

Module 1 Assessment

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

cmd: `touch dir1/file5.txt && chmod a+x dir1/file5.txt`

```
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ touch dir1/file5.txt && chmod a+x dir1/file5.txt
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ ls -la dir1/file5.txt
-rwxr-xr-x 1 mysterychap mysterychap 0 Jan 28 16:30 dir1/file5.txt
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$
```

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

cmd: `touch dir1/file4.txt && chmod g-w dir1/file4.txt`

```
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ touch dir1/file4.txt && chmod g-w dir1/file4.txt
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ ls -la dir1/file4.txt
-rw-r--r-- 1 mysterychap mysterychap 0 Jan 28 16:40 dir1/file4.txt
```

- 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)

cmd: `ln -s $PWD/dir1/dir2/file1.txt ./dir1/symlink2.txt`

```
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ ln -s $PWD/dir1/dir2/file1.txt ./dir1/symlink2.txt
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ ls -iR ./dir1/
./dir1/:
11655 dir2      208021 file2.txt  11548 fileinfo.log  12550 symlink.txt
208017 file1.txt 9843 file3.txt 207965 fileinfo2.log 11532 symlink2.txt

./dir1/dir2:
12549 file1.txt
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ cat dir1/symlink2.txt
Same file to create a symbolic link inside in ./dir1/dir2
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$
```

Error faced: The symlink failed because I used a relative path for the source file without accounting for the link's directory, causing it to resolve to an invalid path

```
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ mkdir ./dir1/dir2 && cat > ./dir1/dir2/file1.txt
Same file to create a symbolic link inside in ./dir1/dir2
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ ln -s ./dir1/dir2/file1.txt ./dir1/symlink.txt
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ ls -iR ./dir1/
./dir1/:
11655 dir2      208021 file2.txt  11548 fileinfo.log  12550 symlink.txt
208017 file1.txt 9843 file3.txt  207965 fileinfo2.log

./dir1/dir2:
12549 file1.txt
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ ls -i ./dir1/
11655 dir2      208021 file2.txt  11548 fileinfo.log  12550 symlink.txt
208017 file1.txt 9843 file3.txt  207965 fileinfo2.log
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ cat dir1/symlink.txt
cat: dir1/symlink.txt: No such file or directory
```

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

cmd: `ps -ef`

```
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ ps -ef
UID          PID    PPID  C STIME TTY          TIME CMD
root           1        0  0 15:12 ?        00:00:17 /sbin/init
root           2        1  0 15:12 ?        00:00:00 /init
root           8        2  0 15:12 ?        00:00:00 plan9 --control-socket 7 --log-level 4 --server-fd 8 --pipe-fd 10 --
root          63        1  0 15:12 ?        00:00:08 /usr/lib/systemd/systemd-journald
root          109        1  0 15:12 ?        00:00:08 /usr/lib/systemd/systemd-udevd
root          128        1  0 15:12 ?        00:00:00 snapfuse /var/lib/snapd/snaps/loiccat_1.snap /snap/loiccat/1 -o ro,nod
root          129        1  0 15:12 ?        00:00:00 snapfuse /var/lib/snapd/snaps/core18_2976.snap /snap/core18/2976 -o
root          132        1  0 15:12 ?        00:00:00 snapfuse /var/lib/snapd/snaps/core18_2979.snap /snap/core18/2979 -o
root          137        1  0 15:12 ?        00:00:00 snapfuse /var/lib/snapd/snaps/snapd_25577.snap /snap/snapd/25577 -o
root          143        1  0 15:12 ?        00:00:05 snapfuse /var/lib/snapd/snaps/snapd_25935.snap /snap/snapd/25935 -o
root          154       109  0 15:12 ?        00:00:00 (udev-worker)
```

- 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

Method 1: using ls with -t flag

cmd: touch dir1/file1.txt dir1/file2.txt dir1/file3.txt

ls -lat dir1/ > dir1/fileinfo.log

```
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ mkdir dir1
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ cat > dir1/file1.txt > dir1/file2.txt
This is a sample text
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ cat > dir1/file3.txt
Another sample text
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ ls -lat dir1/ > dir1/fileinfo.log
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ cat dir1/fileinfo.log
total 16
drwxr-xr-x 2 mysterychap mysterychap 4096 Jan 28 15:58 .
-rw-r--r-- 1 mysterychap mysterychap  0 Jan 28 15:58 fileinfo.log
-rw-r--r-- 1 mysterychap mysterychap 20 Jan 28 15:56 file3.txt
-rw-r--r-- 1 mysterychap mysterychap 22 Jan 28 15:56 file2.txt
-rw-r--r-- 1 mysterychap mysterychap  0 Jan 28 15:55 file1.txt
drwxr-xr-x 3 mysterychap mysterychap 4096 Jan 28 15:55 ..
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$
```

Method 2: using sort command with -k flag

cmd: ls -la dir1/ | sort -k7 > ./dir1/fileinfo2.log

```
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ ls -la dir1/ | sort -k7 > ./dir1/fileinfo2.log
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$ cat dir1/fileinfo2.log
total 20
drwxr-xr-x 3 mysterychap mysterychap 4096 Jan 28 15:55 ..
-rw-r--r-- 1 mysterychap mysterychap  0 Jan 28 15:55 file1.txt
-rw-r--r-- 1 mysterychap mysterychap 22 Jan 28 15:56 file2.txt
-rw-r--r-- 1 mysterychap mysterychap 20 Jan 28 15:56 file3.txt
-rw-r--r-- 1 mysterychap mysterychap 387 Jan 28 15:58 fileinfo.log
drwxr-xr-x 2 mysterychap mysterychap 4096 Jan 28 16:00 .
-rw-r--r-- 1 mysterychap mysterychap  0 Jan 28 16:00 fileinfo2.log
mysterychap@MysteryChap:~/embedUR-linux-practical/assessment/module-1$
```