Lab 4

- 1. Create a shared group with name "ateam", with two new users "andy" and "alice", the password for these accounts is "iti1".
- 2. Create a new directory "ateam-text" in /home.
- 3. Change the group ownership of the "ateam-text" directory to "ateam" group.

```
🥦 🖃 📵 root@ubuntu: /
samaa@ubuntu:~$ sudo su
[sudo] password for samaa:
root@ubuntu:/home/samaa# cd ../..
root@ubuntu:/# useradd andy
root@ubuntu:/# passwd andy
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
root@ubuntu:/# useradd alice
root@ubuntu:/# passwd alice
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
root@ubuntu:/# groupadd ateam
root@ubuntu:/# usermod -aG ateam andy
root@ubuntu:/# usermod -aG ateam alice
root@ubuntu:/#
```

4. Ensure the permissions of "ateam -text" allows group members to create and delete files.

```
🙎 🖨 💷 samaa@ubuntu: ~
samaa@ubuntu:~$ su andy
Password:
andy@ubuntu:/home/samaa$ ls
Desktop docs
                    examples.desktop myclass
                                                 oldpasswd Templates
dir
         Documents f
                                       myclass.
                                                 out
                                                             Videos
dir1
         Downloads gfile.txt
                                                 Pictures
                                       mycv
direct error
                    Music
                                       myteam
                                                 Public
andy@ubuntu:/home/samaa$ cd ...
andy@ubuntu:/home$ ls
ateam-text samaa
andy@ubuntu:/home$ ls l-
ls: cannot access 'l-': No such file or directory
andy@ubuntu:/home$ ls -l
total 8
drwxr-xr-x 2 root ateam 4096 Nov 30 06:48 ateam-text
drwxr-xr-x 22 samaa samaa 4096 Nov 30 07:44 samaa
```

5. Ensure the permissions of "ateam -text" forbids others from accessing its files.

```
No passwd entry for user 'ansy'
root@ubuntu:/home#
root@ubuntu:/home# su andy
andy@ubuntu:/home$ ls
ateam-text samaa
andy@ubuntu:/home$ ls -l
total 8
drwxr-x--- 2 root ateam 4096 Nov 30 06:48 ateam-text
drwxr-xr-x 22 samaa samaa 4096 Nov 30 07:44 samaa
andy@ubuntu:/home$
```

6. Switch to the user "andy", and navigate to "/home/ateam-text" folder.

```
root@ubuntu:/home# su andy
andy@ubuntu:/home$ cd /home/ateam-text
```

7. Create an empty file called "andyfile", and then record the default user and group ownership of the new file and its permissions.

touch /home/ateam-text/andyfile ls -l andyfile

8. Change the group ownership of the file to "ateam" and record the new ownership and permissions.

```
chown :ateam ateam-text
ls -l ateam-text
andy , andy , rwx rw- ---
```

9. Switch to "alice", and then navigate to "/home/ateam-text".

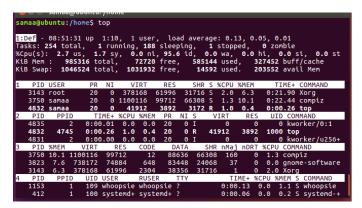
su alice cd /home/ateam-txt

10. Determine Alice's privileges to access and /or modify andyfile.

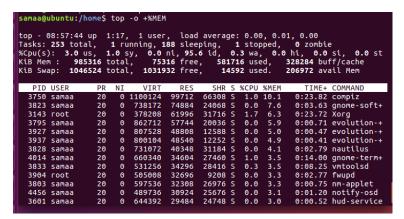
r & w permission

11. Switch to your user again and then, in a terminal window, run the top utility. Size the window to be a s tall as possible.

su samaa



12. Change the display to sort by the amount of memory in use by each process.



13. What are the processes with the largest memory allocations?

```
samaa@ubuntu:/home$ top -o +RES
                                                            ge: 0.04, 0.

1 stopped, 0 zombe

0.0 wa, 0.0 hi, 0.0 si, 0.

5260 used, 328336 buff/cache

used. 203396 avail Mem
top - 09:01:27 up
Tasks: 254 total,
                        1:20, 1 user, load average 1 running, 188 sleeping, 1.7 sy, 0.0 ni, 92.9 id, total, 71720 free, 58 total, 1031932 free, 19
                                             load average: 0.04, 0.01, 0.00
%Cpu(s): 5.4 us, 1.7 sy
KiB Mem : 985316 total,
                                                         ,
585260 used,
KiB Swap: 1046524 total,
                                                           14592 used.
   PID USER
                      PR
                           NI
                                   VIRT
                                              RES
                                                        SHR S %CPU %MEM
                                                                                   TIME+ COMMAND
   3750 samaa
                               1100124
                                                     66308
                                                                                0:25.06 compiz
                                                                                0:03.64 gnome-soft+
  3823 samaa
                      20
                                738172
                                            74884
                                                     24068
                                                                        7.6
                                                                                0:26.02 Xorg
0:00.71 evolution-+
0:00.47 evolution-+
                      20
                                                                        6.3
  3143 root
                             0
                                 378208
                                            61996
                                                     31716 S
                                                                 4.0
  3795 samaa
                      20
                            0
                                862712
                                                     20036
                                            57744
                                                                 0.0
                                                                        5.9
                      20
                            0
                                                     12588 S
                                807528
                                                                        5.0
  3927 samaa
                                           48808
                                                                 0.0
  3937 samaa
                                                     12252 S
                      20
                            0
                                 800104
                                            48540
                                                                                0:00.41 evolution-+
                                                                 0.0
                                                                        4.9
                             0
  3828 samaa
                      20
                                 731072
                                           40348
                                                     31184 S
                                                                 0.3
                                                                       4.1
                                                                                0:02.90 nautilus
                                                                                0:08.74 vmtoolsd
                      20
                             0
                                 534804
                                            38036
                                                     28792 S
                                                                        3.9
  3833 samaa
                                                                 0.3
                             0
                                                     27460 S
                                                                                0:15.50 gnome-term+
0:02.77 fwupd
                      20
  4014 samaa
                                 660496
                                           34604
                                                                 2.0
                                                                       3.5
                                                     9208 S
26976 S
25676 S
24748 S
                      20
                                                                 0.0
  3904 root
                                 505008
                                            32696
                                                                        3.3
                                                                 0.0
                      20
                                                                                0:00.76 nm-applet
  3803 samaa
                                 597536
                                            32308
                                                                        3.3
                      20
  4456 samaa
                                 489736
                                            30924
                                                                                0:01.20 notify-osd
   3601 samaa
                             0 644392
                                            29484
                                                                 0.0
                                                                                0:00.54 hud-service
```

14. Change the display interval "refresh" time of the process to be 4sec instead of 3 by two different methods.

15. Save this configuration for reuse when top is restarted, Exit the top display.

W

q

- 16. Open terminal window, start one process that lets the system waits for 300 secs and send it to the background.
- 17. State the current priority of the last process and give it a lower priority.
- 18. Bring the process back to foreground.
- 19. Kill the running process in the background, make sure it is stopped by a command and state the used command.

```
samaa@ubuntu:/home$ ps l
   UID
           PID
                 PPID PRI
                            ΝI
                                   VSZ
                                         RSS WCHAN
                                                     STAT TTY
                                                                      TIME COMMA
   1000
          4020
                 4014 20
                             0
                                 22316
                                        4856 wait
                                                     Ss
                                                          pts/20
                                                                      0:00 bash
                             0
   1000
          4162
                 4161
                        20
                                                     S
                                                                      0:00 bash
                                 22316
                                        4640 wait
                                                          pts/20
                                                     S
   1000
          4209
                 4208
                        20
                             0
                                 22300
                                                                      0:00 bash
                                        4728 wait
                                                          pts/20
   1000
                             0
                                                     S
                                                                      0:00 bash
          4311
                  4310
                        20
                                 22300
                                        4656 wait
                                                          pts/20
                                                          pts/20
   1000
          4363
                  4360
                        20
                                 22300
                                        4904 wait
                                                                      0:00 bash
                        20
                             0
   1000
          4745
                  4744
                                 22300
                                        4844 wait
                                                          pts/20
                                                                      0:00 bash
                 4745 20
4745 20
   1000
          4758
                             0
                               41912
                                        3880 signal T
                                                                      0:00 top
                                                          pts/20
                                                                      0:00 ps l
   1000
          4900
                             0
                                 28916
                                        1472 -
                                                     R+
                                                          pts/20
samaa@ubuntu:/home$ sleep 300 &
[2] 4905
samaa@ubuntu:/home$ renice 17 4905
4905 (process ID) old priority 0, new priority 17 samaa@ubuntu:/home$ fg %2
sleep 300
[2]+ Stopped
                                sleep 300
samaa@ubuntu:/home$ kill 4905
samaa@ubuntu:/home$ jobs
[1]- Stopped
                                top
[2]+ Stopped
                                sleep 300
samaa@ubuntu:/home$
```

20. Create a scheduled job to state the free disk space of the / directory in a human readable format then saves the output in a file named Fileystem-Ready.txt, the job is scheduled to run every Sunday and Tuesday at 2:00 pm.

crontab 0 14 * * 0,2 df -h / >/home/samaa/Fileystem-Ready.txt