

Assignment 1 – File System Management

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

Command :- `sudo find / -type f -exec du -h {} \; | sort -rh | head -n 5`

```
ubuntu@ip-172-31-35-20:~$ sudo find / -type f -exec du -h {} \; | sort -rh | head -n 5
du: cannot access '/proc/12895/task/12895/fdinfo/6': No such file or directory
du: cannot access '/proc/12895/fdinfo/5': No such file or directory
135M    /usr/lib/jvm/java-21-openjdk-amd64/lib/modules
118M    /usr/lib/x86_64-linux-gnu/libLLVM-17.so.1
118M    /usr/lib/llvm-18/lib/libLLVM.so.1
70M     /var/lib/apt/lists/eu-north-1.ec2.archive.ubuntu.com_ubuntu_dists_noble_universe_binary-amd64_Packages
62M     /usr/lib/llvm-18/lib/libclang-cpp.so.18.1
ubuntu@ip-172-31-35-20:~$
```

- 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.

Step1 :- `mkdir /common`

Step2 :- `sudo chmod 1777 /common`

```
drwxrwxrwt  2 root root 4096 sep 23 05:13 common
```

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

```
ubuntu@ip-172-31-35-20: ~  
ubuntu@ip-172-31-35-20:~$ sudo useradd -m shubam  
ubuntu@ip-172-31-35-20:~$ ls -l /home/  
total 20  
drwxr-x--- 2 abc      abc      4096 Sep 19 05:48 abc  
drwxr-x--- 3 eran     eran     4096 Sep 22 12:42 eran  
drwxr-x--- 2 jane     jane     4096 Sep 18 09:50 jane  
drwxr-x--- 2 shubam   shubam   4096 Sep 23 05:22 shubam  
drwxr-x--- 10 ubuntu  ubuntu  4096 Sep 22 16:11 ubuntu  
ubuntu@ip-172-31-35-20:~$
```

```
ubuntu@ip-172-31-35-20:~$ cat /etc/group | grep admm  
admm:x:10004:shubam  
ubuntu@ip-172-31-35-20:~$
```

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

```
ubuntu@ip-172-31-35-20:~$ sudo chown root:adm /data/  
ubuntu@ip-172-31-35-20:~$ ls -l /  
total 84  
lrwxrwxrwx 1 root root 7 Apr 22 13:08 bin -> usr/bin  
drwxr-xr-x 2 root root 4096 Feb 26 2024 bin.usr-is-merged  
drwxr-xr-x 5 root root 4096 Sep 20 06:52 boot  
drwxrwxrwt 2 root root 4096 Sep 23 05:13 common  
drwxr-xr-x 2 root adm 4096 Sep 19 07:46 data
```

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)

```
ubuntu@ip-172-31-35-20: ~  
ubuntu@ip-172-31-35-20:~$ sudo chmod 2771 /data/  
ubuntu@ip-172-31-35-20:~$ ls -l / |gre  
grep          gresource  
ubuntu@ip-172-31-35-20:~$ ls -l / | grep data  
drwxrws--x    2 root adm   4096 Sep 19 07:46 data
```