SED COMMAND EXAMPLES

1. **To remove a specific character**, say 'a'

```
$ sed 's/a//' file
Linux
Solris
Ubuntu
Fedor
RedHt
```

This will remove the first occurence of 'a' in every line of the file. To remove all occurences of 'a' in every line,

```
$ sed 's/a//g' file
```

2. **To remove 1st character in every line**:

```
$ sed 's/^.//' file
inux
olaris
buntu
edora
edHat
```

.(dot) tries to match a single character. The ^ tries to match a pattern(any character) in the beginning of the line. Another way to write the same:

```
$ sed 's/.//' file
```

This tells to replace a character with nothing. Since by default, sed starts from beginning, it replaces only the 1st character since 'g' is not passed.

3. To remove last character of every line :

```
$ sed 's/.$//' file
Linu
Solari
Ubunt
Fedor
RedHa
```

The $ tries to match a pattern in the end of the line.

4. To remove the 1st and last character of every line in the same command:

```
$ sed 's/.//;s/.$//' file
inu
olari
bunt
edor
edHa
```

Two commands can be given together with a semi-colon separated in between.

5. To remove first character only if it is a specific character:

```
$ sed 's/^F//' file
Linux
Solaris
Ubuntu
edora
RedHat
```

This removes the 1st character only if it is 'F'.

6. To remove last character only if it is a specific character:

```
$ sed 's/x$//' file
Linu
Solaris
Ubuntu
Fedora
RedHat
```

This removed the last character only if it s 'x'.

7. To remove 1st 3 characters of every line:

```
$ sed 's/...//' file
ux
aris
ntu
ora
Hat
```

A single dot(.) removes 1st character, 3 dots remove 1st three characters.

8. To remove 1st n characters of every line:

```
$ sed -r 's/.{4}//' file
x
ris
tu
ra
at
```

.{n} -> matches any character n times, and hence the above expression matches 4 characters and deletes it.

9. To remove last n characters of every line:

```
$ sed -r 's/.{3}$//' file
Li
Sola
Ubu
Fed
Red
```

10. To remove everything except the 1st n characters in every line:

```
$ sed -r 's/(.{3}).*/\1/' file
Lin
Sol
Ubu
Fed
Red
```

.* -> matches any number of characters, and the first 3 characters matched are grouped using parantheses. In the replacement, by having \1 only the group is retained, leaving out the remaining part.

11. To remove everything except the last n characters in a file:

```
$ sed -r 's/.*(.{3})/\1/' file
nux
```

```
ris
ntu
ora
Hat
```
Same as last example, except that from the end.

12. To remove multiple characters present in a file:
```
$ sed 's/[aoe]//g' file
Linux
Slris
Ubuntu
Fdr
RdHt
```
To delete multiple characters, [] is used by specifying the characters to be removed. This will remove all occurences of the characters a, o and e.

13. To remove a pattern :
```
$ sed 's/lari//g' file
Linux
Sos
Ubuntu
Fedora
RedHat
```
Not just a character, even a pattern can be removed. Here, 'lari' got removed from 'Solaris'.

14. To delete only nth occurrence of a character in every line:
```
$ sed 's/u//2' file
Linux
Solaris
Ubunt
Fedora
RedHat
```
By default, sed performs an activity only on the 1st occurence. If n is specifed, sed performs only on the nth occurence of the pattern. The 2nd 'u' of 'Ubuntu' got deleted.

15. To delete everything in a line followed by a character:
```
$ sed 's/a.*//' file
Linux
Sol
Ubuntu
Fedor
RedH
```

16. To remove all digits present in every line of a file:
```
$ sed 's/[0-9]//g' file
```
[0-9] stands for all characters between 0 to 9 meaning all digits, and hence all digits get removed.

17. To remove all lower case alphabets present in every line:
```
$ sed 's/[a-z]//g' file
L
S
```

```
U
F
RH
```
[a-z] represents lower case alphabets range and hence all lower-case characters get removed.

18. To remove everything other than the lower case alphabets:
```
$ sed 's/[^a-z]//g' file
inux
olaris
buntu
edora
edat
```
^ inside square brackets negates the condition. Here, all characters except lower case alphabets get removed.

19. To remove all alpha-numeric characters present in every line:
```
$ sed 's/[a-zA-Z0-9]//g' file
```
All alpha-numeric characters get removed.

20. To remove a character irrespective of the case:
```
$ sed 's/[uU]//g' file
Linx
Solaris
bnt
Fedora
RedHat
```
By specifying both the lower and upper case character in brackets is equivalent to removing a character irrespective of the case.