

# OPERATING SYSTEM - CS23431

## EXP 1(B)

### BASIC LINUX COMMANDS

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#### 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

Sa	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
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: i866

2. uname -n

output: localhost.localdomain

3. uname -r

output: 4.14.8-300.fc26.i686+PAE

4. uname -s

output: linux

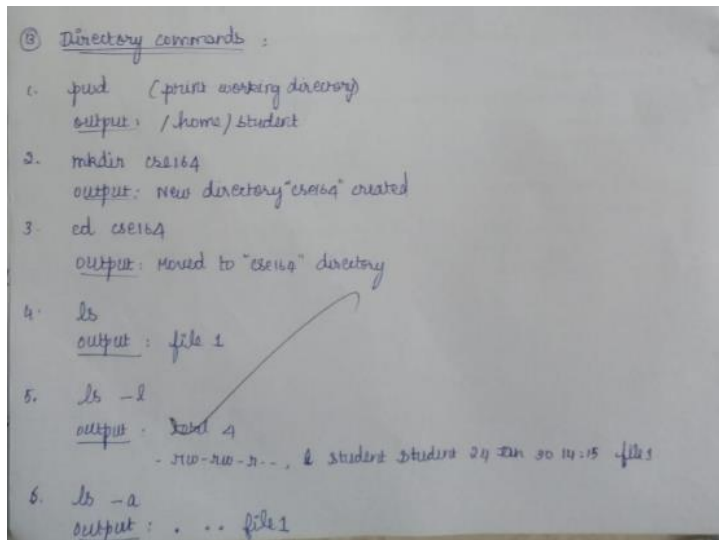
5. uname -v

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

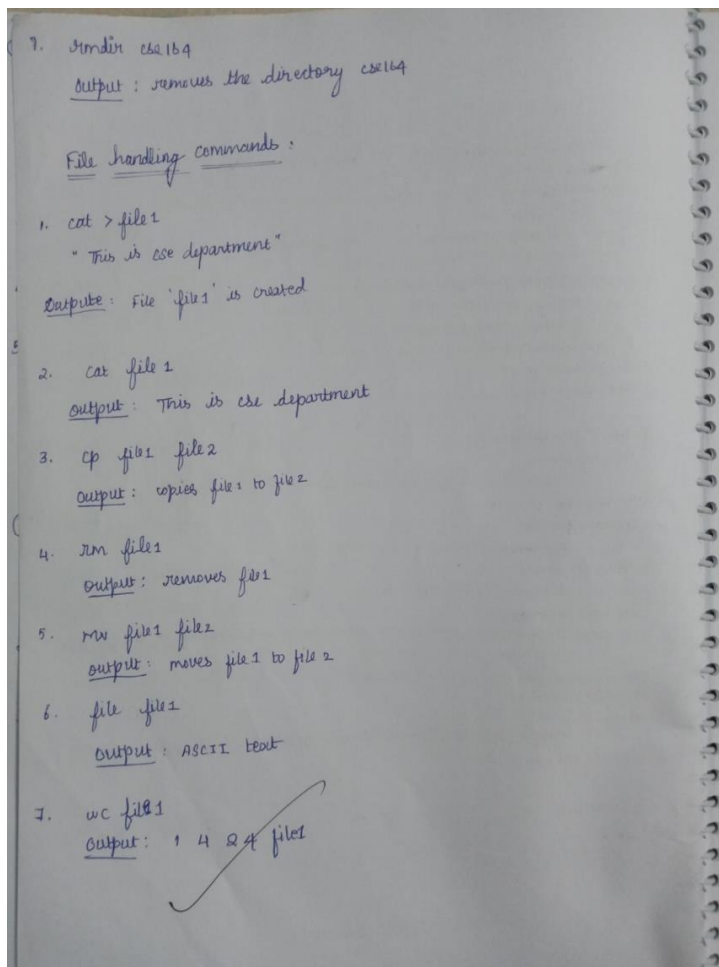
6. uname -a

output: linux localhost.localdomain 4.14.8-300.fc26.i686+PAE #1 SMP Thu Jun 29 20:38:21 UTC 2017 i686 i686 i686 GNU/Linux

## DIRECTORY COMMANDS:



## FILE HANDLING COMMANDS:



8. 167 filz

copy: Directs list of files to file 2

9. who | we - I

Output : 28

10. who | the files | we - d

Output : 28

11.  $23 f''$ 

output: files

12.  $b [a-m]^n$

Output: file 1

13.  $\hookrightarrow [1-a-m]^k$ 

output: Student

14. Is  $\pi$  - l

output : total 8

~~-N--N--N-- . 1 C80164 C82164 24 Feb 1 13:50 file 1~~

## 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 :	16092656	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