

ISPF-TSO

ISPF (Interactive Spool Productivity Facility) is a popular editor in the mainframe platform. There are two kinds of commands that can be entered in edit/view panel of ISPF editor.

They are:

1. Primary Commands that can be entered in the Command Line.
2. Line Commands that can be entered in the line(s).

Mastering in these commands will be highly helpful in analyzing/developing application programs.

Primary Command	Meaning
KEYS	Displays the PF Keys and its definition for that panel
PFSHOW	Shows PF Keys at the bottom of panel. To OFF this option enter PFSHOW OFF.
RESET	Reset the display of the dataset
X ALL	Exclude all the lines
COLUMNS/COLS / COLS ON/COL	Display a ruler at the top of the screen. This can be removed by COLS OFF or RESET.
TOP/BOT	Move to the TOP or BOTTOM of the file.
HEX	Displays the data in Hexadecimal mode. Type HEX OFF to come back to normal display. Highly helpful for reading computational fields and low-values.
SWAP	Switch between split screens.
SWAP LIST	Lists the available screens.
CUT	With C or CC line command, this will copy the lines to temporary storage. CUT .A .B will cut the lines in between the labels A & B.
CUT DISPLAY	Display the lines already cut.
CUT APPEND	Appended the lines to the lines already cut.
PASTE	Paste the already cut lines. Line commands A or B should be used before issuing paste to indicate after or before which line this paste should occur.
SCRNAME XXXXX	The current screen is named as XXXXX. If you are using multiple split screens, then you can come back to this screen by SWAP XXXXX line command. Its good convention to name the screens with the purpose so that you can easily come back. By default the screens are named with numbers.
LOCATE line-number/Label	Locates the line-number or the label. Labels can be established in any line by the line command .labelname.
RECOVERY ON RECOVERY OFF RECOVERY OFF UNWARN UNDO	With RECOVERY on, UNDO line command will revert the last recent change made in the edit/view session. REC OFF will off the recovery option and UNDO Unavailable message will appear in the first line. REC OFF UNWARN is same as REC OFF but there won't be any UNDO unavailable warning message.
F 'Musa' F 'Musa' 1	Locates the next 'Musa'. Locates the next 'Musa' in the first column

F 'Musa' 1 30	Locates the next 'Musa' that appear anywhere between column 1 and 30. The above commands will do the find from the current cursor position and place the cursor over the string found.
F 'Musa' ALL	Independent of cursor position, this will count all the 'Musa' and displays the total count in the upper right corner and place the cursor over the first occurrence from top.
F 'Musa' FIRST/LAST	Locates the First/Last 'Musa' in the dataset/member opened.
F 'Musa' NEXT/PREV	Locates the Next/Previous 'Musa' with respect to the current cursor position in the dataset/member opened. Note: ALL/FIRST/NEXT/PREV/LAST are mutually exclusive keywords.
F 'Musa' CHARS	This is same as F 'Musa'. Look for 'Musa'.
F 'Musa' WORD	Look for 'Musa'. Word is a string followed and prefixed by space.
F 'Musa' PREFIX/SUFFIX	Look for 'Musa' as a prefix or suffix with some other strings. Note: PREFIX/SUFFIX/WORD/CHARS are mutually exclusive.
F 'Musa' X	Locates the string 'Musa' in excluded lines. NX searches the string only in non-excluded lines. Note: X/NX are mutually exclusive with each other.
F * NEXT	Locates the next occurrence of the string that was searched in the last find command.
C ALL 'Musa' 'Muthu'	Changes all 'Musa' as 'Muthu'. Note: Change command is nothing but find and replace. So from string can be qualified with other keywords available in FIND command. Ex C 'st1' 'str2' 1 replaces only the str1 that are in first position to str2.
DEL ALL X/NX	Delete all the excluded/Not excluded lines. DEL .A .B deletes all the lines between .A and .B
;	Represents Enter key. So multiple commands can be given in one shot with ';' separation.
SORT 5 15 A	Sorts in 5-15 in ascending sequence. Maximum 5 fields can be given. D for descending.

Special String Characters that can be used with FIND and CHANGE:

Char	Meaning	Char	Meaning
P'='	Displays any character	P'.'	Displays any non-displayable character
P'#'	Displays any numeric	P'-`	Displays any non-numeric
P'@'	Displays any alphabetic	P'<'	Displays any lower-case alphabetic
P'>'	Displays any upper-case alphabetic	P'\$'	Displays any special character.
X'nn'	Finds the hex value of nn.	P'¬'	Displays any non-blank character

C P '¬' `` 73 80 ALL changes all non-blank characters in 73-80 to spaces.

Primary commands prefixed with & (ampersand) is left in the command line after execution. This way the same command can be entered multiple times without retyping it in each time.

Primary Commands Mapping to PF Key

Any of the line commands can be mapped to a PF key and invoked by pressing that key. Example if you map 'X ALL' command with PF4, then every time PF4 is pressed, all the lines are excluded. Mapping can be done by the line command KEYS. In this way, 24 keys PF1-PF24 can be mapped. PF13-PF24 is nothing but Shift + PF1- PF12.

Typical assignment of the keys is given below:

PF1	Help
PF2	SPLIT - Split the screen at the cursor's location
PF3	Exit
PF4	Exit or RETURN
PF5	RFIND - Find next occurrence of the last F command
PF6	RCHANGE - Change next occurrence of the last C command
PF7	UP
PF8	DOWN
PF9	SWAP
PF10	LEFT
PF11	RIGHT
PF12	RETRIEVE - repeats the previous command line command

LINE Commands:

Com-mand	Meaning	Com-Mand	Meaning
C	Copy this line. <u>C 10</u> copies 10 lines. This will be followed by the line commands A or B.	CC	Copy the block of lines
M	Move this line. <u>M 10</u> copies move 10 lines. This will be followed by the line commands A or B.	MM	Move the block of lines
A/B	After(A)/Before(B) this line, place the copied/moved line(s). A10 repeats the copied/moved lines 10 times.		
R n	Repeats the current line n times. Just R repeat 1 time.	RR	Repeats the block of lines. <u>RR 10</u> repeats the block 10 times.
UC	Change this line content to uppercase	UCC	Changes the content of the blocked lines to upper-case
LC	Change this line content to lower-case	LCC	Changes the content of the blocked lines to lower-case
D	Deletes the line. 'D n ' deletes n lines from this line.	DD	Deletes the block of lines.
I	Insert 1 line. After entering the data in the first line, next line will be inserted. Useful for line by line data entry	I 10	Insert 10 lines. Once enter is pressed, the remaining untouched lines will be removed. Useful for control-C, control-V actions
X	Exclude this line. X10 excludes 10 lines starting with this line.	XX	Exclude a block of lines.
S	Show one line of the excluded text. S 10 shows 10 lines.	F/L	Shows the First/last line of excluded text. L 10 shows the last 10 lines.
)n	Shift the line content by n columns to the right side.(outside). >n is same as)n but in case of data truncation, operation will be error out.))n	Shift the block of lines by n columns to the right side. >>n is same as))n but in case of data truncation, operation will be error out.
(n	Shift the line content by n columns to the left side.(inside) <n is same as (n but in case of data truncation, operation will be error out.	((n	Shift the block of lines by n columns to the left side. <<n is same as ((n but in case of data truncation, operation will be error out.
TS n	To split text in two at the point of cursor to allow a word, phrase or sentence to be inserted. N number of lines are inserted between the two parts of text.	TF n	To flow fragments of sentences into paragraph. N defines the width.
TE	Text Entry mode is used for bulk entry of text and allows power typing techniques to be used at the terminal. (Type data without	BNDS	To process only over a column of data, define the range of columns using BNDS line command.

	bothering about end of line, line numbers etc .The FINAL enter will re flow the data.)		
MASK	It allows to put fixed data into the new lines being entered. Type MASK over a line number and press enter. Overtyping the mask with whatever we want. Now every time we enter new lines with I, TE, TS – mask lines will be displayed rather than empty lines.	O (over lay)	<p>Overlay command indicates the target line(s) when merging lines. Overlay is used in conjunction with M or C line commands.</p> <p>C 0300 *</p> <p>O 0400 MVSQuest</p> <p>Result:</p> <p>0300 *</p> <p>0400 * MVSQuest</p> <p>O10 overlaid the first 10 lines.</p> <p>OO-OO overlaid the block of lines.</p>