

**VPM'S B.N.BANDODKAR COLLEGE OF SCIENCE  
THANE(W)**

**DEPARTMENT OF IT**

**TYBSc IT Sem5 LINUX SYSTEM ADMINISTRATION  
PRACTICAL MANUAL**

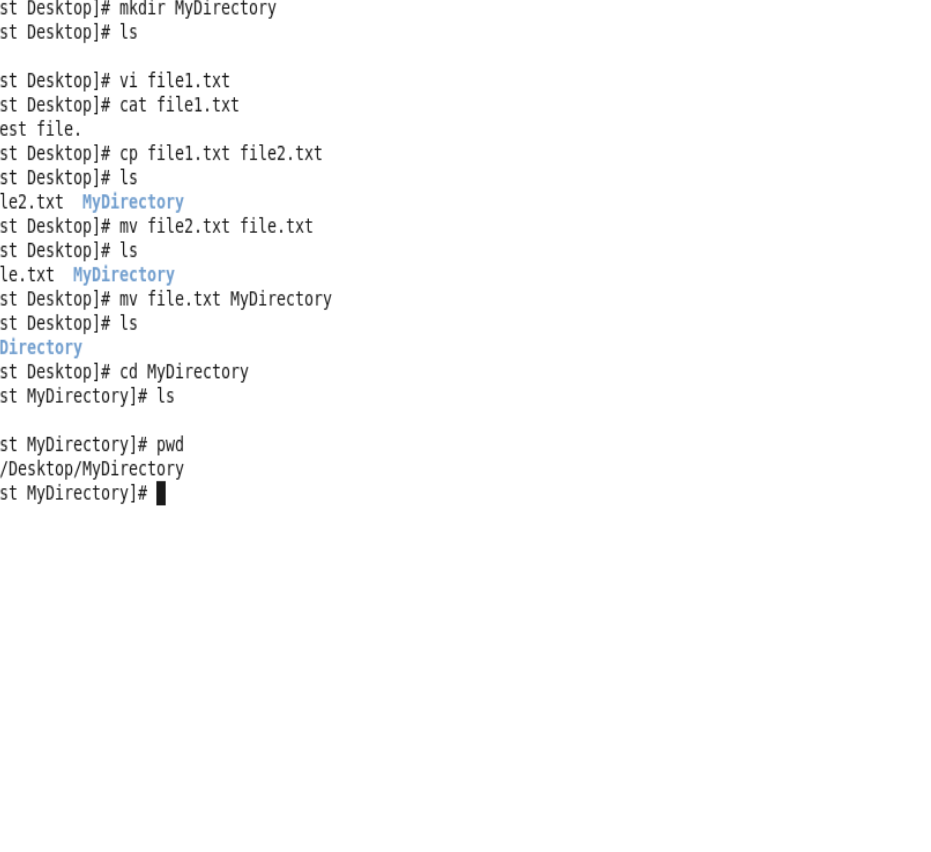
**Practical 1**

**Exploring the Graphical Desktop**

- In the login screen, click the login name “student” and type the password.
- In the upper-right corner you can see the name of the user who is currently logged in.
- Click this username to get access to different tools, such as the tool that allows you to
- change the password.
- Right-click the graphical desktop, and select Open in terminal. Next, type “ls” command.
- On the graphical desktop, you’ll find an icon representing your home folder. Click it
- and navigate to the /etc folder. You’ll notice that as a normal user, you have limited access to this folder.
- Right-click a workspace icon, and select the number of workspaces you want to be displayed.
- Right-click the NetworkManager icon in the upper-right corner of the desktop.
- Next, click Connection Information to display information about the current Connection.
- Press F1 to show the help system. Type the keyword you want to search for and browse the results.

## **B.Command Line Interface**

- Use command “mkdir” to create a directory.
- Use “ls” command to view the content.
- Create a text file using “vi” command.
- Copy and paste a file using “cp” command.
- Rename a file using “mv” command.
- Move a file using “mv” command.
- Change the directory using “cd” command.
- Use “pwd” command to print working directory.
- Use “history” command to find all the previous commands.



The screenshot shows a terminal window titled "root@localhost: ~/Desktop/Desktop/MyDirectory". The terminal displays a series of commands and their outputs:

```

[root@localhost Desktop]# mkdir MyDirectory
[root@localhost Desktop]# ls
MyDirectory
[root@localhost Desktop]# vi file1.txt
[root@localhost Desktop]# cat file1.txt
This is the test file.
[root@localhost Desktop]# cp file1.txt file2.txt
[root@localhost Desktop]# ls
file1.txt  file2.txt  MyDirectory
[root@localhost Desktop]# mv file2.txt file.txt
[root@localhost Desktop]# ls
file1.txt  file.txt  MyDirectory
[root@localhost Desktop]# mv file.txt MyDirectory
[root@localhost Desktop]# ls
file1.txt  MyDirectory
[root@localhost Desktop]# cd MyDirectory
[root@localhost MyDirectory]# ls
file.txt
[root@localhost MyDirectory]# pwd
/root/Desktop/Desktop/MyDirectory
[root@localhost MyDirectory]#

```

The terminal window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The status bar at the bottom shows "root@localhost: ~/Des..." and a system clock indicating "Tue Sep 4, 7:29 PM".

- Use “ifconfig” command to check the IP address

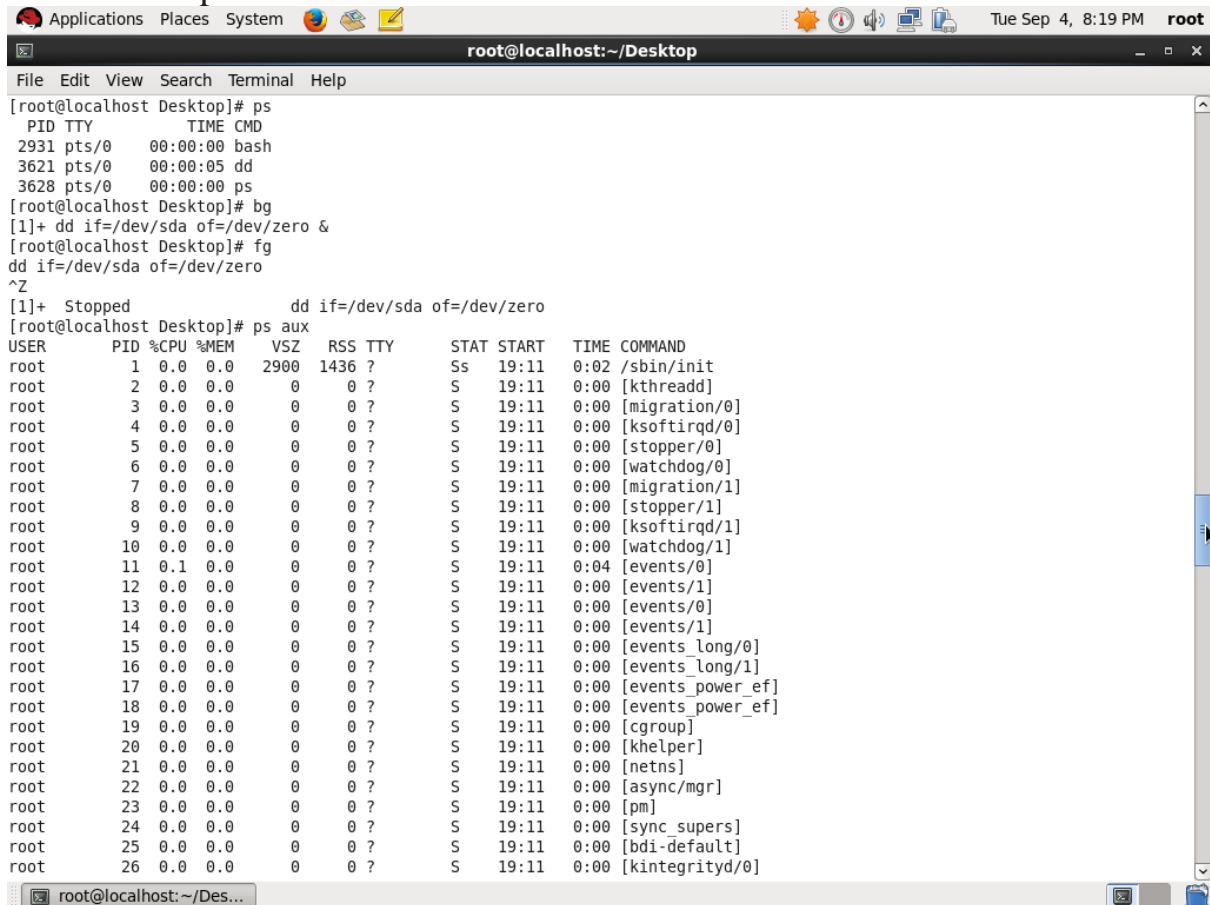
```
root@localhost: ~/Desktop
File Edit View Search Terminal Help
[root@localhost Desktop]# ifconfig
eth0      Link encap:Ethernet  HWaddr 08:00:27:D5:4D:A4
          inet addr:192.168.1.105  Bcast:192.168.1.255  Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:fed5:4da4/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:376 errors:0 dropped:0 overruns:0 frame:0
          TX packets:126 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:36474 (35.6 KiB)  TX bytes:9495 (9.2 KiB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:16 errors:0 dropped:0 overruns:0 frame:0
          TX packets:16 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:960 (960.0 b)  TX bytes:960 (960.0 b)

[root@localhost Desktop]#
```

## C.Managing Process

- Use ps command.
- Use ps aux command.
- Use top command.



The screenshot shows a terminal window titled "root@localhost: ~/Desktop". The user has executed several commands to manage processes:

```
[root@localhost Desktop]# ps
PID TTY          TIME CMD
2931 pts/0      00:00:00 bash
3621 pts/0      00:00:05 dd
3628 pts/0      00:00:00 ps
[root@localhost Desktop]# bg
[1]+  dd if=/dev/sda of=/dev/zero &
[root@localhost Desktop]# fg
dd if=/dev/sda of=/dev/zero
^Z
[1]+  Stopped                  dd if=/dev/sda of=/dev/zero
[root@localhost Desktop]# ps aux
```

USER	PID	%CPU	%MEM	VSZ	RSS	TTY	STAT	START	TIME	COMMAND
root	1	0.0	0.0	2900	1436	?	Ss	19:11	0:02	/sbin/init
root	2	0.0	0.0	0	0	?	S	19:11	0:00	[kthreadd]
root	3	0.0	0.0	0	0	?	S	19:11	0:00	[migration/0]
root	4	0.0	0.0	0	0	?	S	19:11	0:00	[ksoftirqd/0]
root	5	0.0	0.0	0	0	?	S	19:11	0:00	[stopper/0]
root	6	0.0	0.0	0	0	?	S	19:11	0:00	[watchdog/0]
root	7	0.0	0.0	0	0	?	S	19:11	0:00	[migration/1]
root	8	0.0	0.0	0	0	?	S	19:11	0:00	[stopper/1]
root	9	0.0	0.0	0	0	?	S	19:11	0:00	[ksoftirqd/1]
root	10	0.0	0.0	0	0	?	S	19:11	0:00	[watchdog/1]
root	11	0.1	0.0	0	0	?	S	19:11	0:04	[events/0]
root	12	0.0	0.0	0	0	?	S	19:11	0:00	[events/1]
root	13	0.0	0.0	0	0	?	S	19:11	0:00	[events/0]
root	14	0.0	0.0	0	0	?	S	19:11	0:00	[events/1]
root	15	0.0	0.0	0	0	?	S	19:11	0:00	[events_long/0]
root	16	0.0	0.0	0	0	?	S	19:11	0:00	[events_long/1]
root	17	0.0	0.0	0	0	?	S	19:11	0:00	[events_power_ef]
root	18	0.0	0.0	0	0	?	S	19:11	0:00	[events_power_ef]
root	19	0.0	0.0	0	0	?	S	19:11	0:00	[cgroup]
root	20	0.0	0.0	0	0	?	S	19:11	0:00	[khelper]
root	21	0.0	0.0	0	0	?	S	19:11	0:00	[netns]
root	22	0.0	0.0	0	0	?	S	19:11	0:00	[async/mgr]
root	23	0.0	0.0	0	0	?	S	19:11	0:00	[pm]
root	24	0.0	0.0	0	0	?	S	19:11	0:00	[sync_supers]
root	25	0.0	0.0	0	0	?	S	19:11	0:00	[bdi-default]
root	26	0.0	0.0	0	0	?	S	19:11	0:00	[kintegrityd/0]

## Use top command

```
top - 20:22:06 up 1:11, 2 users, load average: 0.07, 0.06, 0.01
Tasks: 187 total, 1 running, 185 sleeping, 1 stopped, 0 zombie
Cpu(s): 1.0%us, 0.3%sy, 0.0%ni, 98.7%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Mem: 2433056k total, 1016484k used, 1416572k free, 655972k buffers
Swap: 1048572k total, 0k used, 1048572k free, 169980k cached
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
3646	root	20	0	2708	1164	880	R	1.0	0.0	0:00.16	top
2324	root	20	0	99.3m	22m	9m	S	0.7	1.0	0:11.05	Xorg
2929	root	20	0	53300	12m	9804	S	0.7	0.5	0:04.07	gnome-terminal
11	root	20	0	0	0	0	S	0.3	0.0	0:04.33	events/0
1564	root	20	0	3572	656	476	S	0.3	0.0	0:01.14	irqbalance
2645	root	20	0	6388	644	432	S	0.3	0.0	0:01.09	udisks-daemon
1	root	20	0	2900	1436	1208	S	0.0	0.1	0:02.84	init
2	root	20	0	0	0	0	S	0.0	0.0	0:00.02	kthreadd
3	root	RT	0	0	0	0	S	0.0	0.0	0:00.03	migration/0
4	root	20	0	0	0	0	S	0.0	0.0	0:00.03	ksoftirqd/0
5	root	RT	0	0	0	0	S	0.0	0.0	0:00.00	stopper/0
6	root	RT	0	0	0	0	S	0.0	0.0	0:00.10	watchdog/0
7	root	RT	0	0	0	0	S	0.0	0.0	0:00.03	migration/1
8	root	RT	0	0	0	0	S	0.0	0.0	0:00.00	stopper/1
9	root	20	0	0	0	0	S	0.0	0.0	0:00.03	ksoftirqd/1
10	root	RT	0	0	0	0	S	0.0	0.0	0:00.10	watchdog/1
12	root	20	0	0	0	0	S	0.0	0.0	0:00.69	events/1
13	root	20	0	0	0	0	S	0.0	0.0	0:00.00	events/0
14	root	20	0	0	0	0	S	0.0	0.0	0:00.00	events/1
15	root	20	0	0	0	0	S	0.0	0.0	0:00.00	events_long/0
16	root	20	0	0	0	0	S	0.0	0.0	0:00.00	events_long/1
17	root	20	0	0	0	0	S	0.0	0.0	0:00.00	events_power_ef
18	root	20	0	0	0	0	S	0.0	0.0	0:00.00	events_power_ef
19	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cgroup
20	root	20	0	0	0	0	S	0.0	0.0	0:00.00	khelper
21	root	20	0	0	0	0	S	0.0	0.0	0:00.00	netns
22	root	20	0	0	0	0	S	0.0	0.0	0:00.00	async/mgr
23	root	20	0	0	0	0	S	0.0	0.0	0:00.00	pm
24	root	20	0	0	0	0	S	0.0	0.0	0:00.05	sync_supers
25	root	20	0	0	0	0	S	0.0	0.0	0:00.00	bdi-default
26	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kintegrityd/0
27	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kintegrityd/1