

OPERATING SYSTEM - CS23431

EXP 1(B)

BASIC LINUX COMMANDS

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ROLL NO:

GENERAL PURPOSE COMMANDS:

Commands and output

① Date Commands

1. date +%m
output : 01
2. date +%h
output : Jan
3. date +%d
output : 30
4. date +%Y
output : 25
5. date +%H
output : 13
6. date +%M
output : 41
7. date +%S
output : 34

② Echo Command :

echo "This is cse department"
output : This is cse department

③ calendar command :

cal Jan 2025
output:
January 2025
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 31

④ bc command :

bc -l
20-15
output : 15

⑤ Who command :

who-
output :

student	pts/0	2025-01-30	08:12
student	pts/1	2025-01-30	08:11
student	pts/2	2025-01-30	13:13

⑥ who am i command:

who am i

output: student pts/3 2025-01-26 13:36

⑦ id command:

id

output:

uid=1000(student) gid=1000(student) groups=1000(student)
context=unconfined - u: unconfined - s: unconfined - l: s0 - s0: c0.c1023

⑧ tty command:

tty

output: /dev/pts/3

⑨ clear command:

clear

output: Console screen is cleared

⑩ man command:

man who

output: Name who - show who is logged on

⑪ process status command:

ps

output:

PID	TTY	TIME	CMD
2627	pts/3	00:00:00	bash
2946	pts/3	00:00:00	ps

ps -e

⑫ uname Commands:

1. uname -m

output: i686

2. uname -n

output: localhost.localdomain

3. uname -r

output: 4.11.8-300.fc26.i686+PAE

4. uname -s

output: linux

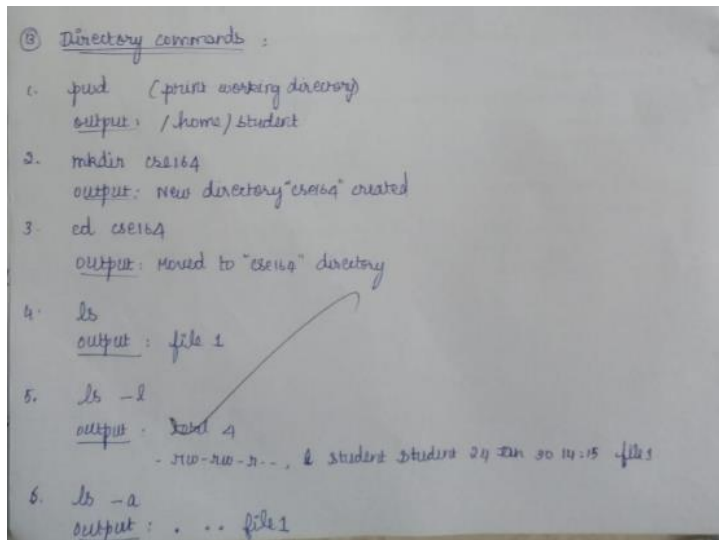
5. uname -T

output: #1 SMP Thu Jun 29 20:38:21 UTC 2017

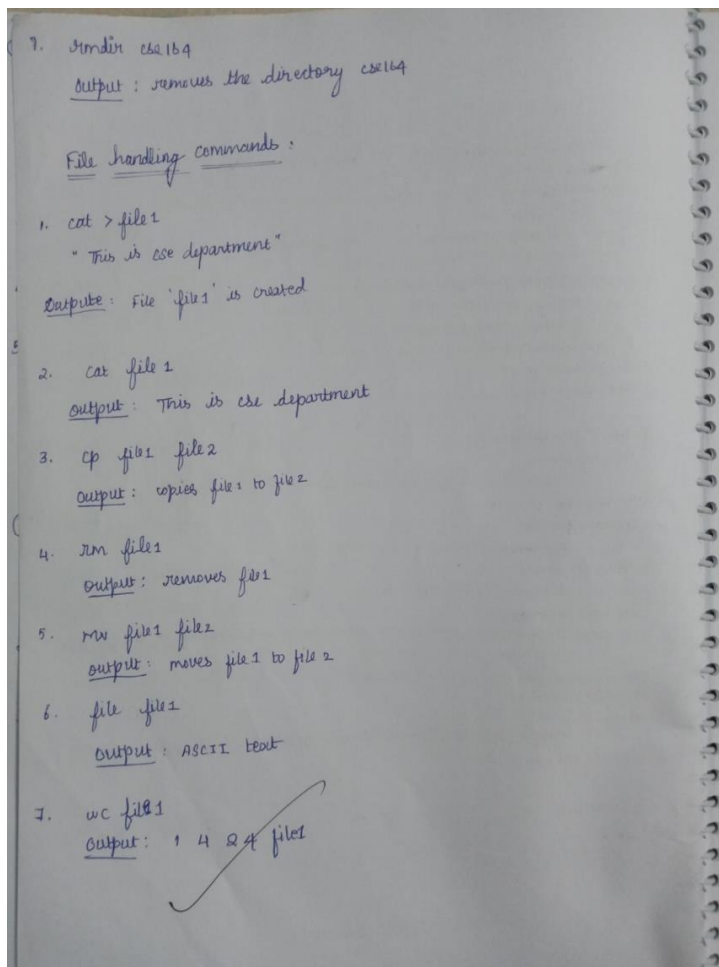
6. uname -a

output: linux localhost.localdomain 4.11.8-300.fc26.i686+PAE #1 SMP Thu Jun 29 20:38:21 UTC 2017 i686 i686 i686 GNU/Linux

DIRECTORY COMMANDS:



FILE HANDLING COMMANDS:



8. `ls > file2`

output: directs list of files to file 2

9. `who | wc -l`

output: 28

10. `who | tee file1 | wc -l`

output: 28

11. `ls f*`

output: files

12. `ls [a-m]*`

output: file 1

13. `ls [!a-m]*`

output: Student

14. `ls -l`

output: total 8

-x--x--x--. 1 280164 Chellu 24 Feb 1 18:50 file1
-rw-r--r--. 1 280164 Chellu 15 Feb 1 18:04 Student

GROUPING COMMANDS:

15) `chmod -rwx files`

Output: Restricts read, write & execute command access to files

16) `chmod +rwx files`

Output: Gives read, write & execute access to files

Grouping commands;

1) `who ; date`

Output:

root	tty2	2025-02-01	13:35	(tty)
cha161	pts/1	2025-02-01	13:39	(172.16.52.161)
cha172	pts/2	2025-02-01	13:39	(172.16.52.173)

...

Saturday 01 February 2025 01:55:12 PM IST

2) `who && date`

Output:

root	tty2	2025-02-01	13:35	(tty)
cha161	pts/1	2025-02-01	13:39	(172.16.52.161)
cha172	pts/2	2025-02-01	13:39	(172.16.52.173)

...

Saturday 01 February 2025 01:55:12 PM IST

FILTER COMMANDS:

3) ~~who # -d~~

3) date || who

Output :

Saturday 01 February 2020 01:55:29 PM IST

4)

Filter commands :

1) head file1

Output : This is cse department

2) tail file1

Output : This is cse department

3) grep "cse" student

Output : Arun cse
Ram cse
Ram cse

4) sort student

Output : Arun cse
Ram cse
Ram cse

5) sort -n student

Output : Ram cse
Arun cse
Arun cse

6) sort -n student

Output : Arun cse
Ram cse
Ram cse

7) sort -m student

Output : Arun cse
Ram cse
Ram cse

8) sort -u student

Output : Arun cse
Ram cse

9) nl student

Output : 1. Arun cse
2. Ram cse
3. Ram cse

10) cut -c 1-3 student

Output : Aru
Ram
Ram

OTHER COMMANDS:

other essential commands :

1) free command :

(i) free ~~mk~~

output :

	total	used	free	shared	buff/cache
Mem :	16892656	1702248	10848764	277464	3541644
Swap :	8388604	0	8388604		
					available 13810116

(ii) free -h

output :

	total	used	free	shared	buff/cache
Mem :	15Gi	1.6Gi	10Gi	270Mi	3.4Gi
Swap :	8.0Gi	0B	8.0Gi		
					available 13Gi

2) top

output :

top -14:37:03 up 1:03, 26 users, load average: 0.06, 0.02, 0.00
 Tasks: 468 total, 1 running, 466 sleeping, 1 stopped, 0 zombie
 %CPU(s): 0.0 us, 0.0 sy, 0.0 ni, 99.9 id, 0.0 wa, 0.0 hi, 0.0 si
 MiB Mem: 15715.5 total, 10332.0 free, 1920.9 used
 MiB Swap: 8192.0 total, 8192.0 free, 0.0 used

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM
8247	root	20	0	22684	468	3455	R	0.3	0.0

3) vmstat

output:

```
procs ----- memory ----- swap ----- io ----- system -----
                                cpu -----
r  b  swpd  free  buff  cache  si  so  bi  bo  in  cs  us  sy
    id  wa  st

1  0  .  0  10575320  5060 3652196  0  0  40  23  40  43  0  0
                                99  1  0
```

4) df

output:

Filesystem	1K-blocks	Used	Available	Use%	Mounted on
devtmpfs	4096	0	4096	0%	/dev
tmpfs	8046328	0	8046328	0%	/dev/shm
tmpfs	32/3532	2332	3216200	1%	/run
:					

5) ping 172.16.4.1

output:

PING 172.16.4.1 (172.16.4.1) 56(84) bytes of data:
64 bytes from 172.16.4.1: icmp_seq=1 ttl=64 time=0.272 ms
64 bytes from 172.16.4.1: icmp_seq=2 ttl=64 time=0.350 ms
:
:

7. `rm -r cs2164`

Output: removes the directory `cs2164`

File handling commands:

1. `cat > file1`

"This is cse department"

Output: File 'file1' is created

2. `cat file1`

Output: This is cse department

3. `cp file1 file2`

Output: copies file1 to file2

4. `rm file1`

Output: removes file1

5. `mv file1 file2`

Output: moves file1 to file2

6. `file file1`

Output: ASCII text

7. `wc file1`

Output: 1 4 24 file1