

- 1) Create a file and add **executable permission** to all users (user, group, others)

```
arjjun-g@arjjun-g-VMware-Virtual-Platform: ~  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ touch file1  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ chmod a+x file1  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ ls -l file1  
-rwxrwxr-x 1 arjjun-g arjjun-g 0 Jan 28 14:12 file1  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$
```

- 2) Create a file and remove **write permission only for group**

```
arjjun-g@arjjun-g-VMware-Virtual-Platform: ~  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ touch file2  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ chmod g-w file2  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ ls -l file2  
-rw-r--r-- 1 arjjun-g arjjun-g 0 Jan 28 14:15 file2  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$
```

- 3) Create a file in dir1/dir2/ and create a **softlink** inside dir1

```
arjjun-g@arjjun-g-VMware-Virtual-Platform: ~  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ mkdir -p dir1/dir2  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ touch dir1/dir2/file  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ ln -s dir1/dir2/file dir1/file_link  
  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ ls -l dir1/file_link  
lrwxrwxrwx 1 arjjun-g arjjun-g 14 Jan 28 14:19 dir1/file_link -> dir1/dir2/file  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$
```

4) Use `ps` with options to display all active processes

```
arjjun-g@arjjun-g-VMware-Virtual-Platform: ~  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ ps aux  
USER          PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND  
root           1  0.2  0.3  23012 14248 ?        Ss   14:08   0:01 /sbin/init sp  
root           2  0.0  0.0      0     0 ?        S    14:08   0:00 [kthreadd]  
root           3  0.0  0.0      0     0 ?        S    14:08   0:00 [pool_workque  
root           4  0.0  0.0      0     0 ?        I<   14:08   0:00 [kworker/R-rc  
root           5  0.0  0.0      0     0 ?        I<   14:08   0:00 [kworker/R-sy  
root           6  0.0  0.0      0     0 ?        I<   14:08   0:00 [kworker/R-kv  
root           7  0.0  0.0      0     0 ?        I<   14:08   0:00 [kworker/R-sl  
root           8  0.0  0.0      0     0 ?        I<   14:08   0:00 [kworker/R-ne  
root          10  0.0  0.0      0     0 ?        I<   14:08   0:00 [kworker/0:0H  
root          12  0.0  0.0      0     0 ?        I    14:08   0:00 [kworker/u512  
root          13  0.0  0.0      0     0 ?        I<   14:08   0:00 [kworker/R-mm  
root          14  0.0  0.0      0     0 ?        I    14:08   0:00 [rcu_tasks_kt  
root          15  0.0  0.0      0     0 ?        I    14:08   0:00 [rcu_tasks_ru  
root          16  0.0  0.0      0     0 ?        I    14:08   0:00 [rcu_tasks_tr  
root          17  0.0  0.0      0     0 ?        S    14:08   0:00 [ksoftirqd/0]  
root          18  0.0  0.0      0     0 ?        I    14:08   0:00 [rcu_preempt]  
root          19  0.0  0.0      0     0 ?        S    14:08   0:00 [rcu_exp_par_  
root          20  0.0  0.0      0     0 ?        S    14:08   0:00 [rcu_exp_gp_k  
root          21  0.0  0.0      0     0 ?        S    14:08   0:00 [migration/0]  
root          22  0.0  0.0      0     0 ?        S    14:08   0:00 [idle_inject/  
root          23  0.0  0.0      0     0 ?        S    14:08   0:00 [cpuhp/0]  
root          24  0.0  0.0      0     0 ?        S    14:08   0:00 [cpuhp/1]
```

5) Create 3 files in `dir1` and redirect `ls` output sorted by timestamp to a file

```
arjjun-g@arjjun-g-VMware-Virtual-Platform: ~  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ mkdir -p dir1  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ touch dir1/f1 dir1/f2 dir1/f3  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ ls -lt dir1 > dir1/time_sorted.txt  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$ cat dir1/time_sorted.txt  
total 4  
-rw-rw-r-- 1 arjjun-g arjjun-g    0 Jan 28 14:26 time_sorted.txt  
-rw-rw-r-- 1 arjjun-g arjjun-g    0 Jan 28 14:25 f3  
-rw-rw-r-- 1 arjjun-g arjjun-g    0 Jan 28 14:25 f1  
-rw-rw-r-- 1 arjjun-g arjjun-g    0 Jan 28 14:25 f2  
lrwxrwxrwx 1 arjjun-g arjjun-g   14 Jan 28 14:19 file_link -> dir1/dir2/file  
drwxrwxr-x 2 arjjun-g arjjun-g 4096 Jan 28 14:19 dir2  
arjjun-g@arjjun-g-VMware-Virtual-Platform:~$
```

This Assignment is done by Arjjun G