Linux Commands

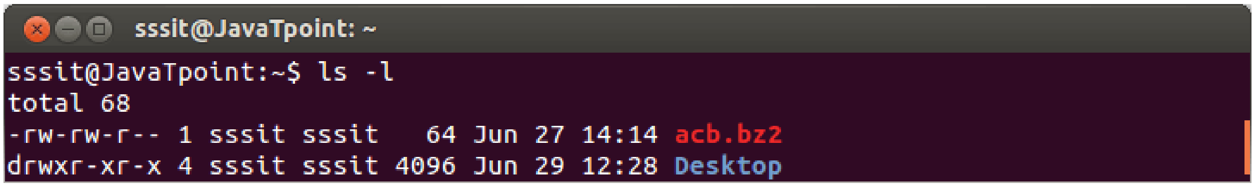
1. **Pwd** : Used to locate current working directory
2. **mkdir** : Used to create New directory.
   mkdir <directory name>
3. **rmdir** : Used to Delete a directory
   a. rmdir <directory name>
4. **ls**: List all the content of directory
   a. ls
5. **touch** : It is used to create empty files and also used to create one or many files by running it once.
6. **cat** : it is used to create file ,display the content of the file and copy the content of one file to another
   a. cat > <filename > (Use to create a file) ctrl+D used to save the file
   b. cat <existing file> > <new file > (Use to copy one file to another file)
   c. cat <filename> (use to read the content of file)
7. **cp** : It used to copy one file or folder .
   a. cp <existing file> > <new file >
8. **mv** : It is used to move a file or directory to another location.
   a. mv <filename> <directory name>
9. **Rename:** rename the file.
   a. rename ‘s/old-name/new-name/’ files
10. **head :** It displays the first 10 lines of a file.
    a. head <file name>
11. **tail** : it displays the last 10 line of file.
    a. tail <FILENAME>
12. **tac** : The commands used to display the content in reverse order.
    a. tac <file name>
13. **su** : command provides access to another user ,it allows access of the Linux shell to another user.
    a. su <username>
14. **id**: this command displays the user id and group id.
    a. Id
15. **useradd** : It is used to add a user on Linux
    a. Useradd username
16. **passwd** : it is used to create and change the password for a user .
    a. passwd <username>
17. **groupadd** : it is used to create a user group.
    a. groupadd <group name.
18. **grep** : The grep is a very useful filter in linux systems, mostly it is used with pipe.
    a. command | grep <search item>

Permissions

r (read)	read file content (cat)	read directory content (ls)

w (write)	change file content (vi)	create file in directory (touch)

x (execute)	execute the file	enter the directory (cd)



```
sssit@JavaTpoint:~$ ls -l
total 68
-rw-rw-r-- 1 sssit sssit   64 Jun 27 14:14 acb.bz2
drwxr-xr-x 4 sssit sssit 4096 Jun 29 12:28 Desktop
```

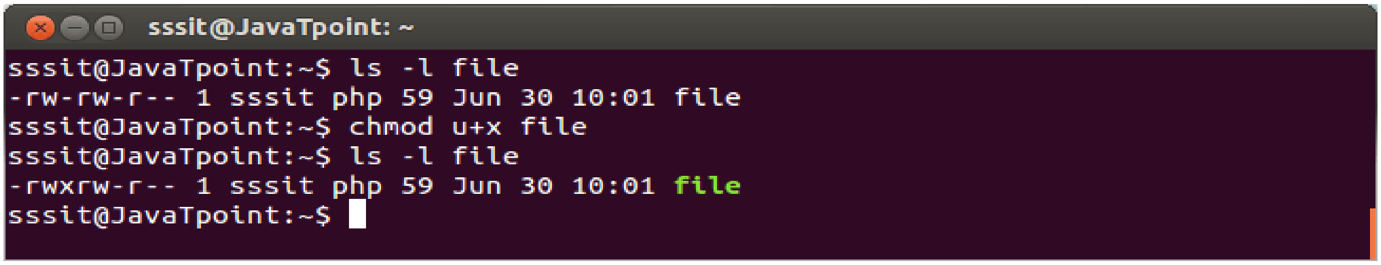
Here you can see in snapshot there are (-rw-rw-r--) before the user let’s describe it

- 1 (-) :denotes the file type
- 2-4 (rw-): permission for user
- 5-7 (rw-): Permission for Group
- 8-10 (r--): permission for other

Chmod :

1. You can change the permissions with the chmod command according to your need.

   Syntax : **chmod <groupName>+<permissionName> <fileName>**
   Example : chmod u+x file



```
sssit@JavaTpoint:~$ ls -l file
-rw-rw-r-- 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$ chmod u+x file
sssit@JavaTpoint:~$ ls -l file
-rwxrw-r-- 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$
```

Look at the image above; the user owner group has been added to and given authority to execute.

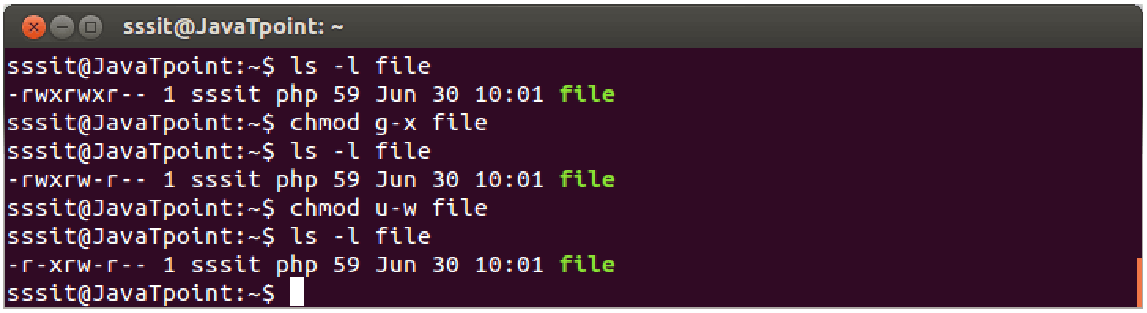
2.To Remove Permission from group :

chmod **<groupName>-<permissionName> <fileName>**

Syntax:

chmod g-x file

chmod u-w file



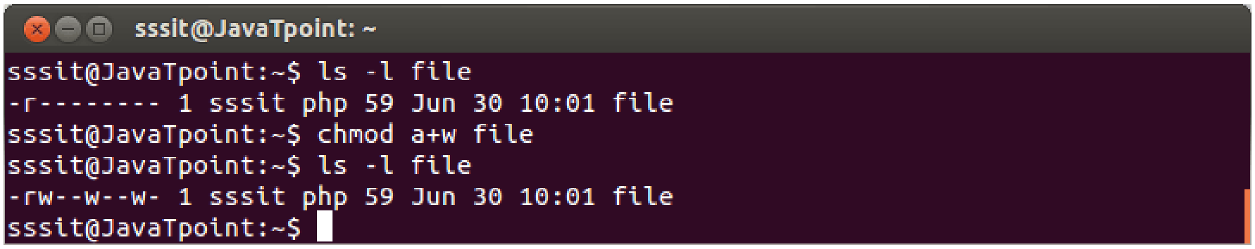
```
sssit@JavaTpoint:~$ ls -l file
-rwxrwxr-- 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$ chmod g-x file
sssit@JavaTpoint:~$ ls -l file
-rwxrw-r-- 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$ chmod u-w file
sssit@JavaTpoint:~$ ls -l file
-r-xrw-r-- 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$
```

3.To Add Permission :

chmod a+**<permissionName> <fileName>**

Syntax:

chmod a+w file



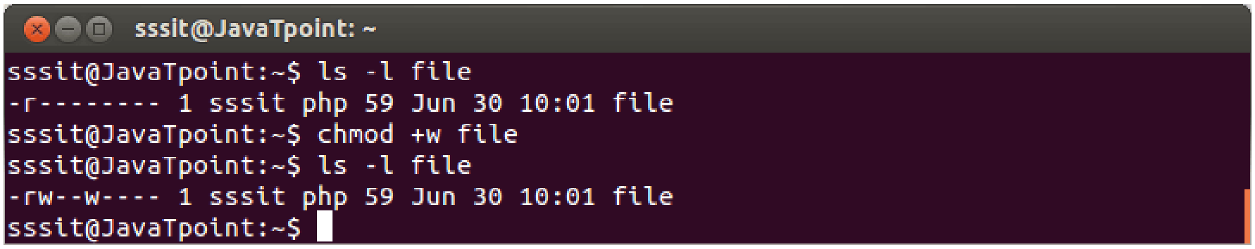
```
sssit@JavaTpoint:~$ ls -l file
-r-------- 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$ chmod a+w file
sssit@JavaTpoint:~$ ls -l file
-rw--w--w- 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$
```

4. To Add permission without ‘a’:

chmod +**<permissionName> <fileName>**

Syntax:

chmod +w file

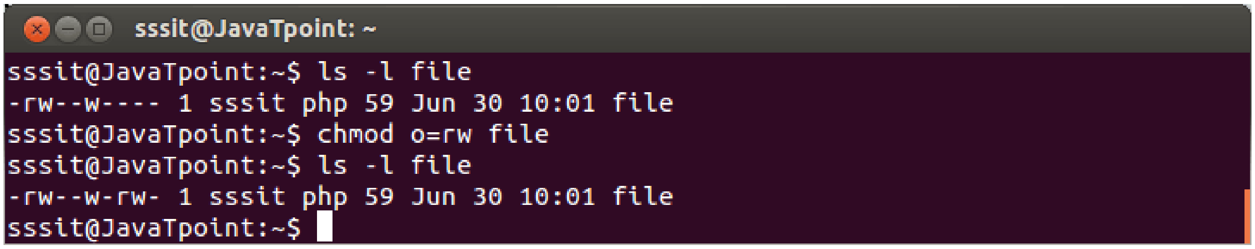


```
sssit@JavaTpoint:~$ ls -l file
-r-------- 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$ chmod +w file
sssit@JavaTpoint:~$ ls -l file
-rw--w---- 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$
```

5. To set Explicit Permission:

chmod **<groupName>**=**<permissions> <fileName>**

Syntax**: chmod o=rw file**



```
sssit@JavaTpoint:~$ ls -l file
-rw--w---- 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$ chmod o=rw file
sssit@JavaTpoint:~$ ls -l file
-rw--w-rw- 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$
```

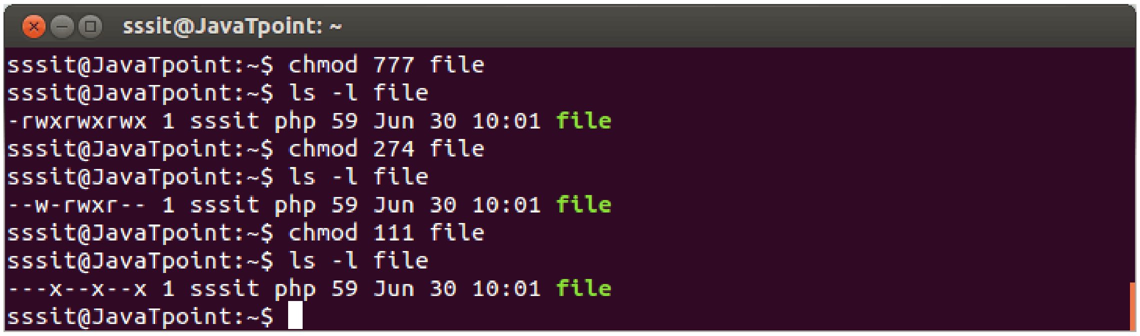
Octal Table:

binary	octal	permissions
000	0	---
001	1	--x
010	2	-w-
011	3	-wx
100	4	r--
101	5	r-x
110	6	rw-
111	7	rwx

For example, to set r octal will be 4, to set w octal will be 2, to set x octal will be 1.

From this we can conclude that,

1. **777 = rwxrwxrwx**
2. **765 = rwxrw-r-x**
3. **654 = rw-r-xr--**



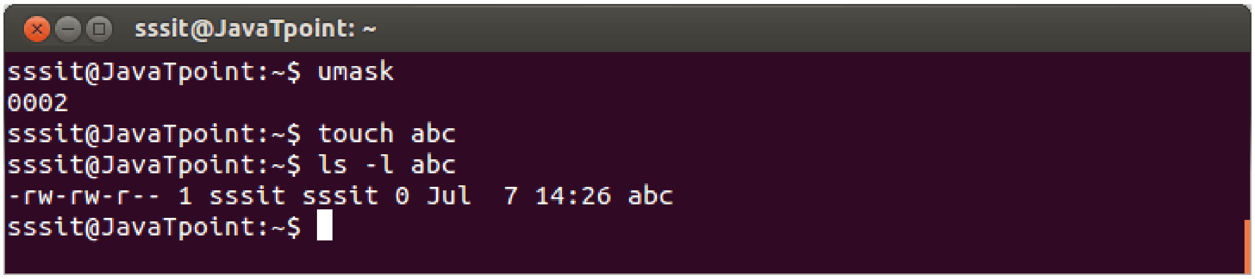
```
sssit@JavaTpoint:~$ chmod 777 file
sssit@JavaTpoint:~$ ls -l file
-rwxrwxrwx 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$ chmod 274 file
sssit@JavaTpoint:~$ ls -l file
--w-rwxr-- 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$ chmod 111 file
sssit@JavaTpoint:~$ ls -l file
---x--x--x 1 sssit php 59 Jun 30 10:01 file
sssit@JavaTpoint:~$
```

Umask:

A set of permissions is applied by default when creating a file or directory. The umask command can be used to view these default permissions.

All Unix systems do not grant freshly created files execution access for security reasons.

You may add execution permission.



```
sssit@JavaTpoint:~$ umask
0002
sssit@JavaTpoint:~$ touch abc
sssit@JavaTpoint:~$ ls -l abc
-rw-rw-r-- 1 sssit sssit 0 Jul  7 14:26 abc
sssit@JavaTpoint:~$
```

mkdir -m

The 'mkdir -m' command can be used to set the mode.

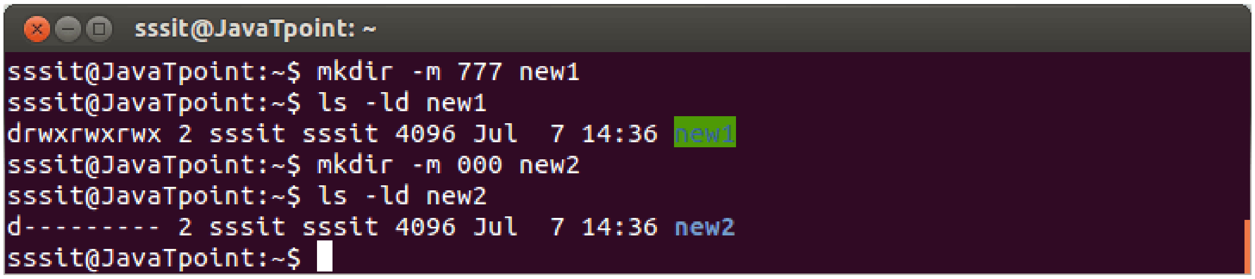
Syntax:

mkdir -m <mode> <fileName>

Example**:**

mkdir -m 777 new1

mkdir -m 000 new2



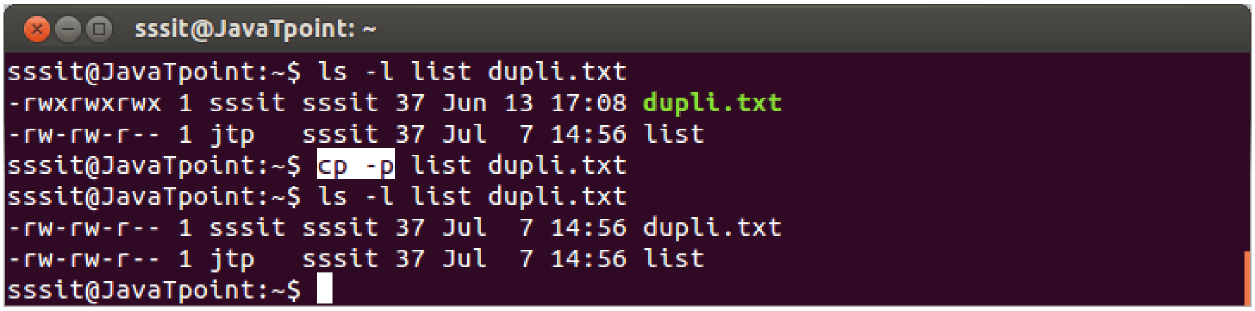
```
sssit@JavaTpoint:~$ mkdir -m 777 new1
sssit@JavaTpoint:~$ ls -ld new1
drwxrwxrwx 2 sssit sssit 4096 Jul  7 14:36 new1
sssit@JavaTpoint:~$ mkdir -m 000 new2
sssit@JavaTpoint:~$ ls -ld new2
d--------- 2 sssit sssit 4096 Jul  7 14:36 new2
sssit@JavaTpoint:~$
```

cp -p:

Syntax:

Syntax: cp -p <sourceFile> <destinationFile>

Example： cp -p list dupli.txt



```
sssit@JavaTpoint:~$ ls -l list dupli.txt
-rwxrwxrwx 1 sssit sssit 37 Jun 13 17:08 dupli.txt
-rw-rw-r-- 1 jtp   sssit 37 Jul  7 14:56 list
sssit@JavaTpoint:~$ cp -p list dupli.txt
sssit@JavaTpoint:~$ ls -l list dupli.txt
-rw-rw-r-- 1 sssit sssit 37 Jul  7 14:56 dupli.txt
-rw-rw-r-- 1 jtp   sssit 37 Jul  7 14:56 list
sssit@JavaTpoint:~$
```

Look at the screenshot above; the dupli.txt and files list permissions were different earlier. However, after running "cp -p list dupli.txt," both files now have the same permissions.