sed command

sed stands for Stream Editor

With the help of SED command we can do following operations

1) We can print particular line data or multiple lines data
2) We can delete particular line or multiple lines
3) We can replace one word with another word
4) We can insert data before line
5) We can insert data after line

Syntax :

```
sed option 'action' file_name
```

Another syntax : If we are using SED command with another command

```
command | sed option 'action'
```

Note : Where we are uing sed command in combination with another command then we no need to specify file name because input for sed command is getting from another command

Example :

```
cat -n Sample.txt | sed -n '1p' Sample.txt
```

This file name is not required if we specify then also no probelm but input is taken from file not from another command out put

First Create dummy file for /etc/passwd as below then perform operations of dummy file

```
cat /etc/passwd > Sample.txt
```

---

1) Action 1: print data

-> To print data we need to use p character

Example: print 10th line data from Sample.txt file

```
Ans : sed -n '10p' /etc/passwd
       or
      cat -n /etc/passwd |sed -n '10p'
```

While printing data we need to -n option. if we are not specifying -n option then specified line number data get printed twice and rest of lines also get printed

Example : Print header from Sample.txt

```
cat -n Sample.txt |sed -n '1p'
```

Example : print 33rd line from Sample.txt

```
cat -n Sample.txt |sed -n '33p'
```

Example : print line number 10, line number 15 , line number 25

```
cat -n Sample.txt |sed -n '10p;15p;25p'
```

Example : print line number 5,20, 30 and 15 from Sample.txt

```
cat -n Sample.txt | sed -n '5p;20p;30p;15p'
```

Example : print line number 5 to 10

```
cat -n Sample.txt | sed -n '5,10p' --> valid

cat -n Sample.txt |sed -n  '5p,10p' -> invalid

cat -n Sample.txt | sed -n '5p,10' -> invalid
```

Example : Print line numbers 10 to 15

```
cat -n Sample.txt | sed -n '10,15p'
```

Example : print footer from Sample.txt
(footer means last line)

```
Ans:   sed -n '$p' Sample.txt

       cat -n Sample.txt |sed -n '$p'
```

Example : print every line two times from Sample.txt

```
          cat -n Sample.txt | sed 'p'
```

Example : print line number 5,10,15 and line number from 20 to 25
and line number 30 to 35

```
cat -n Sample.txt |sed -n '5p;10p;15p;20,25p;30,35p'
```

Operation 2 : delete operation

For delete we need to 'd' character

Example : delete 5th line from Sample.txt

```
Ans : cat -n Sample.txt | sed '5d'
```

Note: Don't use -n option while deleting lines

Example : delete 10th line from Sample.txt file

```
Ans : cat -n Sample.txt | sed '10d'
```

Example : delete lines from 5 to 10 of Sample.txt

```
Ans : cat -n Sample.txt | sed '5,10d'
```

Example : delete line number 5,10, 15 and lines from 20 to 30 and 35 to 40

Ans : cat -n Sample.txt |sed '5d;10d;15d;20,30d;35,40d'

Example : delete header of Sample.txt file

Ans : cat -n Sample.txt |sed '1d'

Example : delete footer of Sample.txt file

Ans : cat -n Sample.txt |sed '$d'

Operation 3: insert data before particular line number
-> To insert data before particular line number character 'i' is used

Example : Insert message 'Good morning' before 3rd line of Sample.txt

Ans : cat -n Sample.txt | sed '3i Good Morning'

Operation 4: insert data after particular line number
-> To insert data after particular line number charcater 'a' is used

Example : Insert message 'Good Morning' after 3rd line of Sample.txt file

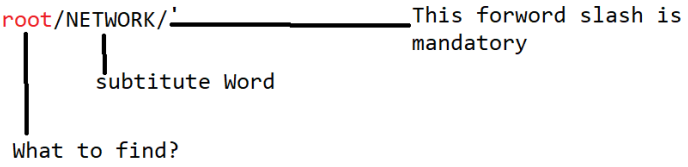
Ans : cat -n Sample.txt |sed '3a Good Morning'

Operation : replace /subtitute

For subtitute operation character 's' is used

Example : Find "root" and replace with "NETWORK"

Ans : cat -n Sample.txt | sed 's/root/NETWORK/'



Note: by default subtition is take place only for first occurance

Example : replace all occurances of "root" with "Network"

Ans: cat -n Sample.txt| sed 's/root/NETWORK/g'

Here g stands for global

Example : replace only second occurance of "root" with "Netwotk"

Ans: cat -n Sample.txt |sed 's/root/Network/2g'

Example : replace second occurance of "usr" with "Admin",only from second line

Ans : cat -n Sample.txt |sed '2s/usr/Admin/2g'

Example : replace "usr" with "Admin", only from line number 2 to 10 and only for 3rd occurance

Ans: cat -n Sample.txt |sed '2,10s/usr/Admin/3g'

Example : replacement by ignoring case

-> If we want to peform replacement by ignoring case then use i character

Ans : cat -n Sample.txt| sed '2,10s/Usr/Admin/i'

Example : Add # symbol to the beggining of every line

Ans: cat -n Sample.txt |sed 's/^/#/'

Note : in sed command all changes take place only onscreen, actual file not get modified. if we want to make changes in the original file then we need to use -i option

Example : Add # symbol to start of every line

cat -n Sample.txt |sed -i 's/^/#/'

Example : Remove # from the beggining of every line

Ans : sed -i 's/^#//' Sample.txt

IQ. Suppose I have one script, from that srcipt I want to comment lines from 5 to 10. How will you do this?

Ans : we can do this by using sed command as below

```
sed -i '5,10s/^/#/' Sample.txt
```

If we want to replace muliple words then use -e option

Example replace "root" with "Network", "usr" with "Admin" and bin with "Rabit"

Ans: sed -e 's/root/Network/' -e 's/usr/Admin/' -e 's/bin/Rabit/'

or

```
sed 's/root/Network/;s/usr/Admin/;s/bin/Rabit/'
```