awk command

1) It is utility command

2) awk is scripting language and used for manipulating data and generating reports

3) awk command is abbrevited from name of three developers
   i) Alfred Aho
   ii) Peter Weinberger
   iii) Brian Kernighan

Q. When we should go with awk command?

Ans: If there is irregular seperator and we cannot fix the delimiter to cut data from file then we should go with awk command

Syntax of awk command

awk <option> 'action' File_name

Some important points about awk

1) $ symbol is used to specify field(column)

2) -F option is used to specify delimiter

Example 1: seperate the words on the basis of space and print first field using awk command

Ans : df -h | awk '{print $ 1}'

Example 2: Seperate the words on the basis of space and print second field using awk command

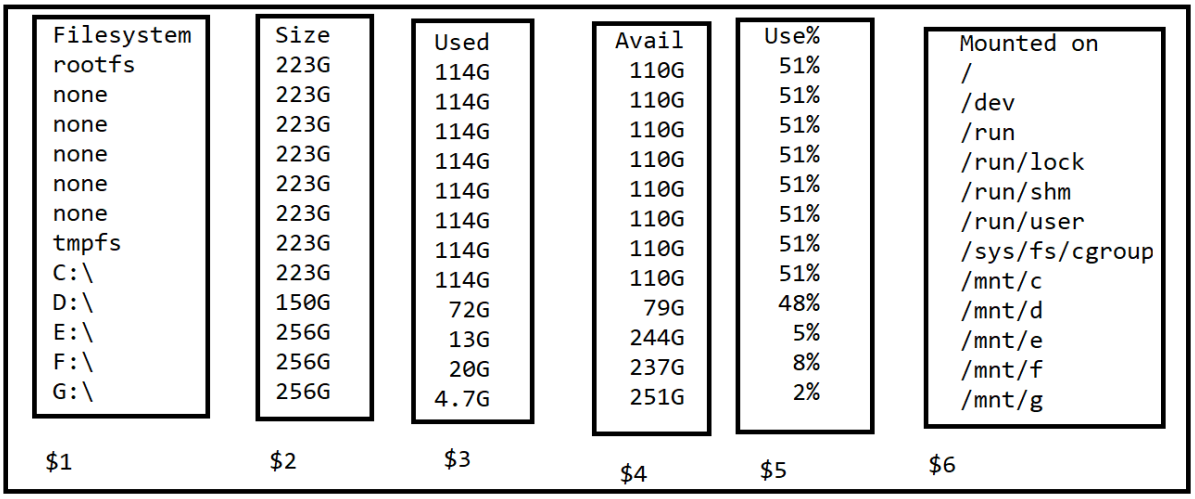
Ans : df -h | awk '{print $ 2}'

Example 3: Seperate the words on the basis of space and print fourth field using awk command

Ans : df -h | awk '{print $ 4}'

Note: in awk default delimiter is space. i.e- If you are not specifying any delimiter then bydefault it is considered as space

When awk get executed then out put of df -h get split like below



Example 4: Seperate the words on the basis of space and print first field, third field and sixth field

Ans : df -h | awk '{print $1,3,6}'

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df -h | awk '{print $1,3,6}' | column -t
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Example 5: seperate the words on the basis of colon operator and print first field

Ans: cat -n /etc/passwd | head -10 | awk -F':' '{print $1}'

tr command

-> trstands for translate

-> This command is used to translate, squeeze, and delete characters from
   standard input and write on standard output

Syntax :

tr <options> [SET1] [SET2] < File_name

-> options for tr command

1) -c Complement of SET 1

2) -d delete characters in SET 1

3) -s squeeze (replace each sequence of repeated characters that is specified
in last specified set

4) -t first truncate SET1 to length of SET2

Examples

1) translate all lower case vowels into upper case

Ans : echo 'aeiuo' | tr 'aeiou' 'AEIUO'

2) convert all lower case letters into upper case

Ans : cat -n /etc/passwd | head -10 | tr '[a-z]' '[A-Z]'

3) Convert all lower case letter into upper case of TrDemo.txt file

Ans : tr '[a-z]' '[A-Z]' < TrDemo.txt

4) Convert all lower case letter into upper case of TrDemo.txt file
   and save the out put in another file

Ans : tr '[a-z]' '[A-Z]' < TrDemo.txt > TrDemo1.txt

5) convert all upper case letter into lower case letter of TrDemo1.txt

6) Convert all lower case letter into upper case and upper case letters into
   lower case TrDemo1.txt

Ans : tr '[a-z] [A-Z]' '[A-Z] [a-z] ' <TrDemo1.txt
or
Ans : echo 'ABCDEFwxyz' | tr '[a-z] [A-Z]' '[A-Z] [a-z]'
