

Assignment 1 – File System Management

1) List out 5 files in your system which consuming most of the disk space

```
ubuntu@ip-172-31-12-62:~$ du -ah | sort -rh | head -n 5
104K    .
24K     ./hello
20K     ./index.html
16K     ./hello/good
12K     ./earth
```

2) Create one common folder in such a way that anyone can create files inside that independently and should not be able to delete other users files from that common Folder.

Go to root folder

```
ubuntu@ip-172-31-12-62:~$ cd /
```

Create a folder “common”

```
ubuntu@ip-172-31-12-62:~$ sudo mkdir /common
```

Create a group “shared”

```
ubuntu@ip-172-31-12-62:~$ sudo groupadd shared
ubuntu@ip-172-31-12-62:~$ sudo chown ubuntu:shared common
```

Add users to the group

sudo usermod -aG shared parth

Check if the users are there

```
ubuntu@ip-172-31-12-62:/$ getent group shared
shared:x:1003:parth,ubuntu
```

Try to delete the folder with another user

```
ubuntu@ip-172-31-12-62:~$ su parth
Password:
parth@ip-172-31-12-62:/home/ubuntu$ ls /
bin          boot        dev         home       lib.usr-is-merged  lost+found  mnt        proc      run       sbin.usr-is-merged  srv      tmp      var
bin.usr-is-merged  common     etc         lib        lib64            media       opt        root      sbin     snap              sys      usr
parth@ip-172-31-12-62:/home/ubuntu$ cd /common
parth@ip-172-31-12-62:/common$ ls
newfile
parth@ip-172-31-12-62:/common$ rm newfile
rm: remove write-protected regular empty file 'newfile'? n
parth@ip-172-31-12-62:/common$ rm -r newfile
rm: remove write-protected regular empty file 'newfile'? n
```

3) Create user name "shubham" and add that user in the group "adm"

a) Create folder /data , change owner and group as "root:adm"

b) Change /data permission such a way that user can able to write data in this folder and ownership of files or folder which you creates in this folder should be same as parent

folder i.e /data folder permission (root:adm)

a).

```
ubuntu@ip-172-31-12-62:~$ groupadd adm
groupadd: group 'adm' already exists
ubuntu@ip-172-31-12-62:~$ sudo useradd shubham
ubuntu@ip-172-31-12-62:~$ sudo usermod -G adm shubham
ubuntu@ip-172-31-12-62:~$ getent group adm
adm:x:4:syslog,shubham
ubuntu@ip-172-31-12-62:~$ mkdir /data
mkdir: cannot create directory '/data': Permission denied
ubuntu@ip-172-31-12-62:~$ sudo mkdir /data
ubuntu@ip-172-31-12-62:~$ sudo chown shubham:adm /data
ubuntu@ip-172-31-12-62:~$ ls -ld /data
drwxr-xr-x 2 shubham adm 4096 Apr  1 09:41 /data
ubuntu@ip-172-31-12-62:~$ |
```

b.)

```
ubuntu@ip-172-31-12-62:~$ sudo chmod 2775 /data
ubuntu@ip-172-31-12-62:~$ ls -ld /data
drwxrwsr-x 2 shubham adm 4096 Apr  1 09:41 /data
```