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Experiment 3:

- **AIM: Implement Basic Commands of Linux like ls, cp, mv using Kernel APIs.**
- **THEORY:**

cp → Copies the file.

cp -r → Copies recursively (directories).

cp -b → Copies the backups of the destination file in the source folder.

cp -i → Asks for confirmation before overwriting the destination file.

cp -f → Forces copying by deleting the destination file if necessary.

cp -v → Enables verbose mode, showing which files are being copied.

cp -p → Preserves file attributes such as modification time, access time, owners, and permissions.

Syntax: cp -p source_file destination_file.

cp -l → Creates a hard link file.

mv → Moves or renames a file.

mv -i → Asks for confirmation before moving the file.

mv -f → Forces moving by deleting the destination file if necessary.

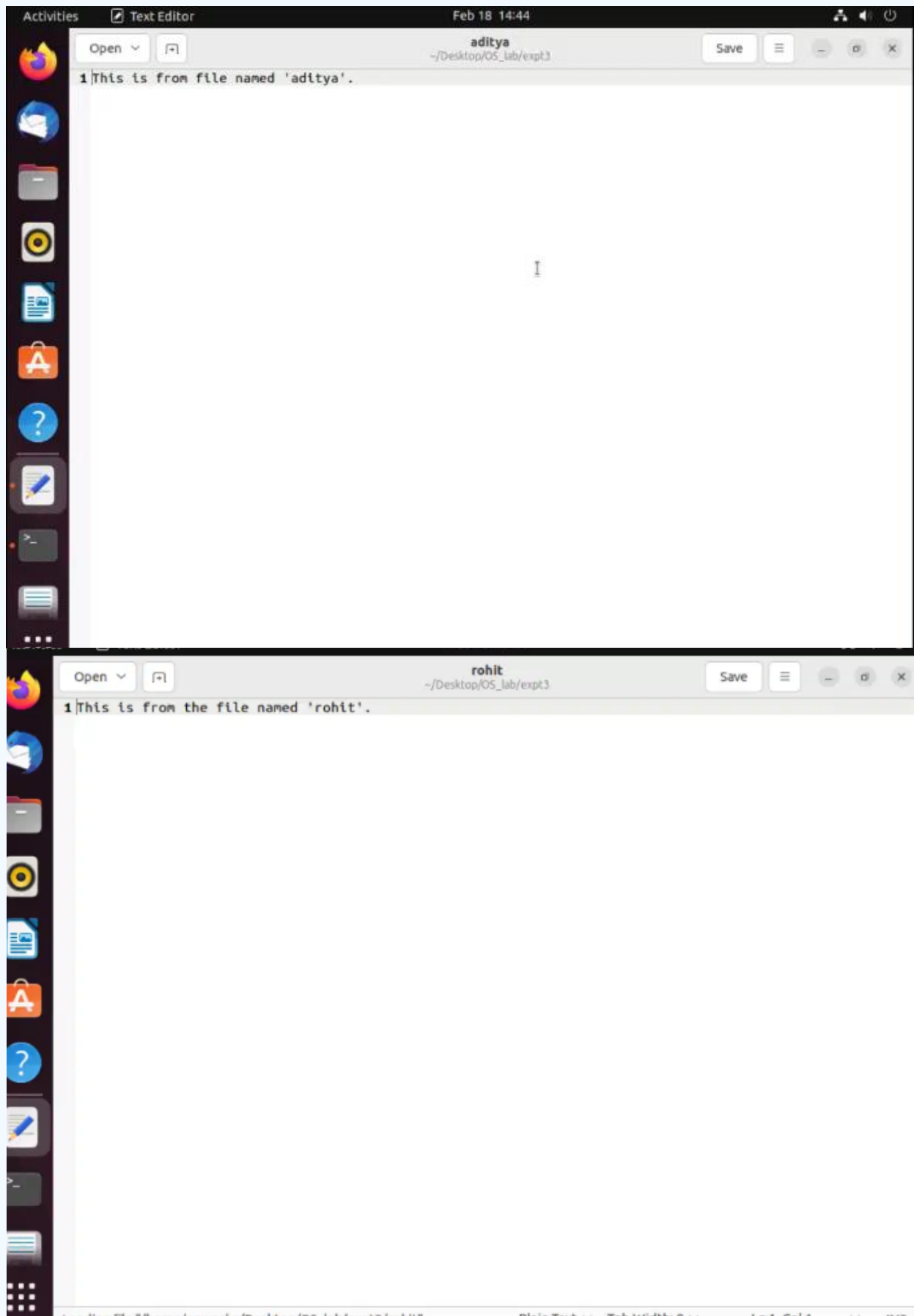
Syntax: mv -f source_file destination_file.

mv -n → Prevents overwriting an existing file.

Syntax: mv -n source_file destination_file.

mv -b → Takes a backup of an existing file.

- SCREENSHOTS:



Activities Terminal Feb 18 14:49 onworks@onworks: ~/Desktop/OS_lab/expt3

```
onworks@onworks:~$ cd desktop
bash: cd: desktop: No such file or directory
onworks@onworks:~$ cd Desktop
onworks@onworks:~/Desktop$ mkdir OS_lab
onworks@onworks:~/Desktop$ cd OS_lab
onworks@onworks:~/Desktop/OS_lab$ mkdir expt3
onworks@onworks:~/Desktop/OS_lab$ cd expt3
onworks@onworks:~/Desktop/OS_lab/expt3$ cat -> aditya
This is from file named 'aditya'
^Z
[1]+  Stopped                  cat -> aditya
onworks@onworks:~/Desktop/OS_lab/expt3$ cat -> rohit
This is from the file named 'rohit'
^Z
[2]+  Stopped                  cat -> rohit
onworks@onworks:~/Desktop/OS_lab/expt3$ gedit aditya
onworks@onworks:~/Desktop/OS_lab/expt3$ cp -r aditya rohit
onworks@onworks:~/Desktop/OS_lab/expt3$
```

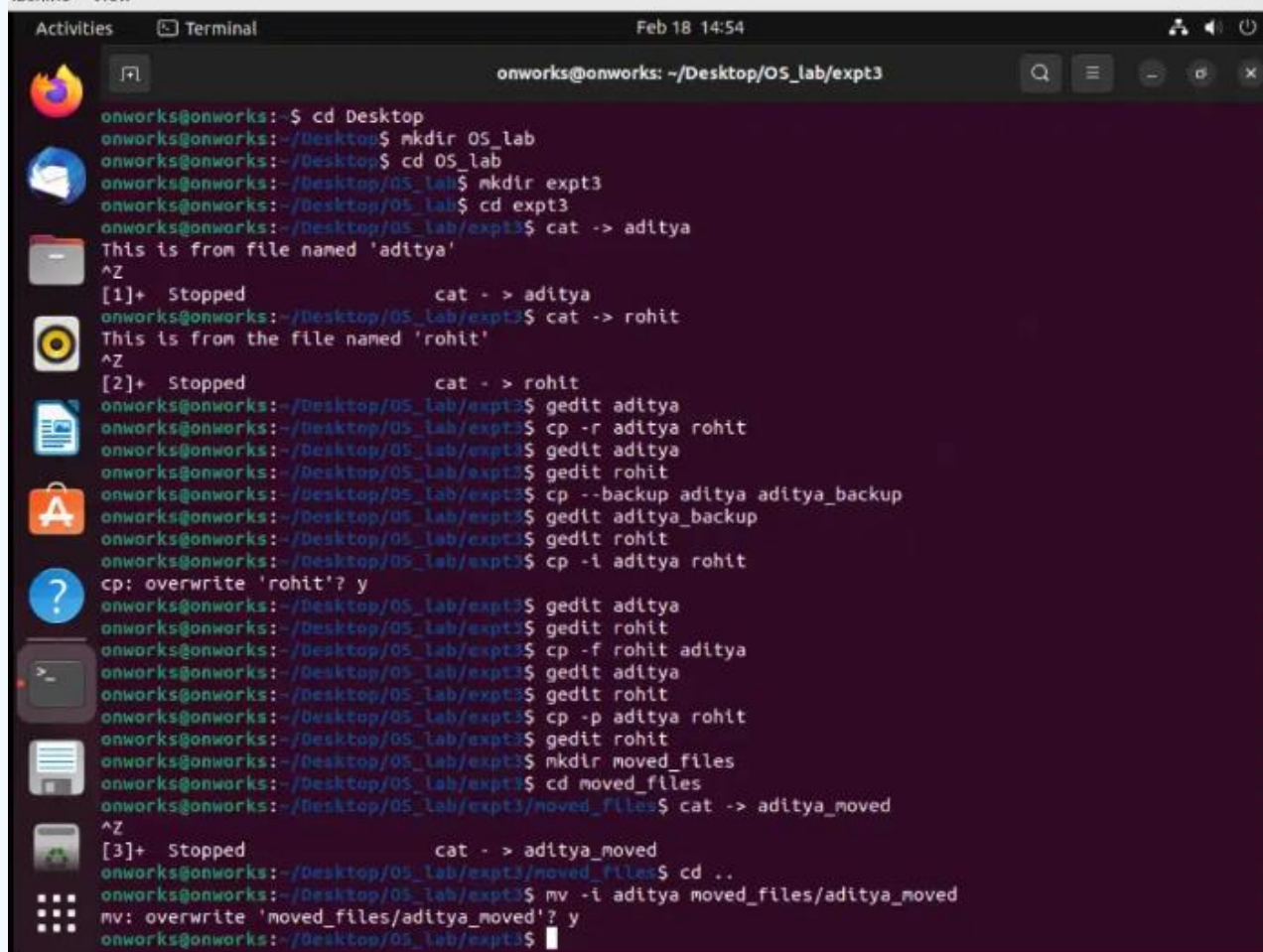
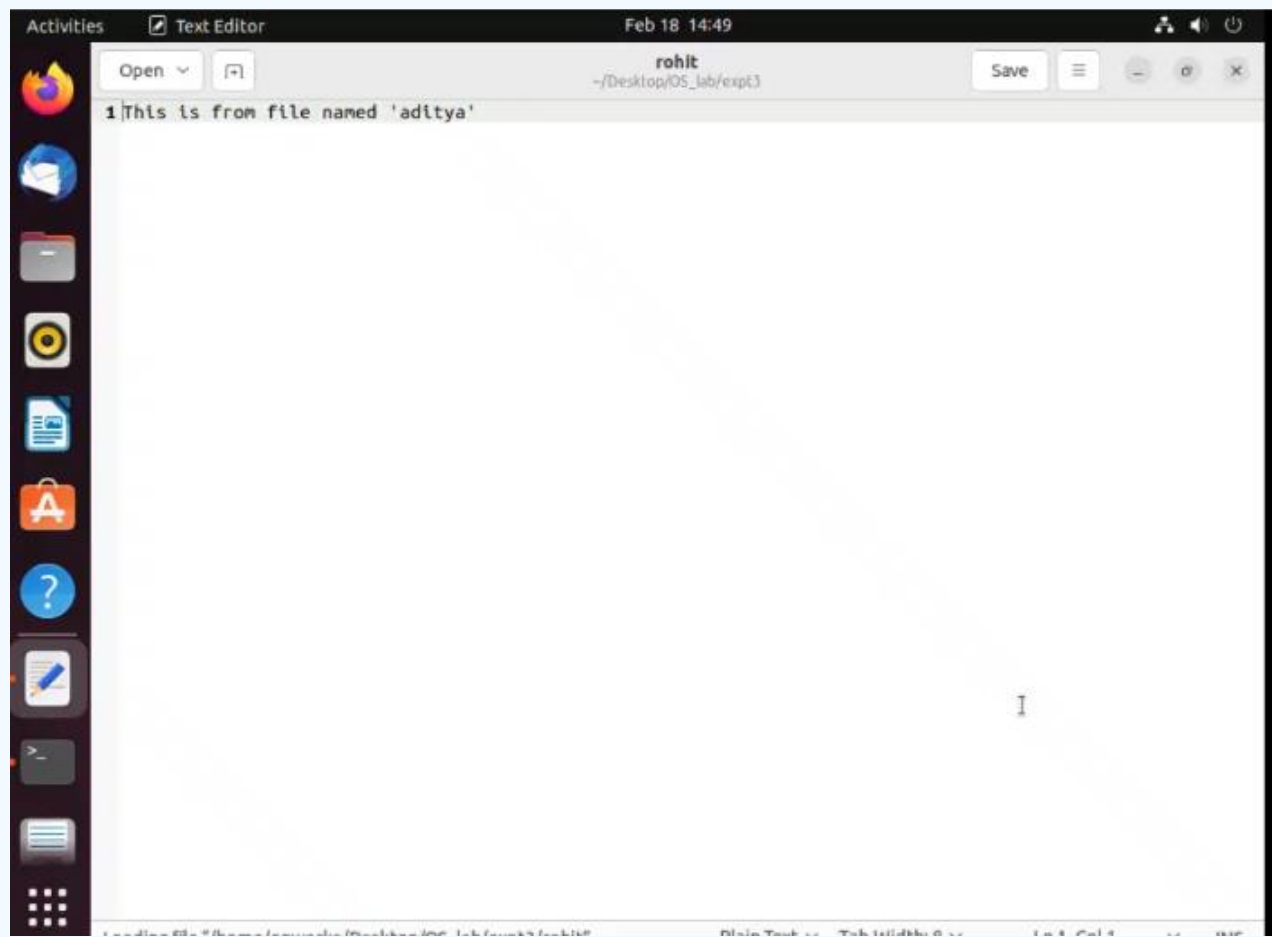
Machine View

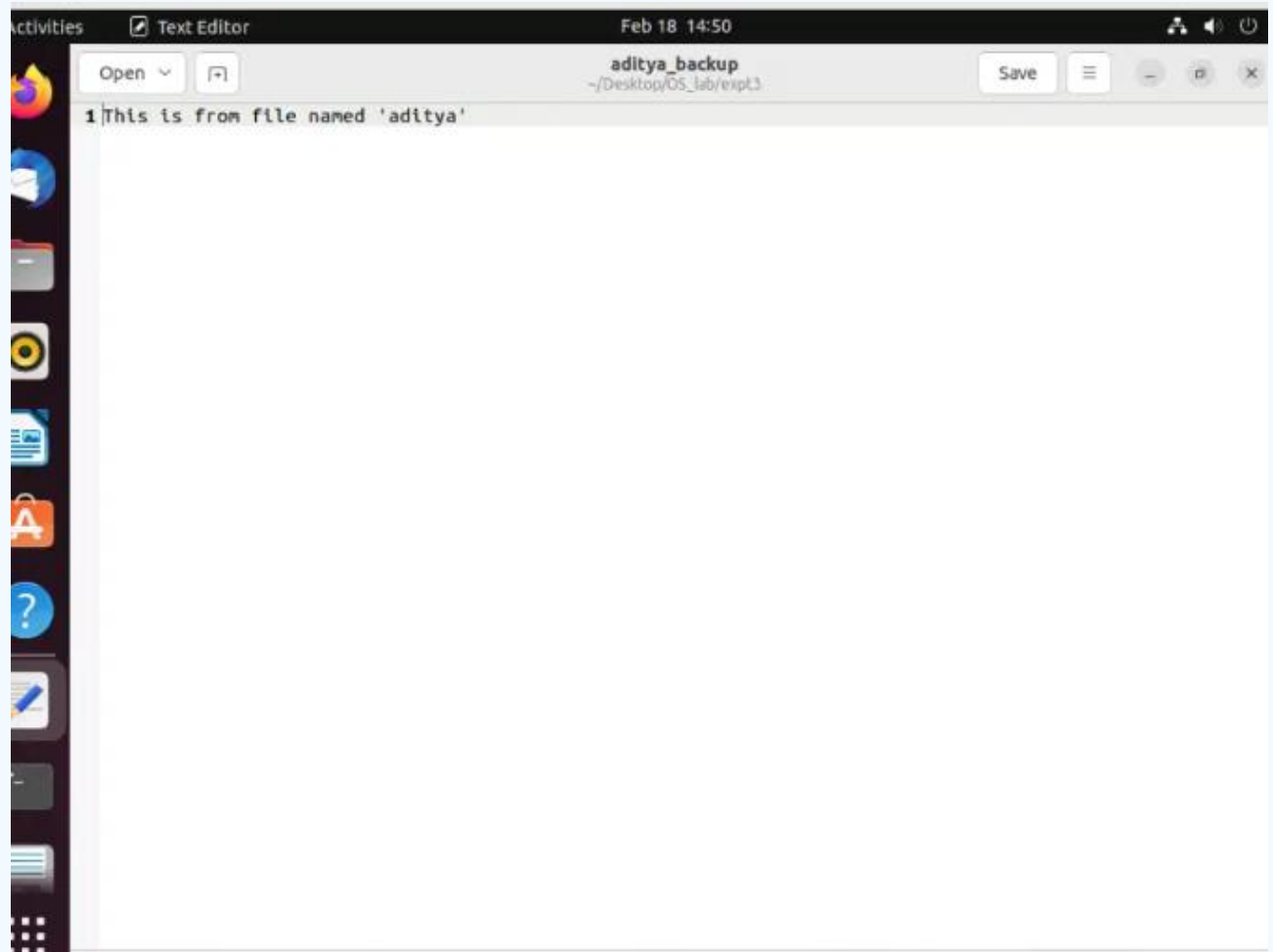
Activities Text Editor Feb 18 14:49

aditya
~/Desktop/OS_lab/expt3

```
1 This is from file named 'aditya'
```

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- **CONCLUSION:** Thus, we have successfully studied and implemented various basic commands of Linux like ls, cp and mv using kernel APIs.

