

Interactive Cares DevOps Career Path

Assignment-3

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Topic: Linux basic commands assignment.

Task 01:

- Create a user with user group

```
sudo groupadd newgroup
sudo useradd -G newgroup -m user1 -p usr
sudo useradd -G newgroup -m user2 -p usr
id user2
```

```
shefat2002@Anonymous: ~/assignment3
shefat2002@Anonymous:~/assignment3$ sudo groupadd newgroup
shefat2002@Anonymous:~/assignment3$ sudo useradd -G newgroup -m user1 -p usr
useradd: user 'user1' already exists
shefat2002@Anonymous:~/assignment3$ sudo useradd -G newgroup -m user2 -p usr
shefat2002@Anonymous:~/assignment3$ id user2
uid=1002(user2) gid=1004(user2) groups=1004(user2),1003(newgroup)
shefat2002@Anonymous:~/assignment3$
```

Task 02:

- Create two directories in user's home directory named os-concepts and ubuntu-is-the-best

```
sudo mkdir /home/shefat2002/os-concepts
sudo mkdir /home/shefat2002/ubuntu-is-the-best
ls /home/shefat2002
```

```
shefat2002@Anonymous: /home
shefat2002@Anonymous:/home$ ls
shefat2002 user1 user2
shefat2002@Anonymous:/home$ sudo mkdir /home/shefat2002/os-concepts
shefat2002@Anonymous:/home$ sudo mkdir /home/shefat2002/ubuntu-is-the-best
shefat2002@Anonymous:/home$ ls /home/shefat2002
assignment3 class.txt os-class-2 os-concepts snap test ubuntu-is-the-best
shefat2002@Anonymous:/home$
```

Task 03:

- Create two files on each directory

```
sudo touch /home/shefat2002/os-concepts/f1 /home/shefat2002/os-concepts/f2
```

```
sudo touch /home/shefat2002/ubuntu-is-the-best/f1 /home/shefat2002/ubuntu-is-the-best/f2
```

```
shefat2002@Anonymous: ~  
shefat2002@Anonymous:~$ sudo touch /home/shefat2002/os-concepts/f1 /home/shefat2002/os-concepts/f2  
shefat2002@Anonymous:~$ sudo touch /home/shefat2002/ubuntu-is-the-best/f1 /home/shefat2002/ubuntu-is-the-best/f2  
shefat2002@Anonymous:~$ ls shefat2002/os-concepts  
ls: cannot access 'shefat2002/os-concepts': No such file or directory  
shefat2002@Anonymous:~$ cd os-concepts  
shefat2002@Anonymous:~/os-concepts$ ls  
f1 f2 samplefile.md
```

Task 04:

- List the files with detailed information (including file permission)

```
sudo ls -l /home/shefat2002/os-concepts
```

```
sudo ls -l /home/shefat2002/ubuntu-is-the-best
```

```
shefat2002@Anonymous: ~  
shefat2002@Anonymous:~$ sudo ls -l /home/shefat2002/os-concepts  
total 0  
-rw-r--r-- 1 root root 0 Oct  8 03:26 f1  
-rw-r--r-- 1 root root 0 Oct  8 03:26 f2  
-rw-r--r-- 1 root root 0 Oct  8 03:20 samplefile.md  
shefat2002@Anonymous:~$ sudo ls -l /home/shefat2002/ubuntu-is-the-best  
total 0  
-rw-r--r-- 1 root root 0 Oct  8 03:27 f1  
-rw-r--r-- 1 root root 0 Oct  8 03:27 f2  
-rw-r--r-- 1 root root 0 Oct  8 03:21 samplefile.md  
shefat2002@Anonymous:~$
```

Task 05:

- Update file permission so that owner can read,write and group can only read and others can not do anything

```
sudo chmod 640 /home/shefat2002/os-concepts/*
```

```
sudo chmod 640 /home/shefat2002/ubuntu-is-the-best/*
```

```
sudo ls -l /home/shefat2002/os-concepts
```

```
sudo ls -l /home/shefat2002/ubuntu-is-the-best
```

```
shefat2002@Anonymous: ~  
shefat2002@Anonymous:~$ sudo chmod 640 /home/shefat2002/os-concepts/*  
shefat2002@Anonymous:~$ sudo chmod 640 /home/shefat2002/ubuntu-is-the-best/*  
shefat2002@Anonymous:~$ sudo ls -l /home/shefat2002/os-concepts  
total 0  
-rw-r----- 1 root root 0 Oct  8 03:26 f1  
-rw-r----- 1 root root 0 Oct  8 03:26 f2  
-rw-r----- 1 root root 0 Oct  8 03:20 samplefile.md  
shefat2002@Anonymous:~$ sudo ls -l /home/shefat2002/ubuntu-is-the-best  
total 0  
-rw-r----- 1 root root 0 Oct  8 03:27 f1  
-rw-r----- 1 root root 0 Oct  8 03:27 f2  
-rw-r----- 1 root root 0 Oct  8 03:21 samplefile.md  
shefat2002@Anonymous:~$
```

Task 06:

- Create another group

```
sudo addgroup newgroup2 --force-badname
getent group newgroup2
```

```
shefat2002@Anonymous: ~
shefat2002@Anonymous:~$ sudo addgroup newgroup2 --force-badname
Adding group `newgroup2' (GID 1005) ...
Done.
shefat2002@Anonymous:~$ getent group newgroup2
newgroup2:x:1005:
shefat2002@Anonymous:~$
```

Task 07:

- Update file ownership to the newly created group

```
sudo chown :newgroup2 /home/shefat2002/os-concepts/*
sudo chown :newgroup2 /home/shefat2002/ubuntu-is-the-best/*
sudo ls -l /home/shefat2002/os-concepts
sudo ls -l /home/shefat2002/ubuntu-is-the-best
```

```
shefat2002@Anonymous: ~
shefat2002@Anonymous:~$ sudo chown :newgroup2 /home/shefat2002/os-concepts/*
shefat2002@Anonymous:~$ sudo chown :newgroup2 /home/shefat2002/ubuntu-is-the-best/*
shefat2002@Anonymous:~$ sudo ls /home/shefat2002/ubuntu-is-the-best/*
/home/shefat2002/ubuntu-is-the-best/f1 /home/shefat2002/ubuntu-is-the-best/samplefile.md
/home/shefat2002/ubuntu-is-the-best/f2
shefat2002@Anonymous:~$ sudo ls /home/shefat2002/ubuntu-is-the-best
f1 f2 samplefile.md
shefat2002@Anonymous:~$ sudo ls -l /home/shefat2002/ubuntu-is-the-best
total 0
-rw-r----- 1 root newgroup2 0 Oct  8 03:27 f1
-rw-r----- 1 root newgroup2 0 Oct  8 03:27 f2
-rw-r----- 1 root newgroup2 0 Oct  8 03:21 samplefile.md
shefat2002@Anonymous:~$ sudo ls -l /home/shefat2002/os-concepts
total 0
-rw-r----- 1 root newgroup2 0 Oct  8 03:26 f1
-rw-r----- 1 root newgroup2 0 Oct  8 03:26 f2
-rw-r----- 1 root newgroup2 0 Oct  8 03:20 samplefile.md
shefat2002@Anonymous:~$
```

Task 08:

- Add the user to the new group

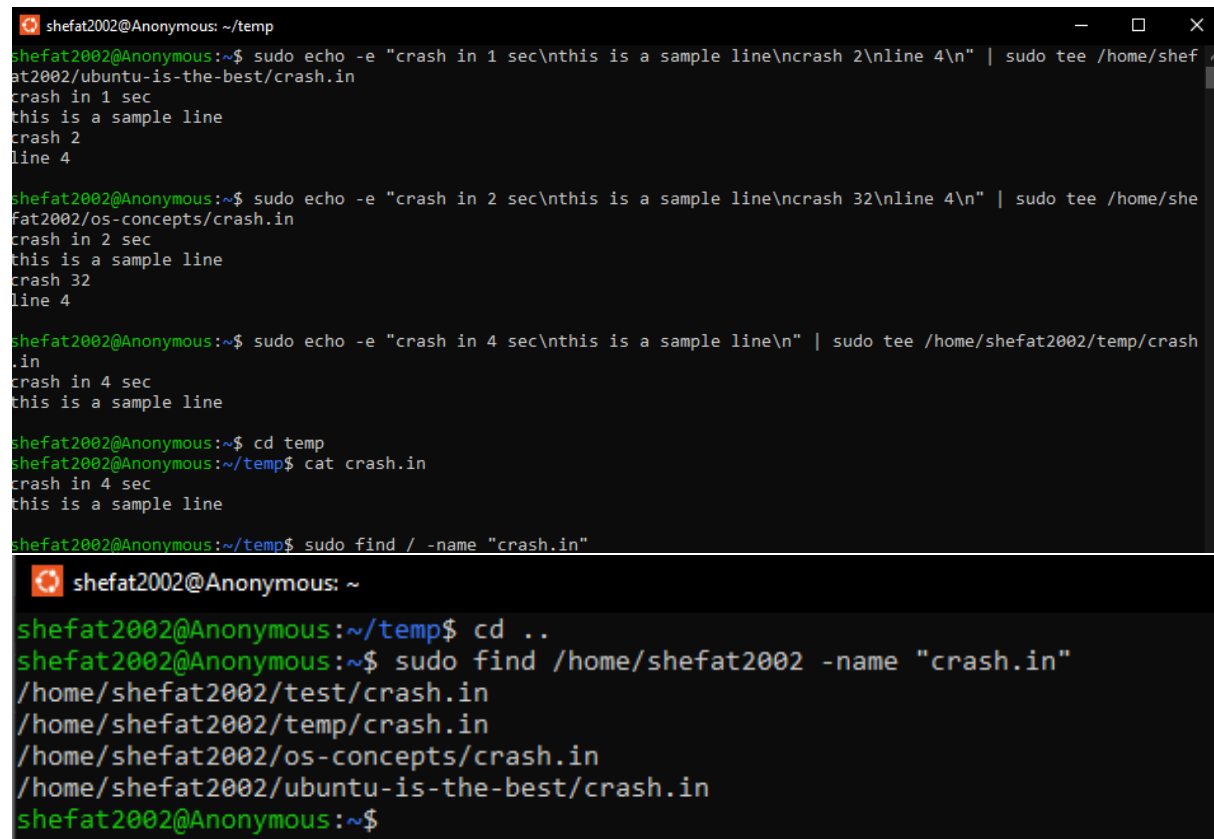
```
sudo usermod -aG newgroup2 shefat2002
id shefat2002
```

```
shefat2002@Anonymous: ~
shefat2002@Anonymous:~$ sudo usermod -aG newgroup2 shefat2002
shefat2002@Anonymous:~$ id shefat2002
uid=1000(shefat2002) gid=1000(shefat2002) groups=1000(shefat2002),4(adm),20(dialout),24(cdrom),25(floppy),27(sudo),29(audio),30(dip),44(video),46(plugdev),116(netdev),1005(newgroup2)
shefat2002@Anonymous:~$
```

Task 09:

- Create a file called crash.in (File should contain the word crash in it) in different directories and then find the file in all the locations using find command

```
sudo echo -e "crash in 1 sec\nthis is a sample line\ncrash 2\nline 4\n" | sudo tee /home/shefat2002/ubuntu-is-the-best/crash.in
sudo echo -e "crash in 2 sec\nthis is a sample line\ncrash 32\nline 4\n" | sudo tee /home/shefat2002/os-concepts/crash.in
sudo echo -e "crash in 4 sec\nthis is a sample line\n" | sudo tee /home/shefat2002/temp/crash.in
sudo find / -name "crash.in"
```

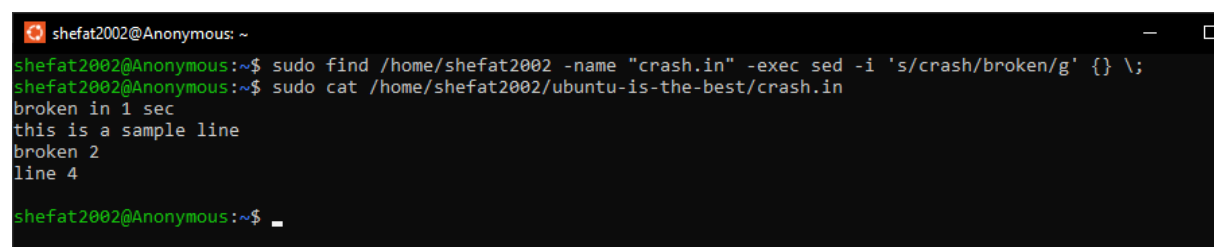
A terminal window showing the execution of the commands from Task 09. The user is in the directory ~/temp. They run three sudo echo commands with tee to create crash.in files in /home/shefat2002/ubuntu-is-the-best/, /home/shefat2002/os-concepts/, and /home/shefat2002/temp/. Then they run sudo find / -name "crash.in" which lists all three files. Finally, they run cd .. and sudo find /home/shefat2002 -name "crash.in" which lists the same three files from the parent directory.

```
shefat2002@Anonymous: ~/temp
shefat2002@Anonymous:~$ sudo echo -e "crash in 1 sec\nthis is a sample line\ncrash 2\nline 4\n" | sudo tee /home/shefat2002/ubuntu-is-the-best/crash.in
crash in 1 sec
this is a sample line
crash 2
line 4
shefat2002@Anonymous:~$ sudo echo -e "crash in 2 sec\nthis is a sample line\ncrash 32\nline 4\n" | sudo tee /home/shefat2002/os-concepts/crash.in
crash in 2 sec
this is a sample line
crash 32
line 4
shefat2002@Anonymous:~$ sudo echo -e "crash in 4 sec\nthis is a sample line\n" | sudo tee /home/shefat2002/temp/crash.in
crash in 4 sec
this is a sample line
shefat2002@Anonymous:~$ cd temp
shefat2002@Anonymous:~/temp$ cat crash.in
crash in 4 sec
this is a sample line
shefat2002@Anonymous:~/temp$ sudo find / -name "crash.in"
/home/shefat2002/test/crash.in
/home/shefat2002/temp/crash.in
/home/shefat2002/os-concepts/crash.in
/home/shefat2002/ubuntu-is-the-best/crash.in
shefat2002@Anonymous:~$
shefat2002@Anonymous: ~
shefat2002@Anonymous:~/temp$ cd ..
shefat2002@Anonymous:~$ sudo find /home/shefat2002 -name "crash.in"
/home/shefat2002/test/crash.in
/home/shefat2002/temp/crash.in
/home/shefat2002/os-concepts/crash.in
/home/shefat2002/ubuntu-is-the-best/crash.in
shefat2002@Anonymous:~$
```

Task 10:

- Then, replace the lines with crash to broken to all files (use sed, xargs)

```
sudo find /home/shefat2002 -name "crash.in" -exec sed -i 's/crash/broken/g' {} \;
sudo cat /home/shefat2002/ubuntu-is-the-best/crash.in
sudo cat /home/shefat2002/temp/crash.in
```

A terminal window showing the execution of the commands from Task 10. The user runs sudo find /home/shefat2002 -name "crash.in" -exec sed -i 's/crash/broken/g' {} \; to replace 'crash' with 'broken' in all crash.in files. Then they run sudo cat on the two files, showing the output with 'broken' instead of 'crash'.

```
shefat2002@Anonymous: ~
shefat2002@Anonymous:~$ sudo find /home/shefat2002 -name "crash.in" -exec sed -i 's/crash/broken/g' {} \;
shefat2002@Anonymous:~$ sudo cat /home/shefat2002/ubuntu-is-the-best/crash.in
broken in 1 sec
this is a sample line
broken 2
line 4
shefat2002@Anonymous:~$
```