

# Name : Haris Roll # 23P-0573

## FILE PERMISSIONS:

```
[zenvila@zenvila ~]$ cd main/
[zenvila@zenvila main]$ ls
file.txt test
[zenvila@zenvila main]$ chmod o+x file.txt
[zenvila@zenvila main]$ ls -lh
total 4.0K
-rwxrw---x 1 zenvila zenvila 0 Feb 20 08:36 file.txt
d----- 2 zenvila zenvila 4.0K Feb 20 08:44 test
[zenvila@zenvila main]$
```

Gives others (everyone except owner & group) permission to execute `file.txt`

```
[zenvila@zenvila main]$ chmod g+w file.txt
[zenvila@zenvila main]$ ls -lh
total 4.0K
-rwxrw---x 1 zenvila zenvila 0 Feb 20 08:36 file.txt
d----- 2 zenvila zenvila 4.0K Feb 20 08:44 test
[zenvila@zenvila main]$
```

`chmod g+w file.txt` → Gives the group permission to write to `file.txt`.

```
[zenvila@zenvila main]$ chmod u+rwx file.txt
[zenvila@zenvila main]$ ls -lh
total 4.0K
-rwxrw---x 1 zenvila zenvila 0 Feb 20 08:36 file.txt
d----- 2 zenvila zenvila 4.0K Feb 20 08:44 test
[zenvila@zenvila main]$
```

`chmod u+rwx file.txt` → Gives the owner full permissions (read, write, execute).

```
[zenvila@zenvila main]$ chmod ugo+rwX file.txt
[zenvila@zenvila main]$ ls -lh
total 4.0K
-rwxrwxrwx 1 zenvila zenvila    0 Feb 20 08:36 file.txt
d----- 2 zenvila zenvila 4.0K Feb 20 08:44 test
[zenvila@zenvila main]$
```

**chmod ugo+rwX file.txt** → Gives full permissions (read, write, execute) to everyone (user, group, others).

```
[zenvila@zenvila main]$ chmod a-rwx file.txt
[zenvila@zenvila main]$ ls -lh
total 4.0K
----- 1 zenvila zenvila    0 Feb 20 08:36 file.txt
d----- 2 zenvila zenvila 4.0K Feb 20 08:44 test
[zenvila@zenvila main]$
```

**chmod a-rwx file.txt** → Removes all permissions from everyone (no read, write, execute).

## Directory Permissions :

```
[zenvila@zenvila main]$ chmod u+x test

[zenvila@zenvila main]$
[zenvila@zenvila main]$ ls -lh
total 4.0K
----- 1 zenvila zenvila    0 Feb 20 08:36 file.txt
d--x----- 2 zenvila zenvila 4.0K Feb 20 08:44 test
[zenvila@zenvila main]$
```

**chmod u+x test** → Gives the owner execute permission for test.

```
[zenvila@zenvila main]$ chmod g+wrX test
[zenvila@zenvila main]$ ls -lh
total 4.0K
----- 1 zenvila zenvila    0 Feb 20 08:36 file.txt
d--xrwx--- 2 zenvila zenvila 4.0K Feb 20 08:44 test
[zenvila@zenvila main]$
```

**chmod g+wrX test** → Gives the group write, read, and execute permissions.

```
[zenvila@zenvila main]$ chmod o-wrx test
[zenvila@zenvila main]$ ls -lh
total 4.0K
----- 1 zenvila zenvila    0 Feb 20 08:36 file.txt
d--xrwX--- 2 zenvila zenvila 4.0K Feb 20 08:44 test
[zenvila@zenvila main]$
```

**chmod o-wrx test** → Removes all permissions (write, read, execute) from others.

### File Ownership:

```
[zenvila@zenvila main]$ sudo chown zenvila test
[sudo] password for zenvila:
[zenvila@zenvila main]$ ls -lh
total 4.0K
----- 1 zenvila zenvila    0 Feb 20 08:36 file.txt
d--xrwX--- 2 zenvila zenvila 4.0K Feb 20 08:44 test
```

**sudo chown zenvila test** → Changes the owner of test to zenvila.

### Changing User and Group Ownership :

```
[zenvila@zenvila main]$ sudo chown root:root test
[zenvila@zenvila main]$ ls -lh
total 4.0K
----- 1 zenvila zenvila    0 Feb 20 08:36 file.txt
d--xrwX--- 2 root    root    4.0K Feb 20 08:44 test
[zenvila@zenvila main]$
```

**sudo chown root:root test** → Changes owner and group of test to root.