BASIC LINUX COMMANDS

1) Date commands

  1) date + %m
    output :- 01
  2) date + %h
    output :- Jan
  3) date + %d
    output :- 30
  4) date + %H
    output :- 13
  5) date + %M
    output :- 41
  6) date + %S
    output :- 30

2) Echo command :-
  echo "hi"
  output :- hi

3) BC Command
  bc
  1 + 2
  output :- 3

4) Cal command
  cal Sep 2005

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

5) Who command :-
  who
  output :- student   pts/1   2025-01-30   8:04
          student2 pts/2   2025-01-30   13:38

6) who am i command
  who am i
  output : student   pts/1   2025-01-30   8:04

7) id command :-
  id
  output :- uid = 1000 (student)   gid = 1000 (student)   groups = 1000
  (student)   context = unconfined_u : unconfined_r :
    unconfined_t : s0-s0 : c0 c1023

8) tty command :-
  tty
  output :- \dev\pts\1

9) clear command :
  clear

10) man command :-
  man clear

11) PS Command :
  ps -e
  output :- 3569   pts/1   00:00:00   ps
  ps - aux
  output :- student 8594   00:00   11672 3652 pts/1   04 14:02

12) Uname command :-
  uname -m → i686
  uname -n → localhost.localdomain
  uname -r → 4.11.8-300 · FC26 · i686 + PAE
  uname -s → Linux
  uname -v → #1 SMP Thu Jun 29 20:38:21 UTC 2017
  uname -a → Linux localhost.localdomain 4.11.8-300.FC26.
    i686 + PAE #1 SMP Thu Jun 29 20:38:21 UTC 2017
    i686 i386 GNU/Linux

1.2) Directory commands :-
  1) pwd :- /home/Student
  2) mkdir 163 :-
  3) rm dir :-
  4) cd 163 :-
  5) ls :- csd cse css Desktop Document Download
    Music MWT Picture Public
    ls -l :→ total 0
    ls -a →

1.3) File Handling commands
  1) cat command :-
    cat > newfile.txt
    Hi' this is a new file
  2) Display command :
    cat # newfile.txt
    Hi 'this is a new file

3) cp command :
  cp newfile.txt   newfilecopy.txt

4) rm command :
  rm newfile.txt

5) mv command :
  mv newfilecopy.txt   newfile.txt

6) file command :
  file newfile.txt
  output :- newfile.txt ASCII text

7) wc command :
  wc newfile.txt
  output :- 1 1 37 newfile.txt

8) ls command :
  ls > newfile

9) The 'pipes' command :
  who | wc -l
  output :- 29

10) tee command :
  who | tee sample.txt | wc -l
  output :- 39

11) Metacharacters of unix
  1) ls n** :- newfile.txt
  2) ls ?e* :- newfile.txt
  3) ls [a-o]* :- newfile.txt
  4) ls [!a-o]* :- "cannot access '[!a-o]*': No such file or directory

12. chmod commands :-
   1) chmod -wx newfile.txt
   2) chmod +rwx newfile.txt
   3) chmod =w+ newfile.txt

13) Octal Notation commands :
   chmod 761 newfile.txt

14) Grouping commands :-
   1) The semicolon one command
      ls ; date
      output : newfile.txt
         Saturday 01 February 2005 02:43:39 PM

   2) '&&' operator
      ls && date
      output :- newfile.tx
         Saturday 01 February 2025 02:43:15 PM IST

   3) '||' operator
      ls || date
      output :- newfile.txt

15) Filters
   1) Head filter
      head newfile.txt
      output :- newfile.txt

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2) tail filter :
      tail newfile.txt
      output :- newfile.txt
3) more filter :-
      ls -l | more
      output :- total 4
4) grep command :
      grep file newfile.txt
      output :- newfile.txt
5) sort command :-
      sort newfile.txt
      output newfile.txt
6) nl command :-
      nl 163
      output :- nl:163: It is a directory.
7) cut command :-
      cut -c 2 newfile.txt
      output :- e
8) Other essential commands :-
   1) free :
      output :-

	total	used	free	shared	buffed/cache
mem	2091992	685644	1504280	209724	11 02048
Swap	3424252	0	3424352		

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2. Loop :
   top: 14:05:24 up 24 min, 3 user, load average: 0.11,
   0.34, 0.35
   Task: 199 total, 1 running, 160 sleeping, 0 stopped
   % cpu(s): 0.505, 0.25y, 0.0n1, 99.3id, 0.044, 0.3hi,

3. Vm stat
   output :

procs		memory				swap		io		system	
r	b	swpd	free	buff	cache	si	so	bi	bo		
0	0	0	1520008	79655	1039636	0	0	204	92		

4. df

file system	1k-blocks	use	Available	use %
dev tmpfs	1635036	0	1635036	0%
tmpfs	1635996	0	1635996	0%
tmpfs	1645996	1272	16414724	1%

5. Ping :
   output :
   usage: ping [-aAbBdDfh1nOgrRUvVb4i] [-c count] [-i interval]
      [-I interface] [-m mark] [-M pmtudisc option] [-l preload]
      [pattern] [-Q tos] [-w deadline] [-w timeout]

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6) Ifconfig :
   output :
   enp3s0: flag = 4163 UP, broadcast, Running, Multicasts mtu 1500
      inet 172.16.9.23 netmask 255.255.252.0
      broadcast 172.16.11.255 ....
      RX packets 190665 bytes 18938095 (180.1MB)

7) Trace route :
   output :
   trace route [-46FI hre BDFV] [-f first H] [-g gatry]
      [-i device] [-m max H] [-N Squeries] [-p ports] [-t tos]

Result:

The Unix/Linux commands successfully displayed system information, managed files, and performed navigation tasks, confirming the proper setup and functionality of the environment.