

- 1- create users called itiusers1, itiusers2

```
tahoun@tahoun-VirtualBox: ~  
tahoun@tahoun-VirtualBox: ~  
tahoun@tahoun-VirtualBox:~$ sudo adduser itiusers1  
Adding user `itiusers1' ...  
Adding new group `itiusers1' (1001) ...  
Adding new user `itiusers1' (1001) with group `itiusers1' ...  
Creating home directory `/home/itiusers1' ...  
Copying files from `/etc/skel' ...  
New password:  
BAD PASSWORD: The password is shorter than 8 characters  
Retype new password:  
Sorry, passwords do not match.  
New password:  
BAD PASSWORD: The password is shorter than 8 characters  
Retype new password:  
passwd: password updated successfully  
Changing the user information for itiusers1  
Enter the new value, or press ENTER for the default  
    Full Name []: itiusers1  
    Room Number []:  
    Work Phone []:  
    Home Phone []:  
    Other []:  
Is the information correct? [Y/n] t
```

```
tahoun@tahoun-VirtualBox: ~  
tahoun@tahoun-VirtualBox: ~  
    Other []:  
Is the information correct? [Y/n] t  
tahoun@tahoun-VirtualBox:~$ sudo adduser itiusers2  
Adding user `itiusers2' ...  
Adding new group `itiusers2' (1002) ...  
Adding new user `itiusers2' (1002) with group `itiusers2' ...  
Creating home directory `/home/itiusers2' ...  
Copying files from `/etc/skel' ...  
New password:  
BAD PASSWORD: The password is shorter than 8 characters  
Retype new password:  
passwd: password updated successfully  
Changing the user information for itiusers2  
Enter the new value, or press ENTER for the default  
    Full Name []: itiusers2  
    Room Number []:  
    Work Phone []:  
    Home Phone []:  
    Other []:  
Is the information correct? [Y/n] y  
tahoun@tahoun-VirtualBox:~$
```

- 2- create group called os_team

```
tahoun@tahoun-VirtualBox: ~  
tahoun@tahoun-VirtualBox: ~  
Is the information correct? [Y/n] t  
tahoun@tahoun-VirtualBox:~$ sudo adduser itiuser2  
Adding user `itiuser2' ...  
Adding new group `itiuser2' (1002) ...  
Adding new user `itiuser2' (1002) with group `itiuser2' ...  
Creating home directory `/home/itiuser2' ...  
Copying files from `/etc/skel' ...  
New password:  
BAD PASSWORD: The password is shorter than 8 characters  
Retype new password:  
passwd: password updated successfully  
Changing the user information for itiuser2  
Enter the new value, or press ENTER for the default  
Full Name []: itiuser2  
Room Number []:  
Work Phone []:  
Home Phone []:  
Other []:  
Is the information correct? [Y/n] y  
tahoun@tahoun-VirtualBox:~$ sudo groupadd os_team  
tahoun@tahoun-VirtualBox:~$
```

- 3- create directory called os_team_workspace

```
tahoun@tahoun-VirtualBox:~$ mkdir os_team_workspace
```

- 4- assign os_team group to the directory os_team_workspace and change mode to setgid (hint use sudo)

```
tahoun@tahoun-VirtualBox:~$ sudo chgrp os_team os_team_workspace  
tahoun@tahoun-VirtualBox:~$ ls -lg  
total 52  
-rw-r--r-- 1 root      4 10:55 12 فير Clockalarm.conf  
-rw-rw-r-- 1 tahoun   688 10:50 8 فير 'commands lec 1'  
drwxr-xr-x 2 tahoun  4096 15:15 8 فير Desktop  
drwxr-xr-x 2 tahoun  4096 12:30 1 فير Documents  
drwxr-xr-x 2 tahoun  4096 12:30 1 فير Downloads  
drwxrwxr-x 2 tahoun  4096 14:42 8 فير iti-0  
drwxr-xr-x 2 tahoun  4096 12:30 1 فير Music  
drwxrwxr-x 2 os_team  4096 20:55 20 فير os_team_workspace  
drwxr-xr-x 2 tahoun  4096 12:30 1 فير Pictures  
drwxr-xr-x 2 tahoun  4096 12:30 1 فير Public  
drwx----- 6 tahoun  4096 15:08 11 فير snap  
drwxr-xr-x 2 tahoun  4096 12:30 1 فير Templates  
drwxr-xr-x 2 tahoun  4096 12:30 1 فير Videos  
tahoun@tahoun-VirtualBox:~$
```

```
tahoun@tahoun-VirtualBox:~$ sudo chmod g+s os_team_workspace
tahoun@tahoun-VirtualBox:~$ ls -lg
total 52
-rw-r--r-- 1 root      4 10:55 12 فبر Clockalarm.conf
-rw-rw-r-- 1 tahoun   688 10:50 8 فبر 'commands lec 1'
drwxr-xr-x 2 tahoun  4096 15:15 8 فبر Desktop
drwxr-xr-x 2 tahoun  4096 12:30 1 فبر Documents
drwxr-xr-x 2 tahoun  4096 12:30 1 فبر Downloads
drwxrwxr-x 2 tahoun  4096 14:42 8 فبر iti-0
drwxr-xr-x 2 tahoun  4096 12:30 1 فبر Music
drwxrwsr-x 2 os_team  4096 20:55 20 فبر os_team_workspace
drwxr-xr-x 2 tahoun  4096 12:30 1 فبر Pictures
drwxr-xr-x 2 tahoun  4096 12:30 1 فبر Public
drwx----- 6 tahoun  4096 15:08 11 فبر snap
drwxr-xr-x 2 tahoun  4096 12:30 1 فبر Templates
drwxr-xr-x 2 tahoun  4096 12:30 1 فبر Videos
tahoun@tahoun-VirtualBox:~$
```

5- add users itiusuer1 and itiusuer2 to os_teamgroup

```
tahoun@tahoun-VirtualBox:~$ sudo usermod -a -G os_team itiusuer1
tahoun@tahoun-VirtualBox:~$ sudo usermod -a -G os_team itiusuer2
tahoun@tahoun-VirtualBox:~$ getent group os_team
os_team:x:1003:itiusuer1,itiusuer2
```

6- create directory mydir1 using itiusuer1 and mydir2 using itiusuer2

7- list directory permissions and send screenshot.

```
tahoun@tahoun-VirtualBox:~$ sudo login itiusuer1
Password:
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-60-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

19 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

*** System restart required ***

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

itiusuer1@tahoun-VirtualBox:~$ mkdir mydir1
itiusuer1@tahoun-VirtualBox:~$ ls -lg
total 4
drwxrwxr-x 2 itiusuer1 4096 21:17 20 فبر mydir1
```


9- execute command tail -f /var/log/syslog

```
tahoun@tahoun-VirtualBox:~$ tail -f /var/log/syslog
Feb 20 21:04:46 tahoun-VirtualBox systemd[1]: systemd-hostnamed.service: Deactivated successfully.
Feb 20 21:16:03 tahoun-VirtualBox systemd[1733]: Started VTE child process 20756 launched by gnome-terminal-server process 3526.
Feb 20 21:16:22 tahoun-VirtualBox systemd[1733]: Starting Notification regarding a new release of Ubuntu...
Feb 20 21:16:44 tahoun-VirtualBox check-new-release-gtk[20792]: WARNING:root:timeout reached, exiting
Feb 20 21:16:44 tahoun-VirtualBox systemd[1733]: Finished Notification regarding a new release of Ubuntu.
Feb 20 21:17:01 tahoun-VirtualBox CRON[20875]: (root) CMD ( cd / && run-parts --report /etc/cron.hourly)
Feb 20 21:17:37 tahoun-VirtualBox systemd[1]: Starting Discard unused blocks on filesystems from /etc/fstab...
Feb 20 21:17:37 tahoun-VirtualBox systemd[1]: fstrim.service: Deactivated successfully.
Feb 20 21:17:37 tahoun-VirtualBox systemd[1]: Finished Discard unused blocks on filesystems from /etc/fstab.
Feb 20 21:20:22 tahoun-VirtualBox gnome-shell[1909]: Failed to store clipboard: Format UTF8_STRING not supported
```

10- find the process id PID and kill it.

```
tahoun 2139 0.0 0.6 355820 20100 ? Ssl 20:32 0:02 /usr/libexec/ibus-extension-gtk3
tahoun 2142 0.0 0.1 245912 7448 ? Ssl 20:32 0:00 /usr/libexec/ibus-portal
tahoun 2156 0.0 0.1 232260 6396 ? Ssl 20:32 0:00 /usr/libexec/gsd-disk-utility-notify
tahoun 2169 0.0 0.2 76320 11924 ? Ss 20:32 0:00 /snap/snapd-desktop-integration/49/usr/bin/snapd-desktop-integration
tahoun 2178 0.0 0.3 351012 13812 ? Ssl 20:32 0:00 /usr/libexec/gsd-printer
tahoun 2224 0.0 0.0 28712 352 ? S 20:32 0:00 /usr/bin/VBoxClient --clipboard
tahoun 2225 0.0 1.9 297872 30076 ? Ssl 20:32 0:00 /usr/bin/VBoxClient --clipboard
tahoun 2265 0.2 4.9 1045244 220004 ? Ssl 20:32 0:07 /snap/snap-store/638/usr/bin/snap-store --gapplication-service
tahoun 2281 0.0 0.4 308812 22140 ? Ssl 20:32 0:00 /snap/snapd-desktop-integration/49/usr/bin/snapd-desktop-integration
tahoun 2285 0.0 0.2 632500 12624 ? Ssl 20:32 0:00 /usr/libexec/xdg-desktop-portal
tahoun 2290 0.0 0.6 457996 20380 ? Ssl 20:32 0:00 /usr/libexec/xdg-desktop-portal-gnome
tahoun 2292 0.0 1.4 200228 65300 ? S 20:32 0:01 /usr/bin/wayland -0 -rootless -noreset -accessx -core -auth /run/user/1000/.nutter-Xwaylandauth.MSIU01 -listen 4 -listen 5 -displayfd 6 -init
tahoun 2365 0.0 0.1 172132 7340 ? Ssl 20:32 0:00 /usr/libexec/ibus-engine-simple
tahoun 2373 0.0 0.1 171716 6532 ? Ssl 20:32 0:00 /usr/libexec/gvfsd-metadata
tahoun 2394 0.0 0.5 352572 24700 ? Ssl 20:32 0:00 /usr/libexec/xdg-desktop-portal-gtk
tahoun 2403 0.0 1.7 532204 81036 ? Ssl 20:32 0:00 /usr/libexec/gsd-settings
tahoun 2436 0.0 0.6 2608144 27500 ? Ssl 20:32 0:00 /usr/bin/gjs /usr/share/gnome-shell/org.gnome.ScreenSaver
tahoun 2459 0.0 0.5 202876 25404 ? Ssl 20:32 0:00 /usr/libexec/ibus-x11
tahoun 2484 0.0 0.0 28712 348 ? S 20:32 0:00 /usr/bin/VBoxClient --seamless
tahoun 2485 0.0 0.0 227000 2424 ? Ssl 20:32 0:01 /usr/bin/VBoxClient --seamless
tahoun 2492 0.0 0.0 28712 348 ? S 20:32 0:00 /usr/bin/VBoxClient --draganddrop
tahoun 2493 0.1 0.0 227516 2308 ? Ssl 20:32 0:06 /usr/bin/VBoxClient --draganddrop
tahoun 2501 0.0 0.0 28712 344 ? S 20:32 0:00 /usr/bin/VBoxClient --vmsvga-session
tahoun 2502 0.0 0.0 160816 2172 ? Ssl 20:32 0:00 /usr/bin/VBoxClient --vmsvga-session
root 2530 0.0 1.7 531012 80524 ? Ssl 20:32 0:01 /usr/libexec/fwupd/fwupd
tahoun 3245 0.0 0.6 510956 31200 ? Ssl 20:33 0:00 update-notifier
tahoun 3476 0.0 1.6 2819316 74720 ? Ssl 20:40 0:01 gjs /usr/share/gnome-shell/extensions/dlngrastersoft.com/dlngrastersoft.com -E -P /usr/share/gnome-shell/extensions/dlngrastersoft.com -M 0 -D 0:0:1920
tahoun 3526 0.2 1.2 577924 50304 ? Ssl 20:40 0:00 /usr/libexec/gnome-terminal-server
tahoun 3544 0.0 0.1 19932 4912 pts/0 Ss+ 20:40 0:00 bash
root 3681 0.0 0.9 735984 40820 ? Ssl 20:40 0:01 /usr/lib/snapd/snapd
root 20672 0.0 0.0 0 0 ? I 21:03 0:00 [worker/u2:4:flush-8:0]
root 20715 0.0 0.0 0 0 ? I 21:04 0:00 [worker/0:1:inode-switch_mbs]
tahoun 20756 0.0 0.1 19932 5480 pts/1 Ss 21:16 0:00 bash
root 20879 0.0 0.0 0 0 ? I 21:17 0:00 [worker/0:0-events]
root 20937 0.0 0.0 0 0 ? I 21:22 0:00 [worker/u2:1-events_unbound]
tahoun 20938 0.0 0.0 17060 1004 pts/1 S+ 21:26 0:00 tail -f /var/log/syslog
tahoun 20941 0.0 0.1 19932 5272 pts/2 Ss 21:29 0:00 bash
tahoun 20948 0.0 0.6 21596 3792 pts/2 R+ 21:29 0:00 ps -aux
tahoun@tahoun-VirtualBox:~$ sudo kill -9 20938
[sudo] password for tahoun:
```