

MODULE 1

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

```
admin1@admin1-VirtualBox:~$ touch file
admin1@admin1-VirtualBox:~$ chmod 777 file
admin1@admin1-VirtualBox:~$ ls -l file
-rwxrwxrwx 1 admin1 admin1 0 Jan 29 19:14 file
admin1@admin1-VirtualBox:~$
```

2. Create a file and remove write permission for group user alone.

```
admin1@admin1-VirtualBox:~$ touch file_2
admin1@admin1-VirtualBox:~$ chmod g-w file_2
admin1@admin1-VirtualBox:~$ ls -l file_2
-rw-r--r-- 1 admin1 admin1 0 Jan 29 19:17 file_2
admin1@admin1-VirtualBox:~$
```

3. Create a file and add a softlink to the file in different directory (Eg : Create a file in dir1/dir2/file and create a softlink for file inside dir1)

```
admin1@admin1-VirtualBox:~$ mkdir -p dir1/dir2
admin1@admin1-VirtualBox:~$ touch dir1/dir2/file_3.txt
admin1@admin1-VirtualBox:~$ ln -s dir1/dir2/file_3.txt dir1/file_l.txt
admin1@admin1-VirtualBox:~$ ls -l dir1
total 4
drwxrwxr-x 2 admin1 admin1 4096 Jan 29 19:21 dir2
lrwxrwxrwx 1 admin1 admin1 20 Jan 29 19:22 file_l.txt -> dir1/dir2/file_3.txt
admin1@admin1-VirtualBox:~$
```

4. Use ps command with options to display all active process running on the system

USER	PID	%CPU	%MEM	VSZ	RSS	TTY	STAT	START	TIME	COMMAND
root	1	0.4	0.1	167864	12996	?	Ss	19:07	0:05	/sbin/init splash
root	2	0.0	0.0	0	0	?	S	19:07	0:00	[kthreadd]
root	3	0.0	0.0	0	0	?	I<	19:07	0:00	[rcu_gp]
root	4	0.0	0.0	0	0	?	I<	19:07	0:00	[rcu_par_gp]
root	5	0.0	0.0	0	0	?	I<	19:07	0:00	[slub_flushwq]
root	6	0.0	0.0	0	0	?	I<	19:07	0:00	[netns]
root	8	0.0	0.0	0	0	?	I<	19:07	0:00	[kworker/0:0H-events_highpri]
root	11	0.0	0.0	0	0	?	I<	19:07	0:00	[mm_percpu_wq]
root	12	0.0	0.0	0	0	?	I	19:07	0:00	[rcu_tasks_kthread]
root	13	0.0	0.0	0	0	?	I	19:07	0:00	[rcu_tasks_rude_kthread]
root	14	0.0	0.0	0	0	?	I	19:07	0:00	[rcu_tasks_trace_kthread]
root	15	0.0	0.0	0	0	?	S	19:07	0:00	[ksoftirqd/0]
root	16	0.2	0.0	0	0	?	I	19:07	0:03	[rcu_preempt]
root	17	0.0	0.0	0	0	?	S	19:07	0:00	[migration/0]
root	18	0.0	0.0	0	0	?	S	19:07	0:00	[idle_inject/0]
root	19	0.0	0.0	0	0	?	S	19:07	0:00	[cpuhp/0]
root	20	0.0	0.0	0	0	?	S	19:07	0:00	[cpuhp/1]
root	21	0.0	0.0	0	0	?	S	19:07	0:00	[idle_inject/1]
root	22	0.2	0.0	0	0	?	S	19:07	0:02	[migration/1]
root	23	0.2	0.0	0	0	?	S	19:07	0:02	[ksoftirqd/1]
root	26	0.0	0.0	0	0	?	S	19:07	0:00	[kdevtmpfs]
root	27	0.0	0.0	0	0	?	I<	19:07	0:00	[inet_frag_wq]
root	28	0.7	0.0	0	0	?	R	19:07	0:07	[kworker/u4:1-events_unbound]
root	29	0.0	0.0	0	0	?	S	19:07	0:00	[kauditfd]
root	30	0.0	0.0	0	0	?	S	19:07	0:00	[khungtaskd]
root	31	0.0	0.0	0	0	?	S	19:07	0:00	[oom_reaper]
root	32	0.1	0.0	0	0	?	I	19:07	0:02	[kworker/u4:2-events_unbound]
root	33	0.0	0.0	0	0	?	I<	19:07	0:00	[writeback]
root	34	0.0	0.0	0	0	?	S	19:07	0:00	[kcompactd0]
root	35	0.0	0.0	0	0	?	SN	19:07	0:00	[ksmd]
root	36	0.0	0.0	0	0	?	SN	19:07	0:00	[khugepaged]
root	37	0.0	0.0	0	0	?	I<	19:07	0:00	[integrityd]
root	38	0.0	0.0	0	0	?	I<	19:07	0:00	[kblockd]
root	39	0.0	0.0	0	0	?	I<	19:07	0:00	[blkcg_punt_bio]
root	40	0.0	0.0	0	0	?	I<	19:07	0:00	[tpm_dev_wq]

5. Create 3 files in a dir1 and re-direct the output of list command with sorted by timestamp of the files to a file

```
admin1@admin1-VirtualBox:~$ mkdir linuxfiles
admin1@admin1-VirtualBox:~$ cd linuxfiles
admin1@admin1-VirtualBox:~/linuxfiles$ touch f1.txt
admin1@admin1-VirtualBox:~/linuxfiles$ sleep 5
admin1@admin1-VirtualBox:~/linuxfiles$ touch f2.txt
admin1@admin1-VirtualBox:~/linuxfiles$ sleep 5
admin1@admin1-VirtualBox:~/linuxfiles$ touch f3.txt
admin1@admin1-VirtualBox:~/linuxfiles$ ls -lt > output.txt
admin1@admin1-VirtualBox:~/linuxfiles$ cat output.txt
total 0
-rw-rw-r-- 1 admin1 admin1 0 Jan 29 19:30 output.txt
-rw-rw-r-- 1 admin1 admin1 0 Jan 29 19:29 f3.txt
-rw-rw-r-- 1 admin1 admin1 0 Jan 29 19:28 f2.txt
-rw-rw-r-- 1 admin1 admin1 0 Jan 29 19:28 f1.txt
admin1@admin1-VirtualBox:~/linuxfiles$ █
```