

# TSO/ISPF TIPS

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I will demonstrate how to create a file/dataset with JCL, submit the work(job) to the Marist mainframe, and fetch its output in TSO/ISPF. My Marist id is **KC02321**.

First, get to the “main” TSO/ISPF screen on your system.

This is the main/primary screen, called the “primary option menu”, and you go into other areas based on what number we tell you. To get back to the main screen keep hitting “F3” to take you back up.

```
Winsock 3270 Telnet - mvs.cs.niu.edu
Connect Close Exit Edit Print Screen Setup Help
-----
Menu Utilities Compilers Options Status Help
-----
                                ISPF Primary Option Menu
Option ==>
0 Settings      Terminal and user parameters      User ID . . : T90JFL1
1 View          Display source data or listings    Time . . . : 15:46
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 : IKJACCNT
7 Dialog Test   Perform dialog testing             TSO prefix: T90JFL1
8 LM Facility   Library administrator functions    System ID  : PRDD
9 IBM Products  IBM program development products   MVS acct. : 01142906
                                                    Release .  : ISPF 5.0

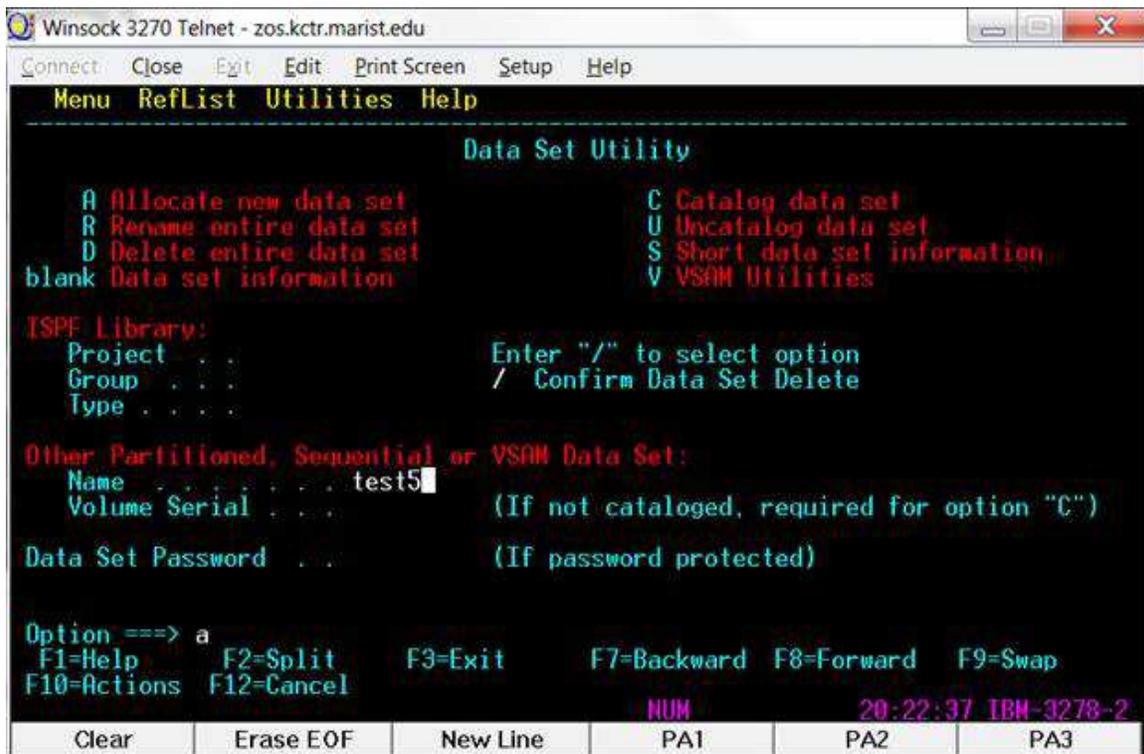
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ard F8=Forward F9=Swap
F10=Actions F12=Cancel
MMH 15:47:12 IBM-3278-2
Clear Erase EOF New Line PA1 PA2 PA3
```

To create a file, first you must allocate it. **You only need to allocate a file one time.** Later I will show you how to copy the file to another file.

## TO ALLOCATE A SIMPLE PHYSICAL SEQUENTIAL FILE IN 3.2:

Let us allocate a dataset named TEST5. Type in file name in the “other partitioned” areas as you see below then type in “A”, for allocate, in the option area and hit return.



```
Winsock 3270 Telnet - zos.kctr.marist.edu
Connect: Close Exit Edit Print Screen Setup Help
Menu RefList Utilities Help
-----
Data Set Utility

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
V VSAM Utilities

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

Other Partitioned, Sequential or VSAM Data Set:
Name test5
Volume Serial (If not cataloged, required for option "C")
Data Set Password (If password protected)

Option ==> a
F1=Help F2=Split F3=Exit F7=Backward F8=Forward F9=Swap
F10=Actions F12=Cancel
NUM 20:22:37 IBM-3278-2
Clear Erase EOF New Line PA1 PA2 PA3
```

You should see the screen below. Fill in the numbers you see on the screen and hit enter. You should get back a message in upper right corner that says, “dataset allocated”.

```

Winsock 3270 Telnet - zos.kctr.marist.edu
Connect Close Exit Edit Print Screen Setup Help
Menu RefList Utilities Help
-----
Allocate New Data Set
Data Set Name . . . . : KC02321.TEST5
Management class . . . . (Blank for default management class)
Storage class . . . . . (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 . . . . . TRKS (BLKS, TRKS, CYLS, KB, MB, BYTES
or RECORDS)
Average record unit . . . . (M, K, or U)
Primary quantity . . . . 4 (In above units)
Secondary quantity . . . . 1 (In above units)
Directory blocks . . . . 0 (Zero for sequential data set) -
Record format . . . . FB
Record length . . . . 80
Block size . . . . 800
Data set name type . . . . (LIBRARY, HFS, PDS, LARGE, BASIC, -
Command ==>
F1=Help F2=Split F3=Exit F7=Backward F8=Forward F9=Swap
F10=Actions F12=Cancel
CAPS NUM 20:23:47 IBW-3278-2
Clear Erase EOF New Line PA1 PA2 PA3

```

Note: Allocating it with 1 or more in the directory block area creates a PDS file structure, if the directory block area is a 0, it is a physical sequential file. Allocate ALL files as PS, so you don't have to compress any PDS.

## FYI: ALLOCATING A PDS WOULD LOOK LIKE

```

Menu  RefList  Utilities  Help
-----
                                Data Set Utility                                Data set allocated

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       U  USAM Utilities

ISPF Library:
Project . . . . . KC03023          Enter "/" to select option
Group . . . . .  CSC1360          / Confirm Data Set Delete
Type . . . . .  OUTPUT

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

Data Set Password . . . . . _____ (If password protected)

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

```

```

Menu  RefList  Utilities  Help
-----
                                Allocate New Data Set                                More:  +

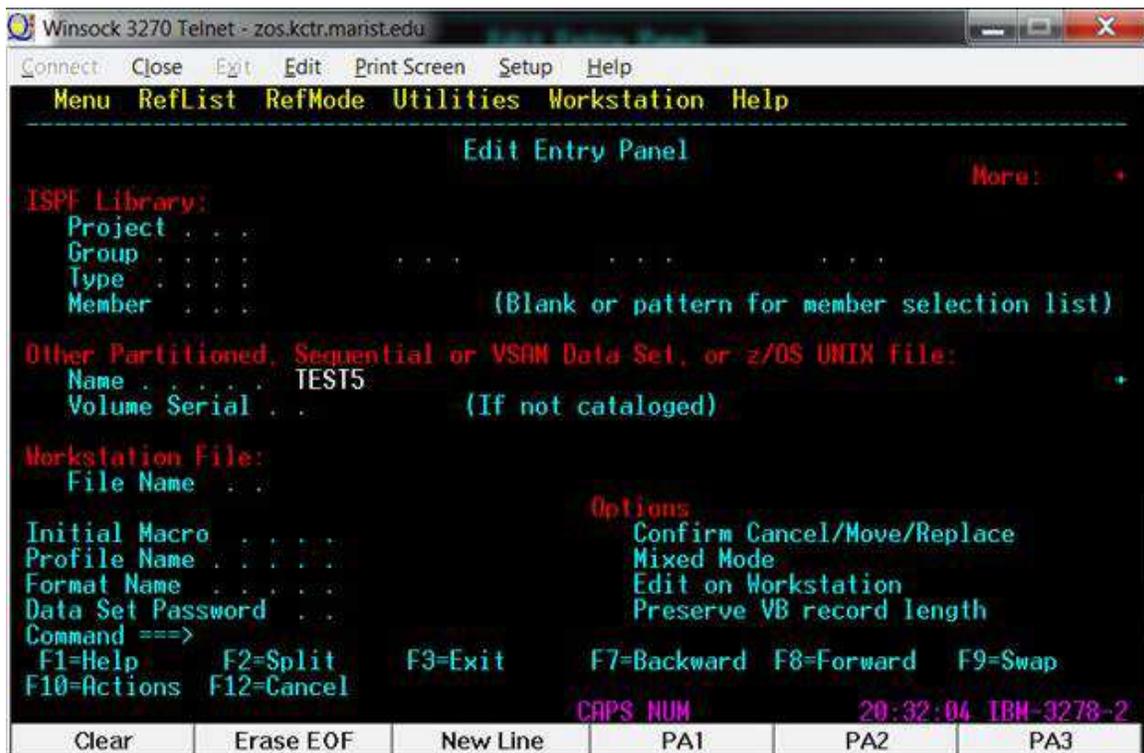
Data Set Name . . . . . : KC03023.CSC1360.OUTPUT

Management class . . . . . DEFAULT          (Blank for default management class)
Storage class . . . . .  PRIM90            (Blank for default storage class)
Volume serial . . . . .  KCTR52            (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 . . . . . 10             (In above units)
Secondary quantity . . . . . 10           (In above units)
Directory blocks . . . . . 10             (Zero for sequential data set) *
Record format . . . . .  UB              *
Record length . . . . . 134
Block size . . . . . 4000
Data set name type . . . . . PDS          (LIBRARY, HFS, PDS, LARGE, BASIC, *
Command ==> _____
F1=Help      F2=Split      F3=Exit      F7=Backward  F8=Forward  F9=Swap
F10=Actions  F12=Cancel

```

## TO EDIT THE FILE/DATASET

After allocation, go to the “edit” option, option 2 from the main TSO screen. Type in TEST5 as below and hit enter.



You should see a blank screen now and this is where you type in your assembler program and JCL. Type in the JCL (see below) and do a “SUB” in the command line to submit it for execution on the mainframe. Replace my KC id with your KC id on the first line. For line 3 below, the STEPLIB statement, type it in the way you see it, do not change the KC num on line 3.

File Edit Edit\_Settings Menu Utilities Compilers Test Help

```
EDIT          KC03Q53.CSC1360.ASSIGNS(TSOCOMS) - 01.02          Columns 00001 00072
***** ***** Top of Data *****
000100 //KC02321@ JOB , 'LEON',MSGCLASS=H
000200 //STEP1 EXEC PGM=ASSIST,PARM='MACRO=F'
000300 //STEPLIB DD DSN=KC02293.ASSIST.LOADLIB,DISP=SHR
000400 //SYSIN DD *
000500 MAIN      CSECT
000600          USING MAIN,R15          SETUP BASE REGISTER
000700 TOP       XREAD  CARD,80        READ A RECORDED
000800          BC      B'0100',END     BRANCH TO END ON EOF
000900          XDECI  R2,CARD          GET THE FIRST NUMBER
001000          XDECI  R3,0(R1)        GET THE SECOND NUMBER
001100          AR      R2,R3          ADD THE VALUES TOGETHER
001200          XDECO  R2,OUTPUT       PUT THE SUM ON THE LINE
001300          XPRNT  PLINE,25        PRINT THE LINE
001400          B       TOP            GO TO TOP OF LOOP
001500 END       BR      R14          BRANCH TO ADDRE IN R14
001600 *****
001700 *          STORAGE          *
001800 *****
001900 CARD      DC      20CL4'CARD'    AN INPUT RECORD
002000 PLINE     DC      CL1' '        CARRIAGE CONTROL FOR PRINTER
002100          DC      CL12'THE SUM IS: ' THE OUTPUT MESSAGE
002200 OUTPUT    DC      CL12'OUTPUT'  THE OUTPUT AREA
002300 R1        EQU     1
002400 R2        EQU     2
002500 R3        EQU     3
002600 R14       EQU     14
002700 R15       EQU     15
002800          END
002900 /*
003000 //FT05F001 DD *
003100 10        5
003200 11        12
003300 1         3
003400 -13       22
003500 -1        -45
003600 /*
003700 //SYSPRINT DD SYSOUT=*
***** ***** Bottom of Data *****
```

Note: the sample instream data for this above program above is five records with two numbers on each record. The records are typed in following the //FT05F001 DD \*

To insert  
in an easy manner type NULLS ON in the command line.

I 5 will insert 5 lines at the line prompt on the far left side.  
D will delete a line.

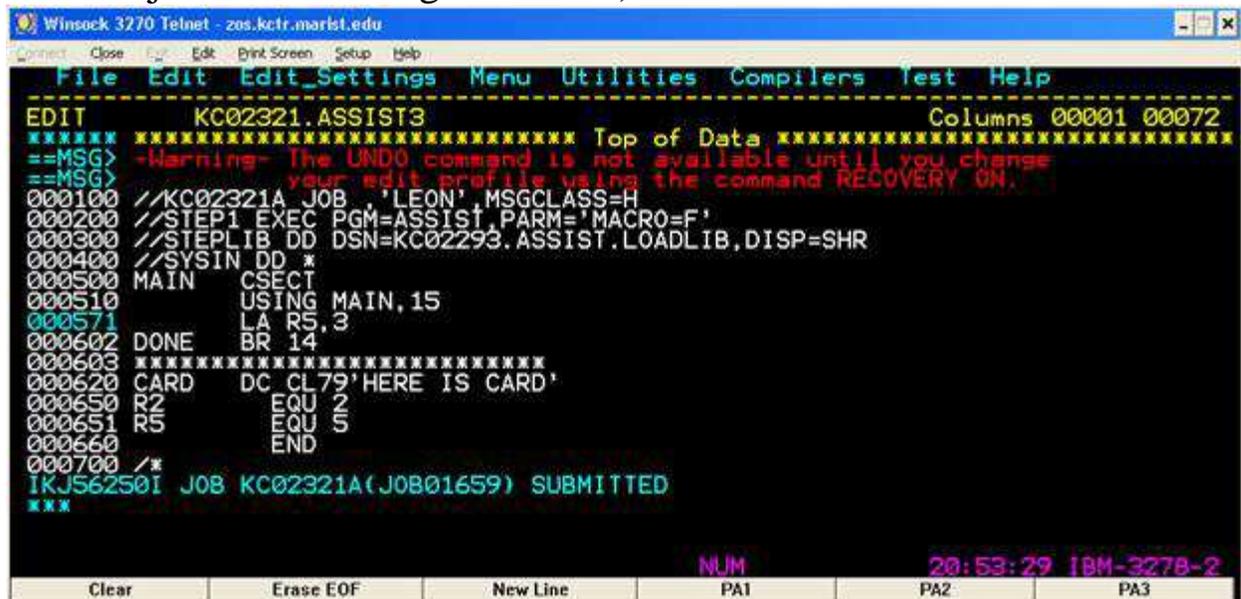
DD  
block of text to delete  
DD

CC can be used to copy text. A or B can be use for after and before where to move blocks of text.

In a document you are typing, you can type SAVE or CANCEL in the command line to save changes or cancel the changes. The changes will be saved automatically if you leave edit without saving it.

## SUBMITTING A JOB

To submit the job type “SUB” in the lower command line (Notice I have a job number assigned 01659)



```
Winsock 3270 Telnet - zos.kcfr.marist.edu
File Edit Edit Settings Menu Utilities Compilers Test Help
-----
EDIT      KC02321.ASSIST3                               Columns 00001 00072
***** Top of Data *****
==MSG> -Warning- The UNDO command is not available until you change
==MSG> your edit profile using the command RECOVERY ON.
000100 //KC02321A JOB 'LEON',MSGCLASS=H
000200 //STEP1 EXEC PGM=ASSIST,PARM='MACRO=F'
000300 //STEPLIB DD DSN=KC02293.ASSIST.LOADLIB,DISP=SHR
000400 //SYSIN DD *
000500 MAIN      CSECT
000510          USING MAIN,15
000571          LA R5,3
000602 DONE    BR 14
000603 *****
000620 CARD    DC CL79'HERE IS CARD'
000650 R2      EQU 2
000651 R5      EQU 5
000660          END
000700 /*
IKJ56250I JOB KC02321A(JOB01659) SUBMITTED
***
NUM 20:53:29 IBM-3278-2
Clear Erase EOF New Line PA1 PA2 PA3
```

Hint: After choosing a file to edit, hit F2 on the command line to create a “split screen”. Then go down to the split screen and go to 13 (SDSF), which is the output area for jobs. To toggle between the screens, only use F9 for toggling to go back and forth between your document and the output area 13 (SDSF).

# FETCHING OUTPUT

Go to the main TSO screen, and type in SDSF.H

Doing that takes you to the screen below and it will show the jobs you have run. Select the job to see your output (put S) by the job row of the job you want to select (see below).

```
Winsock 3270 Telnet - zos.kctr.marist.edu
Connect Close F2 Edit Print Screen Setup Help
Display Filter View Print Options Help
-----
SDSF HOLD OUTPUT DISPLAY ALL CLASSES LINES 42 DATA SET DISPLAYED
NP JOBNAME JobID Owner Prty C ODisp Dest Tot-Rec Tot-
s KC02321A JOB01659 KC02321 144 H HOLD LOCAL 42
-----
COMMAND INPUT ==>
NUM 20:55:39 IBM-3270-2
Clear Erase EOF New Line PA1 PA2 PA3
```

P and then hitting enter will purge/delete the job. One can put P front of a list of jobs and all will be deleted.

```

  Display Filter View Print Options Search Help
-----
SDSF HELD OUTPUT DISPLAY ALL CLASSES LINES 156          LINE 1-2 (2)
NP  JOBNAME  JobID   Owner   Prty C DDisp Dest          Tot-Rec  Tot-
   KC03Q53A  JOB06960  KC03Q53  144 H HOLD  LOCAL          75
P_  KC03Q53A  JOB06961  KC03Q53  144 H HOLD  LOCAL          81

```

When you leave TSO by hitting F3 several times, you will get a log out dataset list area. Delete all the logs that were kept on you by choosing “2” at this screen (see below).

```

Winsock 3270 Telnet - mvs.cso.niu.edu
Connect Close Exit Edit Print Screen Setup Help
Specify Disposition of Log Data Set
Command ==>
Log Data Set (T00JFL1.SPFL0G1.LIST) Disposition:
Process Option . . . . 2  1. Print data set and delete
                        2. Delete data set without printing
                        3. Keep data set - Same
                           (allocate same data set in next session)
                        4. Keep data set - New
                           (allocate new data set in next session)
Batch SYSOUT class . .
Local printer ID or
writer-name . . . .
Local SYSOUT class . .
List Data Set Options not available
Press ENTER key to complete ISPF termination.
Enter END command to return to the primary option menu.
Job statement information: (Required for system printer)
==>
F1=Help      F2=Split    F3=Exit     F7=Backward F8=Forward  F9=Swap
F12=Cancel
                                NUM          16:01:05 IBM-3278-2
Clear Erase EOF New Line PA1 PA2 PA3

```

LOGOFF will get you out of TSO.

To adjust your profile, do a =0 at the command line, it is recommended to take “off” (the slash) the jump option and take “off” the tab to action bar.

### Useful ISPF line commands

Command	Function
D	Delete Deletes this line from the file. Can be specified with a number to indicate that following lines are also to be deleted (see insert example below).
DD	Block delete
C	Copy Copies this line either to another place within the current file (using a, b, or c to identify destination) or to another file (using the create, replace, or cut commands). Can be specified with a number to indicate that multiple lines are to be copied.
CC	Block copy
M	Move Works the same as copy except that the lines are removed from their current location.
MM	Block move
A	After used with copy, move, or paste to specify the line after which the copied/moved lines are to be inserted.
B	Before used with copy, move, or paste to specify the line before which the copied/moved lines are to be inserted.
I	Insert a new line after this one Can be specified with a number to insert multiple lines (see example below).
COLS	Display the column ruler above this line

All commands listed need to be at the far left of the TSO screen in the far left column.

## Examples

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT      KC03Q53.CSCI360.ASSIGNS(TS0COMS) - 01.00      Columns 00001 00072
***** Top of Data *****
000150 <- THIS WILL INSERT 5 LINES
***** Bottom of Data *****
```

The above example will insert 5 blank lines immediately after the line that the command was entered on. Note that the D command works in the same manner. If the command is immediately followed by a number it inserts/deletes that many lines. If no number is provided insert will insert one line immediately following the line that command was issued on, while delete will delete the line the command was issued on.

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT      KC03Q53.CSCI360.ASSIGNS(TS0COMS) - 01.00      Columns 00001 00072
***** Top of Data *****
000100 THIS LINE WILL STILL BE HERE
000200 THIS LINE WILL BE DELETED
000300 THIS LINE WILL BE DELETED
000400 THIS LINE WILL BE DELETED
000500 THIS LINE WILL BE DELETED
000600 THIS LINE WILL BE DELETED
000700 THIS LINE WILL BE DELETED
000800 THIS LINE WILL BE DELETED
000900 THIS LINE WILL STILL BE HERE
***** Bottom of Data *****
```

In the above example of block delete the lines labeled “THIS LINE WILL BE DELETED” will be deleted. Note that block copy and block move work in the same manner except that you would specify an A (after) or a B (before) on another line to signify where the copied or moved text will go.