

**Course: COMP-8567**  
**Assignment 04**  
**Due date: Nov/20/2022**  
**Marks 50**

Write a **Bash script** named `monitor.sh` that continuously monitors all the current user processes (`ps -u`) and whenever any user process  $p$  has more than 6 descendants, do the following:

1. Output the process tree with  $p$  as the root on the standard output (you can use **`pstree -p processid`**). A sample output of *ps*tree is shown in the screenshot below

**Note:** Consider **all the descendants** and not just the direct descendants.

2. A timestamp (date and time) is entered into **log.txt** followed by the contents of `ps tree -p processid`

### Submission Instructions:

- You are required test your program by dynamically creating or increasing the number of child processes
- Log.txt must have at least 10 entries
- Submit two files: **monitor.sh** and **log.txt**

### Sample Screenshot showing the output of ps-u and pstree

```
NoMachine - Window
pranga@alpha:~/chapter5$ ps -u
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
pranga   1639429 0.0  0.0   9548  5464 pts/3    Ss   09:36   0:00 bash
pranga   1654786 99.9  0.0   2172    516 pts/3    R+   09:39  12:33 ./fork7
pranga   1654787 99.9  0.0   2172     72 pts/3    R+   09:39  12:33 ./fork7
pranga   1654788 99.9  0.0   2172     72 pts/3    R+   09:39  12:33 ./fork7
pranga   1654789 99.9  0.0   2172     72 pts/3    R+   09:39  12:33 ./fork7
pranga   1654790 99.9  0.0   2172     72 pts/3    R+   09:39  12:33 ./fork7
pranga   1654791 99.9  0.0   2172     72 pts/3    R+   09:39  12:33 ./fork7
pranga   1654792 99.9  0.0   2172     72 pts/3    R+   09:39  12:33 ./fork7
pranga   1654793 99.9  0.0   2172     72 pts/3    R+   09:39  12:33 ./fork7
pranga   1654917 0.0  0.0   9548  5396 pts/4    Ss   09:39   0:00 bash
pranga   1665909 0.0  0.0  10720  3280 pts/4    R+   09:52   0:00 ps -u
pranga@alpha:~/chapter5$ pstree -p 1639429
bash(1639429)---fork7(1654786)---fork7(1654787)---fork7(1654789)---fork7(1654793)
                                     |
                                     +--fork7(1654792)
                                --fork7(1654788)---fork7(1654791)
                   --fork7(1654790)
pranga@alpha:~/chapter5$
```

Taskbar at bottom shows search bar and various application icons.