

TASK 3

User and Group Management

Task: Create a set of user accounts and groups with specific permissions. Develop a scenario where different users need different access to certain directories. Document the user-group permissions and provide examples of commands used to achieve this

1. Create users:

```
sudo useradd dev1 dev2 marketingPerson1 marketingPerson2
```

2. Create groups developers and Marketing

```
sudo groupadd Developers Marketing
```

3. Assign users to their respective group:

```
sudo usermod -a -G Developers dev1
sudo usermod -a -G Developers dev2
sudo usermod -a -G Marketing marketingPerson1
sudo usermod -a -G Marketing marketingPerson2
```

4. Create some directories:

```
mkdir Marketing DevModules
```

5. Change ownerships:

```
sudo chown :Developers /DevModules
sudo chown :Marketing /Marketing
```

```
jainil@jainil-VirtualBox:~/Desktop/Assignment5$ ls -l
total 104
drwxrwxr-x 2 jainil jainil      4096 Jan  6 01:01 backup
drwxrwxr-x 2 jainil Developers 4096 Jan  6 02:24 DevModules
drwxr-x--- 2 jainil jainil      4096 Jan  5 23:38 folder
drwxrwxr-x 2 jainil Marketing  4096 Jan  6 02:24 Marketing
-rw-rw-r-- 1 jainil jainil     85217 Jan  6 00:33 population.txt
-rwxrwxr-x 1 jainil jainil      237 Jan  6 01:10 save_backup.sh
jainil@jainil-VirtualBox:~/Desktop/Assignment5$
```

6. Change Permissions

```
chmod 770 /DevModules
chmod 775 /Marketing
```

```
jainil@jainil-VirtualBox:~/Desktop/Assignment5$ chmod 770 DevModules/
jainil@jainil-VirtualBox:~/Desktop/Assignment5$ chmod 775 Marketing/
jainil@jainil-VirtualBox:~/Desktop/Assignment5$ ls -l
total 104
drwxrwxr-x 2 jainil jainil      4096 Jan  6 01:01 backup
drwxrwx--- 2 jainil Developers 4096 Jan  6 02:24 DevModules
drwxr-x--- 2 jainil jainil      4096 Jan  5 23:38 folder
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-rwxrwxr-x 1 jainil jainil       237 Jan  6 01:10 save_backup.sh
jainil@jainil-VirtualBox:~/Desktop/Assignment5$
```

DevModules only needs to be accessed by Developers, Marketing can be changed by Marketing group users but other users can read and execute the directory.

Checking Permissions:

```
su dev1
mkdir /Marketing/M
```

```
$ mkdir /Marketing/M
mkdir: cannot create directory '/Marketing/M': No such file or directory
$
```

Developers group will be unable to write in the DevModules directory.

```
su marketingPerson1
ls DevModules
```

```
$ ls DevModules
ls: cannot open directory 'DevModules': Permission denied
$
```

Marketing group will be unable to read/write in DevModules.