

Linux User, Group, and System Management Practice

PART 1 – USER MANAGEMENT

Goal: Create users and understand how Linux identifies people.

Step 1: Create a new user

```
sudo adduser ali
```

This command: * Automatically creates `/home/ali` * Prompts for password and user info

Step 2: Check user details

```
id ali
```

Displays: * User ID (UID) * Group ID (GID) * Group memberships

Step 3: Switch to user ali

```
su - ali  
whoami  
exit
```

- `whoami` shows the active user.
- `exit` returns to your main account.

PART 2 – GROUP MANAGEMENT

Goal: Create a group and enable teamwork.

Step 4: Create a new group

```
sudo groupadd developers
```

Step 5: Add user ali to the group

```
sudo usermod -aG developers ali
```

Step 6: Verify group membership

```
id ali
```

You should now see **developers** in the group list.

PART 3 – FILE OWNERSHIP & PERMISSIONS

Goal: Control access to shared folders.

Step 7: Create a shared folder

```
sudo mkdir /shared
```

Step 8: Change group ownership

```
sudo chown somnog:developers /shared
```

Step 9: Set permissions for owner & group only

```
sudo chmod 770 /shared  
ls -ld /shared
```

Step 10: Test as user ali

```
su - ali  
cd /shared  
touch testfile.txt  
ls -l  
exit
```

The created file should belong to: * User: **ali** * Group: **developers**

PART 4 – BASIC PERMISSION CHANGES

Goal: Protect files and control execution.

Step 11: Secure a file

```
sudo touch /shared/secure.txt
sudo chmod 600 /shared/secure.txt
ls -l /shared/secure.txt
```

Only the owner can read and write.

Step 12: Make a script executable

```
cd ~
echo 'echo "Hello SomNOG!"' > hello.sh
chmod +x hello.sh
./hello.sh
```

PART 5 – BASIC PROCESS MANAGEMENT

Goal: View, run, and stop programs.

Step 13: View running processes

```
ps aux | head
```

Step 14: Start a background process

```
sleep 500 &
jobs
```

Step 15: Find the process

```
ps aux | grep sleep
```

Step 16: Kill the process

```
kill <PID>
```

Replace **<PID>** with the actual process ID.

Step 17: Monitor live processes

```
top
```

Press **q** to exit.

PART 6 – BASIC PACKAGE MANAGEMENT (Ubuntu apt)

Goal: Install and remove software.

Step 18: Update package list

```
sudo apt update
```

Step 19: Install a package

```
sudo apt install htop -y
```

Step 20: Run the package

```
htop
```

Press **q** to exit.

Step 21: Remove the package

```
sudo apt remove htop -y
```

PART 7 – MINI ASSIGNMENT (HOMEWORK)

Participants must complete the following:

1. Create a user called `abdi`
2. Create a group called `network`
3. Add `abdi` to `network`
4. Create a folder `/network-share`
5. Change group owner to `network`
6. Set permissions so only owner & group can access
7. Switch to `abdi` and create a file inside `/network-share`
8. Install the package `curl`
9. Start `sleep 300 &`
10. Use `ps` to find and kill the process