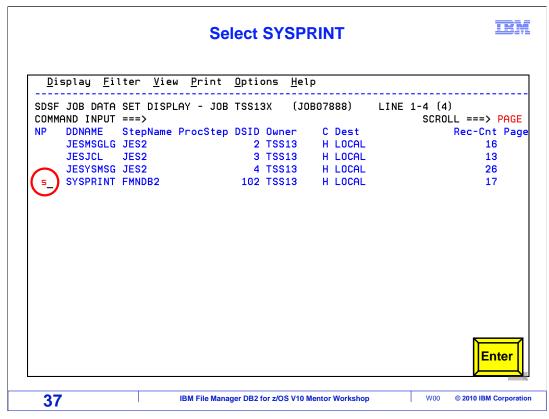34   IBM File Manager DB2 for z/OS V10 Mentor Workshop   W00   © 2010 IBM Corporation

The Print Utility Options panel is displayed. Processing Option Print mode can be modified from 1 Table to 2 Single. Batch execution has been selected by entering a slash in the field. Press F3 to return to the Print utility panel.
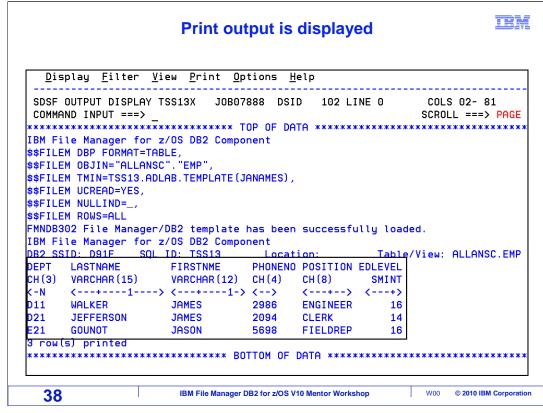
JCL has been generated
Submit job

```
   File  Edit  Edit_Settings  Menu  Utilities  Co    The job card is copied
                                                      from your options settings
 EDIT       SYS10083.T005854.RA000.TSS13.R0133208
 Command ===> sub                                            Scroll ===> PAGE
 ****** *********************************** Top of Data *********************************
 000001 //TSS13X JOB (ACCTG),'IBM TOOLS WORKSHOP',REGION=4M,CLASS=A,
 000002 //           MSGCLASS=H,NOTIFY=&SYSUID,MSGLEVEL=(1,1)
 000003 //*
 000004 //FMNDB2   EXEC PGM=FMNDB2,PARM=('SSID=D91F,SQID=TSS13')
 000005 //STEPLIB  DD DSN=ADTOOLS.FMA10.SFMNMOD1,DISP=SHR
 000006 //         DD DSN=SYS1.D91F.SDSNEXIT,DISP=SHR
 000007 //         DD DSN=SYS1.D91F.SDSNLOAD,DISP=SHR
 000008 //SYSPRINT DD SYSOUT=*
 000009 //FMNTSPRT DD SYSOUT=*
 000010 //SYSTERM  DD SYSOUT=*
 000011 //SYSIN    DD *                          Tip: You can use a
 000012 $$FILEM DBP FORMAT=TABLE,                CREate or REPlace edit
 000013 $$FILEM OBJIN="ALLANSC"."EMP",           command to save the JCL
 000014 $$FILEM TMIN=TSS13.ADLAB.TEMPLATE(JANAMES
 000015 $$FILEM UCREAD=YES,
 000016 $$FILEM NULLIND=_,
 000017 $$FILEM ROWS=ALL
 ****** *********************************** Bottom of Data ****************    Enter
```

File Manager DB2 has generated the JCL to print the EMP table using the JANAMES template. Type SUB on the command line and press Enter.

Job display in SYSOUT viewer
Select job with ?

```
   Display  Filter              s  Help
------------------------    View DDs in the   ------------------------
SDSF STATUS DISPLA          job's SYSOUT              LINE 1-2 (2)
COMMAND INPUT ===>                                    SCROLL ===> PAGE
NP   JOBNAME  JobID    Owner    Prty Queue    C  Pos  SAff  ASys Status
     TSS13    TSU07887 TSS13      15 EXECUTION           F6    F6
?_   TSS13X   JOB07888 TSS13       1 PRINT     A   273
```

Enter

The job has completed. Navigate to your SYSOUT viewer (SDSF in this example). Enter a ? next to the jobname. Press Enter.

Select the SYSPRINT by entering an 's' in the line prefix area. Press Enter.

Print output is displayed

```
   Display  Filter  View  Print  Options  Help
 -------------------------------------------------------------------------------
 SDSF OUTPUT DISPLAY TSS13X    JOB07888  DSID    102 LINE 0        COLS 02- 81
 COMMAND INPUT ===> _                                   SCROLL ===> PAGE
 ********************************* TOP OF DATA ***********************************
 IBM File Manager for z/OS DB2 Component
 $$FILEM DBP FORMAT=TABLE,
 $$FILEM OBJIN="ALLANSC"."EMP",
 $$FILEM TMIN=TSS13.ADLAB.TEMPLATE(JANAMES),
 $$FILEM UCREAD=YES,
 $$FILEM NULLIND=_,
 $$FILEM ROWS=ALL
 FMNDB302 File Manager/DB2 template has been successfully loaded.
 IBM File Manager for z/OS DB2 Component
 DB2 SSID: D91F    SQL ID: TSS13     Location:        Table/View: ALLANSC.EMP
 DEPT    LASTNAME       FIRSTNME     PHONENO POSITION EDLEVEL
 CH(3)   VARCHAR(15)    VARCHAR(12)  CH(4)   CH(8)      SMINT
 <-N     <---+----1----> <---+----1-> <-->   <---+--> <---+>
 D11     WALKER         JAMES         2986    ENGINEER      16
 D21     JEFFERSON      JAMES         2094    CLERK         14
 E21     GOUNOT         JASON         5698    FIELDREP      16
 3 row(s) printed
 ******************************** BOTTOM OF DATA ********************************
```

Print output is displayed in SYSOUT.

This ends the section on printing from File Manager DB2.

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