Assignment 2 – Permissions & Ownership

1. Create a file named secure.txt

```
ubuntu@ip-172-31-5-27:~$ cd linux_practice/
ubuntu@ip-172-31-5-27:~/linux_practice$ cd day1/
ubuntu@ip-172-31-5-27:~/linux_practice/day1$ touch secure.txt
```

2. Set permissions so that:

- Owner → read/write
- Group → read only
- Others → no access

```
ubuntu@ip-172-31-5-27:~/linux_practice$ cd day1/
ubuntu@ip-172-31-5-27:~/linux_practice/day1$ touch secure.txt
ubuntu@ip-172-31-5-27:~/linux_practice/day1$ chmod 640 secure.txt
ubuntu@ip-172-31-5-27:~/linux_practice/day1$ ls -l
total 8
drwxrwxr-x 2 ubuntu ubuntu 4096 Jan 13 09:52 backup
drwxrwxr-x 2 ubuntu ubuntu 4096 Jan 13 09:20 files
-rw-r----- 1 ubuntu ubuntu    0 Jan 13 10:19 secure.txt
ubuntu@ip-172-31-5-27:~/linux_practice/day1$
```

3. Change ownership of the file to another user.

```
ubuntu@ip-172-31-5-27:~/linux_practice/day1$ sudo useradd -m uma
ubuntu@ip-172-31-5-27:~/linux_practice/day1$ pwd
/home/ubuntu/linux_practice/day1
ubuntu@ip-172-31-5-27:~/linux_practice/day1$ cd ../../
ubuntu@ip-172-31-5-27:~$ ls
linux_lab_day1  linux_practice
ubuntu@ip-172-31-5-27:~$ cd ..
ubuntu@ip-172-31-5-27:/home$ ls
ubuntu  uma
ubuntu@ip-172-31-5-27:/home$ cd u
ubuntu/ uma/
ubuntu@ip-172-31-5-27:/home$ cd ..
ubuntu@ip-172-31-5-27:/$ pwd
/
ubuntu@ip-172-31-5-27:/$ cd home
ubuntu@ip-172-31-5-27:/home$ pwd
/home
ubuntu@ip-172-31-5-27:/home$ cd ubuntu/
ubuntu@ip-172-31-5-27:~$ cd linux_practice/
ubuntu@ip-172-31-5-27:~/linux_practice$ cd day1/
ubuntu@ip-172-31-5-27:~/linux_practice/day1$ sudo chown uma secure.txt
ubuntu@ip-172-31-5-27:~/linux_practice/day1$ ls
backup  files  secure.txt
ubuntu@ip-172-31-5-27:~/linux_practice/day1$ ls -l
total 8
drwxrwxr-x 2 ubuntu ubuntu 4096 Jan 13 09:52 backup
drwxrwxr-x 2 ubuntu ubuntu 4096 Jan 13 09:20 files
-rw-r----- 1 uma    ubuntu    0 Jan 13 10:19 secure.txt
ubuntu@ip-172-31-5-27:~/linux_practice/day1$
```

4. Explain:

- Why 777 is dangerous

  Any type of user can read, write and execute the file which will lead to security issues. This can even cause vulnerability into the system. It can even lead to the inserting the malicious code into the file which can affect the whole file and data can be lost or tampered. So the 777 permission must not be given.

- Difference between permission and ownership

  Permission: It defines what all actions can be performed. The permissions are read(r), write(w) and execute(x). chmod rwx command is used to change the permissions.

  Ownership: It defines about who owns the file. It has 3 levels : owner of file or folder, group owner and others.