

OPERATING SYSTEM LAB

ASSIGNMENT: 1

1. Directory operations

Name: cd Syntax: cd [directory]

Description: The current working directory to the directory specified by "directory".

Example: enter the directory / usr / bin /:

cd / usr / bin

```
nimra@ubuntu:~$ cd /usr/bin
nimra@ubuntu:/usr/bin$
```

2. **Name:** ls

Syntax: ls [options] [pathname-list]

Description: display the file name within the directory and file name specified in the "pathname-list"

Example: List all names in the current working directory is s at the beginning of the file:

ls s *

```
nimra@ubuntu:~/Desktop$ cd
nimra@ubuntu:~$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos
nimra@ubuntu:~$
```

3. **Name:** pwd

Syntax: pwd

Description: Displays the absolute path of the current directory.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
nimra@ubuntu:~/Desktop$ cd
nimra@ubuntu:~$ pwd
/home/nimra
nimra@ubuntu:~$
```

4. **Name:** mkdir

Syntax: mkdir [options] dirName

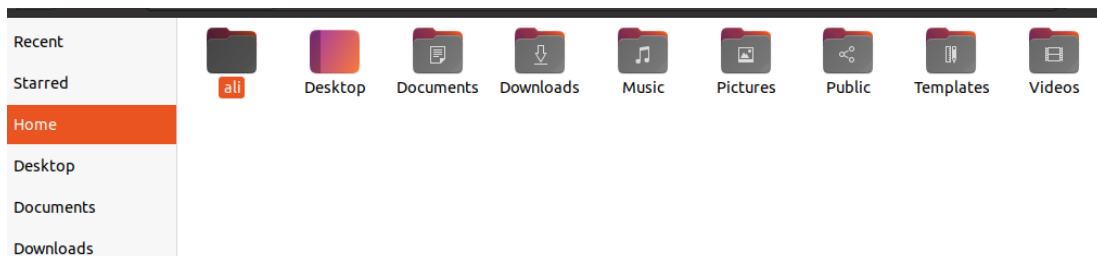
Description: create name is dirName subdirectory.

Example: In the working directory, create a subdirectory named AA:

mkdir AA

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
nimra@ubuntu:~/Desktop$ cd
nimra@ubuntu:~$ mkdir ali
nimra@ubuntu:~$ ls
ali      Documents  message.txt  nimra.txt   Public      Videos
Desktop  Downloads  Music        Pictures    Templates
nimra@ubuntu:~$
```



5. **Name:** rmdir

Syntax: rmdir [-p] dirName

Description: delete empty directories.

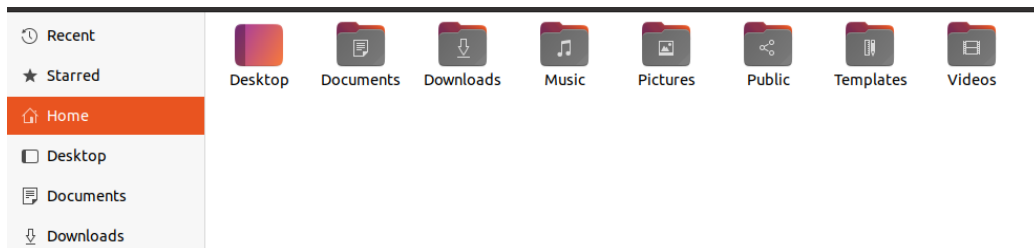
Example: to delete the working directory,
subdirectory named AA:

rmdir AA

2 file operations.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
ninra@ubuntu:~/Desktop$ cd
ninra@ubuntu:~$ rmdir ali
ninra@ubuntu:~$ ls
Desktop    Downloads  Music      Pictures   Templates
Documents  message.txt nimra.txt  Public     Videos
ninra@ubuntu:~$
```



6. **Name:** cp

Syntax: cp [options] file1 file2

Description: Copy the file file1 to file2.

Common options:-r copy the entire directory

Example: aaa copy (existing), and named bbb:

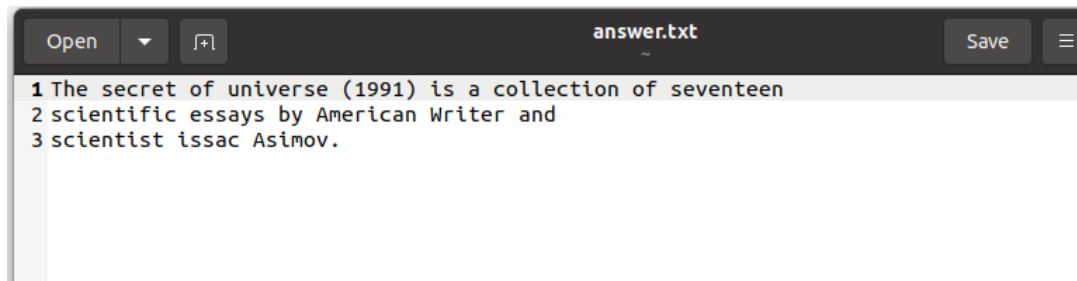
cp aaa bbb

To run a command as administrator (user "root"), use "sudo <command>". See "man sudo_root" for details.

```
nimra@ubuntu:~/Desktop$ cd
nimra@ubuntu:~$ cat > secret-of-universe.txt
The secret of universe (1991) is a collection of seventeen
scientific essays by American Writer and
scientist issac Asimov.
```

```
nimra@ubuntu:~$ cat > answer.txt
nimra@ubuntu:~$ ls
answer.txt  Downloads  nimra.txt  secret-of-universe.txt
Desktop     message.txt Pictures    Templates
Documents   Music      Public     Videos
nimra@ubuntu:~$
```

```
nimra@ubuntu:~$ cp secret-of-universe.txt answer.txt
nimra@ubuntu:~$
```



```
nimra@ubuntu:~$ cat answer.txt
The secret of universe (1991) is a collection of seventeen
scientific essays by American Writer and
scientist issac Asimov.
nimra@ubuntu:~$ ls
answer.txt  Downloads  nimra.txt  secret-of-universe.txt
Desktop     message.txt Pictures    Templates
Documents   Music      Public     Videos
nimra@ubuntu:~$
```

7. **Name:** mv

Syntax: mv [options] source ... directory

Description: Rename the file, or the number of files to another directory.

Example: aaa renamed as bbb:

mv aaa bbb

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
nimra@ubuntu:~/Desktop$ cd
nimra@ubuntu:~$ ls
Desktop    Downloads  Music      Public      Templates
Documents  message    Pictures    secret-of-universe.txt  Videos
nimra@ubuntu:~$ mv message answer.txt
nimra@ubuntu:~$ ls
answer.txt  Documents  Music      Public      Templates
Desktop     Downloads  Pictures    secret-of-universe.txt  Videos
nimra@ubuntu:~$
```

8. **Name:** rm

Syntax: rm [options] name ...

Description: delete files and directories.

Commonly used options:-f to force delete files

Example: Remove all but the suffix named c file

rm *.C

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
nimra@ubuntu:~/Desktop$ cd
nimra@ubuntu:~$ ls
answer.txt  Documents  Music      Public      Templates
Desktop     Downloads  Pictures    secret-of-universe.txt  Videos
nimra@ubuntu:~$ rm answer.txt
nimra@ubuntu:~$ ls
Desktop     Downloads  Pictures    secret-of-universe.txt  Videos
Documents   Music      Public      Templates
nimra@ubuntu:~$
```

9. **Name:** cat

Syntax: cat [options] [file-list]

Description: standard output connection, display a list of files in the file-list file

Example 1: Displays the contents of file1 and file2

cat file1 file2

Example 2: file1 and file2 merged into file3

cat file1 file2 > file3

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
nimra@ubuntu:~/Desktop$ cd
nimra@ubuntu:~$ cat > file1.txt
My name is nimra nasir
nimra@ubuntu:~$ cat > file2.txt
mnfrnvfhufnvnvn
nimra@ubuntu:~$ cat > file3.txt
nimra@ubuntu:~$ cat file1.txt file2.txt
My name is nimra nasir
mnfrnvfhufnvnvn
nimra@ubuntu:~$ cat file1 file2 >file3
cat: file1: No such file or directory
cat: file2: No such file or directory
nimra@ubuntu:~$ cat file1.txt file2.txt > file3.txt
nimra@ubuntu:~$ ls
Desktop  file1.txt  file3.txt  Public  Videos
Documents file2.txt  Music      secret-of-universe.txt
Downloads file3      Pictures   Templates
nimra@ubuntu:~$ cat file3.txt
My name is nimra nasir
mnfrnvfhufnvnvn
nimra@ubuntu:~$
```

10. **Name:** more

Syntax: more [options] [file-list]

Description: standard output is connected to the paging file in the file list file-list

Example: paging file AAA

more AAA

```
nimra@ubuntu:~$ more file1.txt
```

```
d  
d  
d  
d  
d  
d  
s  
  
a  
a  
a  
  
d  
d  
d  
  
f  
  
f  
f
```

```
a  
a  
a  
  
d  
d  
d  
  
f  
  
f  
f  
f
```

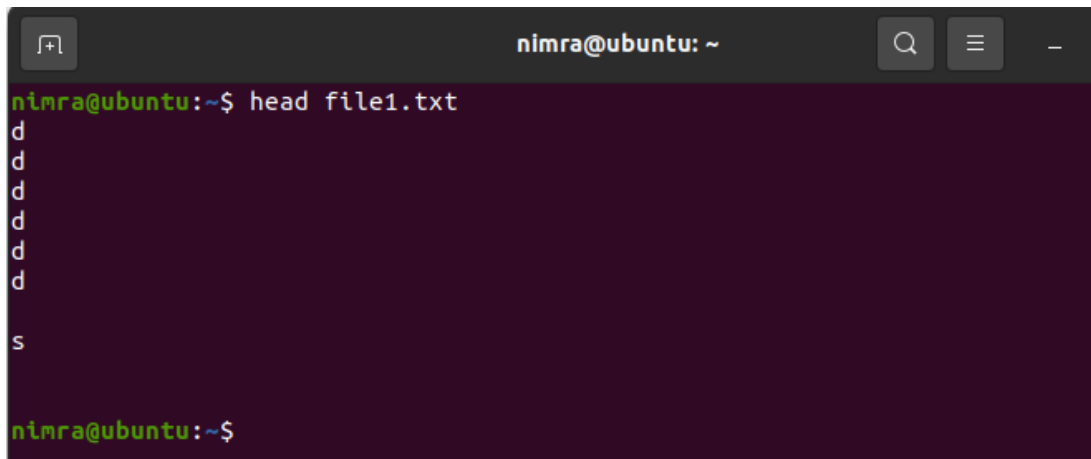
```
--More-- (63%)
```

11. **Name:** head

Syntax: head [options] [file-list]

Description: Display the initial part of the file in the list of files in the file-list, the default display 10 lines;

Example: the initial part of the file AAA
head AAA



```
nimra@ubuntu: ~  
nimra@ubuntu:~$ head file1.txt  
d  
d  
d  
d  
d  
d  
d  
s  
  
nimra@ubuntu:~$
```

12. **Name:** tail

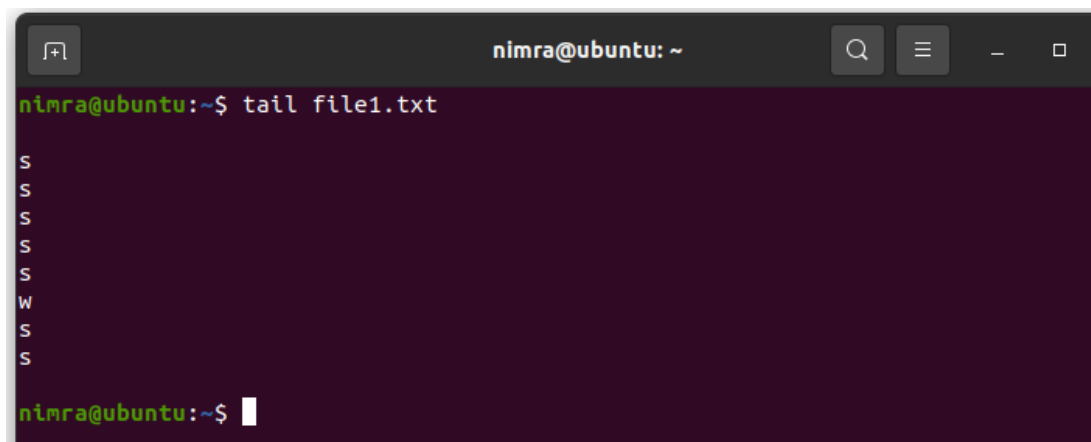
Syntax: tail [options] [file-list]

Description: Displays the tail of the list of files in the file-list file; default display

10 lines;

Example: tail file AAA

tail AAA



```
nimra@ubuntu: ~  
nimra@ubuntu:~$ tail file1.txt  
s  
s  
s  
s  
s  
s  
w  
s  
s  
  
nimra@ubuntu:~$
```

13. **Name:** ln

Syntax: ln [options] existing-file new-file

In [options] existing-file-list directory

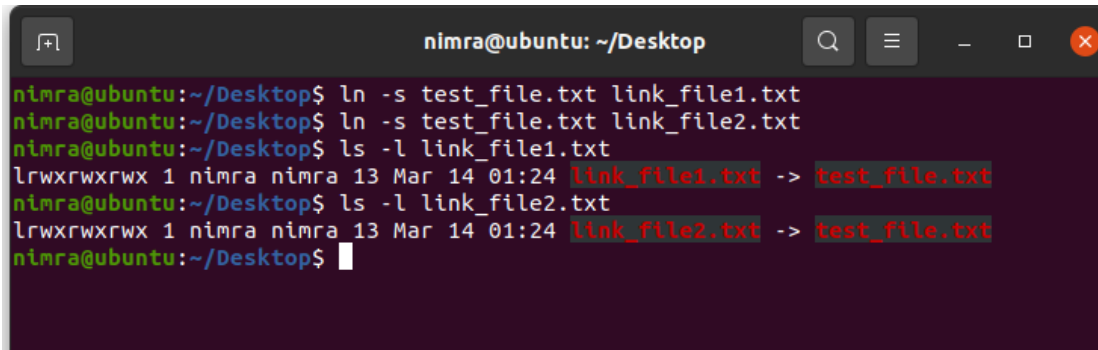
Description: create a link named "existing-file" new-file , Created with the same name for each file contained in the existing-file-list "link in the directory catalog Commonly used options:-f, regardless of whether the new-file exists, create links -S to create a soft link

Example 1: To establish the soft connection temp.soft, point Chapter3

In-s Chapter3 temp.soft

Example 2: for all the files and subdirectories in the examples directory to create a soft connection

In-s ~ / linuxbook / examples / * / home / faculty /linuxbook / examples

A terminal window titled 'nimra@ubuntu: ~/Desktop' showing a series of commands and their outputs. The user creates two soft links from 'test_file.txt' to 'link_file1.txt' and 'link_file2.txt'. Then, they use 'ls -l' to verify the links, showing they both point to 'test_file.txt'.

```
nimra@ubuntu:~/Desktop$ ln -s test_file.txt link_file1.txt
nimra@ubuntu:~/Desktop$ ln -s test_file.txt link_file2.txt
nimra@ubuntu:~/Desktop$ ls -l link_file1.txt
lrwxrwxrwx 1 nimra nimra 13 Mar 14 01:24 link_file1.txt -> test_file.txt
nimra@ubuntu:~/Desktop$ ls -l link_file2.txt
lrwxrwxrwx 1 nimra nimra 13 Mar 14 01:24 link_file2.txt -> test_file.txt
nimra@ubuntu:~/Desktop$
```

14. **Name:** echo

Syntax: echo \$ variable

Description: Displays the value of the variable variable.

Example 1: Display the current user's PATH value

echo \$ PATH

```
nimra@ubuntu:~$ echo $ PATH
$ PATH
nimra@ubuntu:~$
```

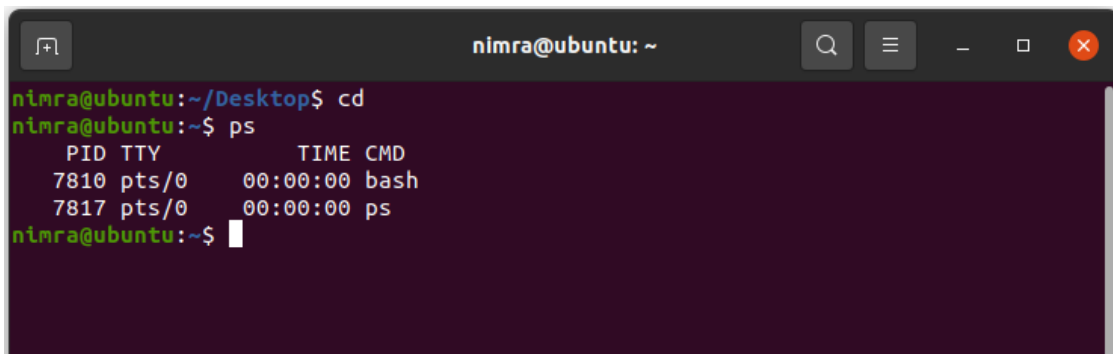
15. **Name:** ps

Syntax: \$ ps [options]

Description: The active process is used to view the current system

Example 1: display all current processes

ps-aux

A terminal window titled 'nimra@ubuntu: ~' with search, menu, and window control icons. The prompt is 'nimra@ubuntu:~/Desktop\$'. The user enters 'cd' and the prompt changes to 'nimra@ubuntu:~\$'. Then the user enters 'ps' and the output is displayed as a table with columns PID, TTY, TIME, and CMD. The output shows two processes: PID 7810 (bash) and PID 7817 (ps).

```
nimra@ubuntu:~/Desktop$ cd
nimra@ubuntu:~$ ps
  PID TTY          TIME CMD
  7810 pts/0    00:00:00 bash
  7817 pts/0    00:00:00 ps
nimra@ubuntu:~$
```

16. **Name:** kill

Syntax: \$ kill [-signal] pid

Description: terminates the specified process

Example 1: the process of termination of 1511

kill 1511


```
root@ubuntu: /home/nimra
MiB Swap: 1873.4 total, 1873.4 free, 0.0 used. 918.7 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
645	root	20	0	175392	7796	6708	S	0.7	0.4	0:27.21	vmtoolsd
7524	root	20	0	20624	4024	3256	R	0.7	0.2	0:00.14	top
1867	nimra	20	0	740868	46448	35264	S	0.3	2.3	0:03.32	update-+
7112	root	20	0	0	0	0	I	0.3	0.0	0:00.83	kworker+
7499	nimra	20	0	823344	51300	38668	S	0.3	2.6	0:00.63	gnome-t+
1	root	20	0	176000	11620	8472	S	0.0	0.6	0:12.93	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.12	kthreadd
3	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_gp
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_par+
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker+
9	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_perc+
10	root	20	0	0	0	0	S	0.0	0.0	0:00.82	ksoftir+
11	root	20	0	0	0	0	R	0.0	0.0	0:05.64	rcu_sch+
12	root	rt	0	0	0	0	S	0.0	0.0	0:00.12	migrati+
13	root	-51	0	0	0	0	S	0.0	0.0	0:00.00	idle_in+
14	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/0
15	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/1

```
root@ubuntu:/home/nimra# kill 7524
bash: kill: (7524) - No such process
root@ubuntu:/home/nimra# kill 1867
root@ubuntu:/home/nimra#
```

-----THE END-----