

Jagan Institute of Management Studies

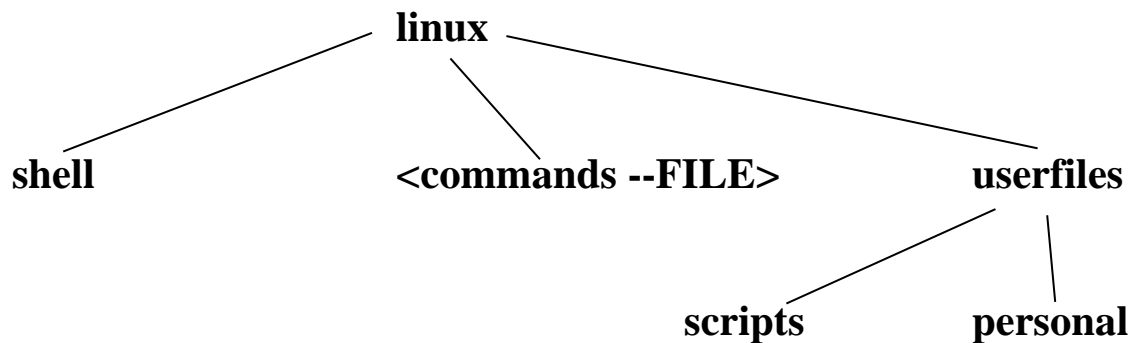
3, Institutional Area, Sector-5, Rohini, Delhi-110085

MCA – 163

Lab : Operating System with LINUX

ASSIGNMENT – I

1. Create a structure as follows in home directory:



```
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop$ mkdir sarthak
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop$ mkdir sarthak/linux
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop$ mkdir sarthak/linux/shell
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop$ mkdir sarthak/linux/userfiles
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop$ mkdir sarthak/linux/userfiles/scripts
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop$ mkdir sarthak/linux/userfiles/personal
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop$ cat > sarthak/linux/commands
```

```
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop$ tree sarthak
locales-launch: Data of en_US locale not found, generating, please wait...
```

```
sarthak
├── linux
│   ├── commands
│   ├── shell
│   └── userfiles
│       ├── personal
│       └── scripts
```

5 directories, 1 file

```
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop$ █
```

2. Create a file “text” in the personal directory and then copy the file into linux directory.

```
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak$ cat > linux/userfiles/personal/text
nothing
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak$ cp linux/userfiles/personal/text linux
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak$ tree
.
├── linux
│   ├── commands
│   ├── shell
│   ├── text
│   └── userfiles
│       ├── personal
│       │   └── text
│       └── scripts
5 directories, 3 files
```

3. Create 5 files prog1, prog2, prog3, prog4, prog5 in the scripts directory. Copy the directory structure userfiles in shell directory.

```
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles$ cd scripts
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ cat >prog1
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ cat >prog2
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ cat >prog3
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ cat >prog4
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ cat >prog5
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ tree
.
├── prog1
├── prog2
├── prog3
├── prog4
└── prog5
0 directories, 5 files

sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux$ cp -r userfiles/scripts shell
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux$ tree
.
├── commands
├── shell
│   ├── scripts
│   │   ├── prog1
│   │   ├── prog2
│   │   ├── prog3
│   │   ├── prog4
│   │   └── prog5
├── text
└── userfiles
    ├── personal
    │   └── text
    └── scripts
        ├── prog1
        ├── prog2
        ├── prog3
        ├── prog4
        └── prog5
5 directories, 13 files
```

4. Count total number of words, characters and lines in the files in scripts directory.

Entered content in the files ->

```
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ wc prog1
33 33 141 prog1
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ wc prog2
36 36 215 prog2
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ wc prog3
11 10 42 prog3
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ wc prog4
13 13 61 prog4
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ wc prog5
31 31 91 prog5
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ █
```



Lines Words Characters

5. Compare files prog1 and prog2.

```
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ cat >prog1
apple
carrot
fish
radish
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ cat >prog2
apple
berry
fish
salad
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ cmp prog1 prog2
prog1 prog2 differ: byte 7, line 2
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ comm prog1 prog2
      apple
    berry
carrot
      fish
radish
    salad
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ diff prog1 prog2
2c2
< carrot
---
> berry
4c4
< radish
---
> salad
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ █
```

6. Split prog1 into multiple files (with five lines each).

```
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ ls
prog1 prog2 prog3 prog4 prog5
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ cat >prog1
1
2
3
4
5
6
7
8
9
10
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ split -5 prog1
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$ ls
prog1 prog2 prog3 prog4 prog5 xaa xab
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles/scripts$
```

7. Delete scripts (from userfiles) directory.

```
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles$ tree
.
├── personal
│   └── text
└── scripts
    ├── prog1
    ├── prog2
    ├── prog3
    ├── prog4
    ├── prog5
    ├── xaa
    └── xab

2 directories, 8 files
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles$ rm -r scripts
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles$ tree
.
└── personal
    └── text

1 directory, 1 file
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux/userfiles$
```

8. Add execute permission to the user and write permission to group and others on commands file.

```
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux$ ls -l commands
----- 1 sarthak-sengar sarthak-sengar 1 Sep 23 17:47 commands
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux$ chmod u+x commands
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux$ chmod go+w commands
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux$ ls -l commands
--x-w--w- 1 sarthak-sengar sarthak-sengar 1 Sep 23 17:47 commands
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux$
```

9. Change permission of file “commands” to r--r--r—(Using Octal Notation).

```
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux$ ls -l commands
--x-w--w- 1 sarthak-sengar sarthak-sengar 1 Sep 23 17:47 commands
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux$ chmod 444 commands
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux$ ls -l commands
-r--r--r-- 1 sarthak-sengar sarthak-sengar 1 Sep 23 17:47 commands
sarthak-sengar@sarthak-sengar-VirtualBox:~/Desktop/sarthak/linux$
```