

Assignment – 2

Ques. - Apply the following commands with a suitable example :-

1. r/w/x permissions for the directory.

```
surya@LAPTOP-BSTB84HN:~$ chmod 700 dir
surya@LAPTOP-BSTB84HN:~$ ls -l
total 8
-rwxr-xr-x 1 surya surya 190 Sep  7 16:28 ass1.sh
drwx----- 2 surya surya 4096 Sep  9 22:20 dir
surya@LAPTOP-BSTB84HN:~$
```

2. touch command for modifying the access timings

```
surya@LAPTOP-BSTB84HN:~$ stat dir
  File: dir
  Size: 4096          Blocks: 8          IO Block: 4096   directory
Device: 810h/2064d   Inode: 29389        Links: 2
Access: (0700/drwx-----)  Uid: ( 1000/   surya)   Gid: ( 1000/   surya)
Access: 2023-09-09 22:20:36.192600784 +0530
Modify: 2023-09-09 22:20:36.192600784 +0530
Change: 2023-09-09 22:21:15.222600999 +0530
 Birth: 2023-09-09 22:20:36.192600784 +0530
surya@LAPTOP-BSTB84HN:~$ touch dir
surya@LAPTOP-BSTB84HN:~$ stat dir
  File: dir
  Size: 4096          Blocks: 8          IO Block: 4096   directory
Device: 810h/2064d   Inode: 29389        Links: 2
Access: (0700/drwx-----)  Uid: ( 1000/   surya)   Gid: ( 1000/   surya)
Access: 2023-09-09 22:25:20.802602352 +0530
Modify: 2023-09-09 22:25:20.802602352 +0530
Change: 2023-09-09 22:25:20.802602352 +0530
 Birth: 2023-09-09 22:20:36.192600784 +0530
surya@LAPTOP-BSTB84HN:~$ |
```

3. find command

```
surya@LAPTOP-BSTB84HN:~$ find dir
dir
dir/dir
surya@LAPTOP-BSTB84HN:~$ |
```

4. umask command

```
surya@LAPTOP-BSTB84HN:~$ umask 022
surya@LAPTOP-BSTB84HN:~$ ls -l
total 8
-rwxr-xr-x 1 surya surya 190 Sep  7 16:28 ass1.sh
drwx----- 3 surya surya 4096 Sep  9 22:28 dir
```

5. Hard link.

```
surya@LAPTOP-BSTB84HN:~$ touch test.sh
surya@LAPTOP-BSTB84HN:~$ nano test.sh
surya@LAPTOP-BSTB84HN:~$ ./test.sh
-bash: ./test.sh: Permission denied
surya@LAPTOP-BSTB84HN:~$ chmod +x test.sh
surya@LAPTOP-BSTB84HN:~$ ./test.sh
Hello World!
surya@LAPTOP-BSTB84HN:~$ ln test.sh link.txt
surya@LAPTOP-BSTB84HN:~$ ./link.txt
Hello World!
```

6. Symbolic links.

```
surya@LAPTOP-BSTB84HN:~$ ln -s test.sh softlink.txt
surya@LAPTOP-BSTB84HN:~$ ./softlink.txt
Hello World!
```

7. Directory and associated permissions.

```
surya@LAPTOP-BSTB84HN:~$ ls -l dir
total 4
drwxr-xr-x 2 surya surya 4096 Sep  9 22:28 dir
```

8. Modification and access times.

```
surya@LAPTOP-BSTB84HN:~$ stat test.sh
  File: test.sh
  Size: 20          Blocks: 8          IO Block: 4096   regular file
Device: 810h/2064d Inode: 29408         Links: 2
Access: (0755/-rwxr-xr-x)  Uid: ( 1000/   surya)   Gid: ( 1000/   surya)
Access: 2023-09-09 22:57:37.822984118 +0530
Modify: 2023-09-09 22:56:11.162983640 +0530
Change: 2023-09-09 22:57:27.122984059 +0530
 Birth: 2023-09-09 22:55:46.162983503 +0530
surya@LAPTOP-BSTB84HN:~$ |
```

9. Locating files.

```
surya@LAPTOP-BSTB84HN:~$ find . -type f -mtime -7
./bash_history
./test.sh
./motd_shown
./ass1.sh
./test.txt
./profile
./nano.66.save
./bash_logout
./bashrc
./link.txt
./nano.27.save
surya@LAPTOP-BSTB84HN:~$ find |
```

Above command will give all the files modified within last 7 days in the directory or its subdirectories.

10. expr – Computational and String handling

```
#!/bin/bash
result=$(expr 5 + 7)
echo "Result: $result"
```

```
surya@LAPTOP-BSTB84HN:~$ ./ass2.sh
Result: 12
```