

**Write down commands for the tasks mentioned below**

- Create a user with user group
- Create two directories in user's home directory named os-concepts and ubuntu-is-the-best
- Create two files on each directory
- List the files with detailed information ( including file permission )
- Update file permission so that the owner can read,write and group can only read and others can not do anything
- Create another group
- Update file ownership to the newly created group
- Add the user to the new group
- 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
- Then, replace the lines with crash to broken to all files ( use sed, xargs )

**Submission guideline:**

- Create a repo and upload each command
- Make a documentation that will contain the output of your command
- add it to your git repo
- Share the repository link

**Submission deadline:**

Sunday 11:59 PM, 8th October, 2023

## 1. Create a user with a user group:

### Group Creation

- `sudo groupadd first-group`

### Add new user to the group

- `sudo useradd -m -g first-group devops`

### Check all user

- `getent passwd | cut -d: -f1`

### Check all group

- `getent group | cut -d: -f1`

### Check a specific user's group

- `groups devops`

### Check a specific user's primary group

- `id -gn devops`

```
black in ~/Desktop via 4GiB/23GiB
> pwd
/home/black/Desktop
black in ~/Desktop via 4GiB/23GiB
> sudo groupadd first-group
[sudo] password for black:
black in ~/Desktop via 4GiB/23GiB took 4s
> sudo useradd -m -g first-group devops
black in ~/Desktop via 4GiB/23GiB
> getent passwd | cut -d: -f1

root
daemon
bin
```

```
black
mongodb
devops
black in ~/Desktop via 4GiB/23GiB
> getent group | cut -d: -f1

root
daemon
bin
```

```
black
_cvsadmin
mongodb
first-group
black in ~/Desktop via 4GiB/23GiB
> groups devops
devops : first-group
black in ~/Desktop via 4GiB/23GiB
> id -gn devops
first-group
black in ~/Desktop via 4GiB/23GiB
>
```

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

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

```
black in ~ via 🖥️ 4GiB/23GiB
> sudo mkdir /home/devops/ubuntu-is-the-best
[sudo] password for black:
mkdir: cannot create directory '/home/devops/ubuntu-is-the-best': File exists
black in ~ via 🖥️ 4GiB/23GiB took 2s
> sudo mkdir /home/devops/os-concepts
mkdir: cannot create directory '/home/devops/os-concepts': File exists
black in ~ via 🖥️ 4GiB/23GiB
> █
```

## 3. Create two files on each directory:

- `sudo touch /home/devops/os-concepts/file1.txt`
- `sudo touch /home/devops/os-concepts/file2.txt`
- `sudo touch /home/devops/ubuntu-is-the-best/file1.txt`
- `sudo touch /home/devops/ubuntu-is-the-best/file2.txt`

```
black in ~ via 🖥️ 4GiB/23GiB
> sudo touch /home/devops/ubuntu-is-the-best/file1.txt
[sudo] password for black:
black in ~ via 🖥️ 4GiB/23GiB took 3s
> sudo touch /home/devops/ubuntu-is-the-best/file2.txt
black in ~ via 🖥️ 4GiB/23GiB
> sudo ls /home/devops/ubuntu-is-the-best
file1.txt file2.txt
black in ~ via 🖥️ 4GiB/23GiB
> sudo ls /home/devops/os-concepts
file1.txt file2.txt
black in ~ via 🖥️ 4GiB/23GiB
> █
```

## 4. List the files with detailed information ( including file permission )

- `ls -l /home/devops/os-concepts`
- `ls -l /home/devops/ubuntu-is-the-best`

```

black in ~ via 4GiB/23GiB
> ls -l /home/devops/os-concepts
ls: cannot access '/home/devops/os-concepts': Permission denied
black in ~ via 4GiB/23GiB
> sudo ls -l /home/devops/os-concepts
[sudo] password for black:
total 0
-rw-r--r-- 1 root root 0 Oct  8 23:07 file1.txt
-rw-r--r-- 1 root root 0 Oct  8 23:07 file2.txt
black in ~ via 4GiB/23GiB took 3s
> sudo ls -l /home/devops/ubuntu-is-the-best
total 0
-rw-r--r-- 1 root root 0 Oct  8 23:15 file1.txt
-rw-r--r-- 1 root root 0 Oct  8 23:15 file2.txt
black in ~ via 4GiB/23GiB
>

```

#### 5. Update file permission so that the owner can read, write and group can only read and others can not do anything:

- chmod 640 /home/devops/os-concepts/file1.txt
- chmod 640 /home/devops/os-concepts/file2.txt
- chmod 640 /home/devops/ubuntu-is-the-best/file1.txt
- chmod 640 /home/devops/ubuntu-is-the-best/file2.txt

```

black in ~ via 4GiB/23GiB
> sudo chmod 640 /home/devops/os-concepts/file1.txt
black in ~ via 4GiB/23GiB
> sudo chmod 640 /home/devops/os-concepts/file2.txt
black in ~ via 4GiB/23GiB
> sudo chmod 640 /home/devops/ubuntu-is-the-best/file1.txt
black in ~ via 4GiB/23GiB
> sudo chmod 640 /home/devops/ubuntu-is-the-best/file2.txt
black in ~ via 4GiB/23GiB
>

```

#### 6. Create another group:

- sudo groupadd second-group

```

black in ~ via 4GiB/23GiB
> sudo groupadd second-group
black in ~ via 4GiB/23GiB
>

```

### 7. Update file ownership to the newly created group:

```
chown :second-group /home/devops/os-concepts/file1.txt
chown :second-group /home/devops/os-concepts/file2.txt
chown :second-group /home/devops/ubuntu-is-the-best/file1.txt
chown :second-group /home/devops/ubuntu-is-the-best/file2.txt
```

```
black in ~ via 4GiB/23GiB
> sudo groupadd second-group
black in ~ via 4GiB/23GiB
> sudo chown :second-group /home/devops/os-concepts/file1.txt
black in ~ via 4GiB/23GiB
> sudo chown :second-group /home/devops/os-concepts/file2.txt
black in ~ via 4GiB/23GiB
> sudo chown :second-group /home/devops/ubuntu-is-the-best/file1.txt
black in ~ via 4GiB/23GiB
> sudo chown :second-group /home/devops/ubuntu-is-the-best/file2.txt
black in ~ via 4GiB/23GiB
> █
```

### 8. Add the user to the new group:

- sudo usermod -aG second-group devops

```
black in ~ via 4GiB/23GiB
> sudo usermod -aG second-group devops
black in ~ via 4GiB/23GiB
> █
```

### 9. 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:

- echo "crash" > /home/devops/os-concepts/crash.in
- echo "crash" > /home/devops/ubuntu-is-the-best/crash.in
- find /home/<username> -name "crash.in"

### 10. Then, replace the lines with crash to broken to all files ( use sed, xargs ):

```
find /home/<username> -name "crash.in" -exec sed -i 's/crash/broken/g' {} \;
```