Assignment – Memory Management

1) Setup additional swap space in the system to solve low memory issue. The swap which you added should be available post reboot.
2) Find out the number of process is in run queue and blocking queue.

Solutions:

1)swapon --show

sudo fallocate -l 1G /swapfile (adding 1G of swap file)

sudo chmod 600 /swapfile (setting rw permissions)

sudo mkswap /swapfile (converting swapfile into swap space)

Verify the space: swapon --show

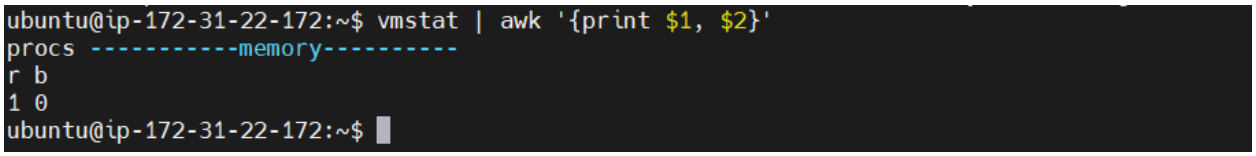
```
*** System restart required ***
Last login: Sun Mar  2 15:33:31 2025 from 223.178.80.166
ubuntu@ip-172-31-22-172:~$ swapon --show
ubuntu@ip-172-31-22-172:~$ sudo fallocate -l 1G /swapfile
ubuntu@ip-172-31-22-172:~$ sudo chmod 600 /swapfile
ubuntu@ip-172-31-22-172:~$ sudo mkswap /swapfile
Setting up swapspace version 1, size = 1024 MiB (1073737728 bytes)
no label, UUID=0ed0adc1-f8ef-4452-93a2-1cf0e68d64c7
ubuntu@ip-172-31-22-172:~$ sudo swapon /swapfile
ubuntu@ip-172-31-22-172:~$ swapon --show
NAME      TYPE  SIZE USED PRIO
/swapfile file 1024M   0B   -2
ubuntu@ip-172-31-22-172:~$
```

Making swap space permanent:

2)vmstat

```
ubuntu@ip-172-31-22-172:~$ vmstat
procs -----------memory---------- ---swap-- -----io---- -system-- -------cpu-------
 r  b   swpd   free   buff  cache   si   so    bi    bo   in   cs us sy id wa st gu
 1  0      0  71520  86556 534056    0    0     6     7   33    0  0  0 100  0  0  0
```

Vmstat |awk {$1 $2} first first 2 column displaying running and block


ubuntu@ip-172-31-22-172:~$ vmstat | awk '{print $1, $2}'
procs -----------memory----------
r b
1 0
ubuntu@ip-172-31-22-172:~$