Practical no: 1

Name: Saloni Vishwakarma

Batch-Roll no: C1-13

Aim: To study and execute basic Linux Sytem Commands and write shell scripts to display the system particulars (processor, processes and memory)

Theory:

Iscpu

Q: Run command more /proc/cpuinfo and explain the following terms: processor and cores. Use the command Iscpu to verify your definitions. Writing shell scripts.

Solution: cd /proc echo Directory changed pwd Is

Q: How many cores does your machine have? Solution: echo Total cores cat /proc/cpuinfo | grep cores

Q: How many processors does your machine have? Solution: echo Total Processor nproc –all

Q: What is the frequency of each processor? Solution: echo frequency of processor cat /proc/cpuinfo | grep Mhz

Q: What is the architecture of your CPU? Solution: echo Architecture of Cpu: Iscpu

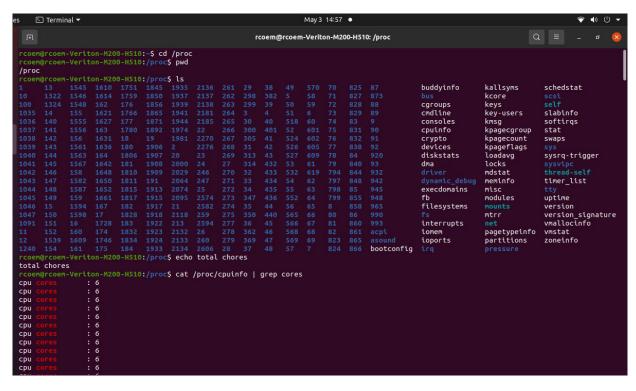
Q: How much physical memory does your system have? Solution: echo Total Memory cat /proc/meminfo | grep MemTotal

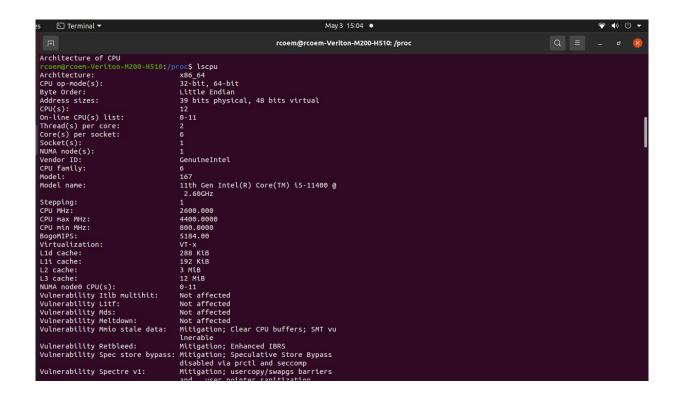
Q: How much of this memory is free?
Solution: echo Avialable Memory
cat /proc/meminfo | grep MemAvailable

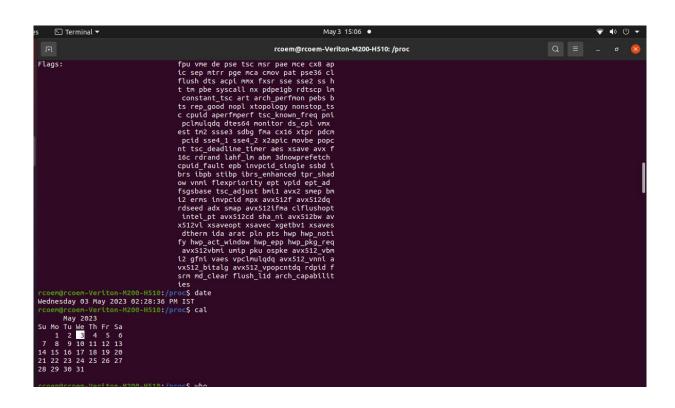
Q: What is total number of number of forks and context switches since the system booted up?
Solution: echo Total Forks
vmstat -f
echo 3

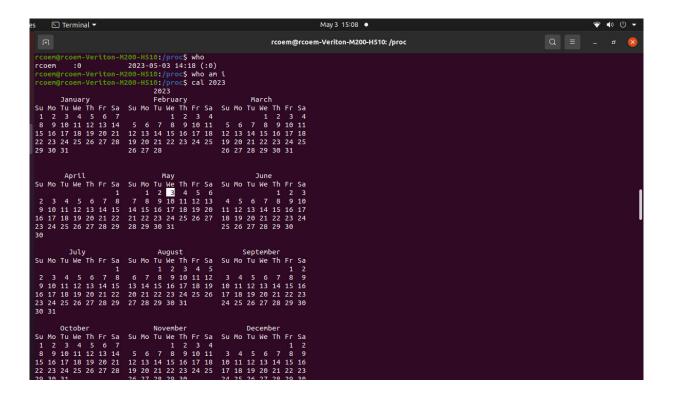
echo Total number of Context Switiches: cat /proc/stat | grep ctxt

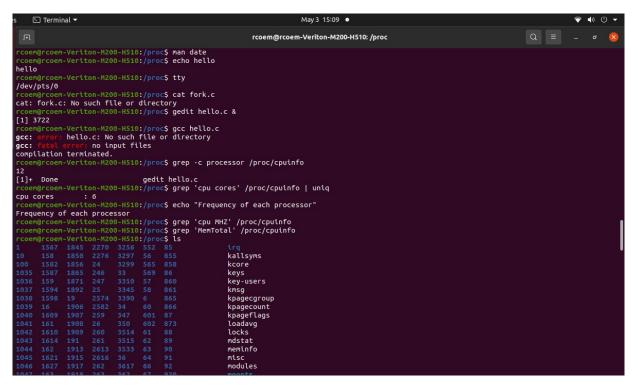
Output:

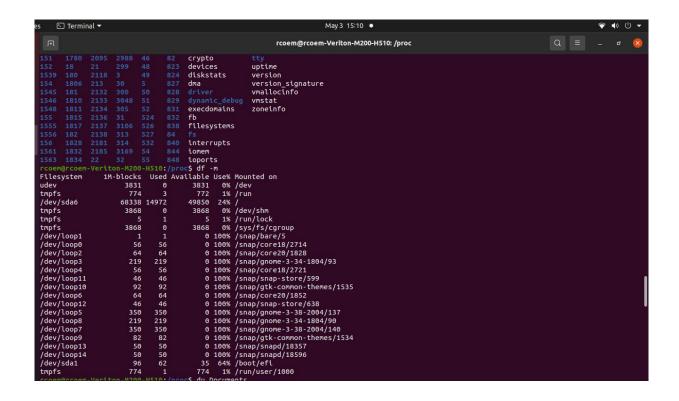


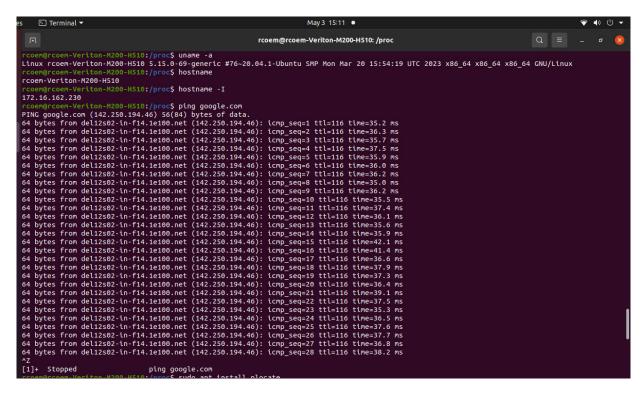












The commands and their uses-

- 1. date- displays or sets the date and time.
- 2. cal- displays a calender.
- 3. who- displays the user currently logged in to your Linux operating system.
- 4. man- displays the user manual of any command the we run on the terminal.
- 5. echo- to print the message on the screen.
- 6. tty- writes the name of terminal to standard output.
- 7. cat- to print the content of a file onto the standard output stream.
- 8. touch- to create a blank file.
- 9. grep- used to search a particular word or pattern related to that word from the file.
- 10. Is- used to list the files.
- 11. sudo- allows to run programs with the security privileges of another user.
- apt- Advanced Packaging Tool
- locate- used to find files on filesystems.
- 14. passwd- changes passwords for user account.
- 15. df- displays the amount of disk space available on the filesystem with each file name's argument.
- 16. du- measures the disk space occupied by files or directories.
- 17. uname- displays the system information such as hardware platform, system name and processor.
- 18. hostname- displays the set and system host name.
- 19. chmod- used to change the permission of a file or directory.
- 20. ping- helps diagnose the network connectivity between your device and a network destination.

Conclusion: I have successfully implemented basic Linux Sytem Commands and shell scripts to display the system particulars (processor,processes and memory)