

OPERATING SYSTEMS

EXPERIMENT - 2

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AIM: System calls for file manipulation

PROBLEM STATEMENT:

Try different file manipulation operations provided by linux

1. pwd Command

pwd, short for the print working directory, is a command that prints out the current working directory in a hierarchical order, beginning with the topmost root directory (/).

To check your current working directory, simply invoke the pwd command as shown.

\$ pwd

2. mkdir Command

You might have wondered how we created the tutorials directory. Well, it's pretty simple. To create a new directory use the mkdir (make directory) command as follows:

\$ mkdir directory_name

3. ls Command

The ls command is a command used for listing existing files or folders in a directory. For example, to list all the contents in the home directory, we will run the command.

\$ ls

4. cd Command

To change or navigate directories, use the cd command which is short for change directory.

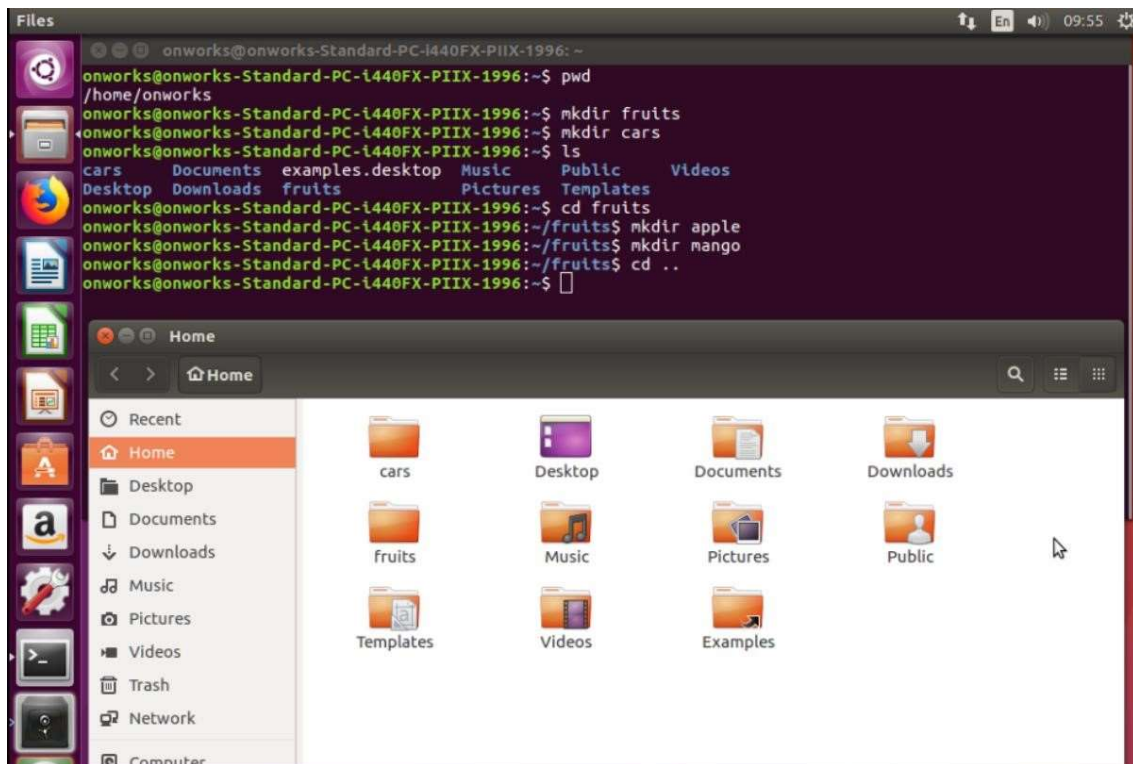
For instance, to navigate to particular directory run the command:

\$ cd directory_name

To go a directory up append two dots or periods in the end.

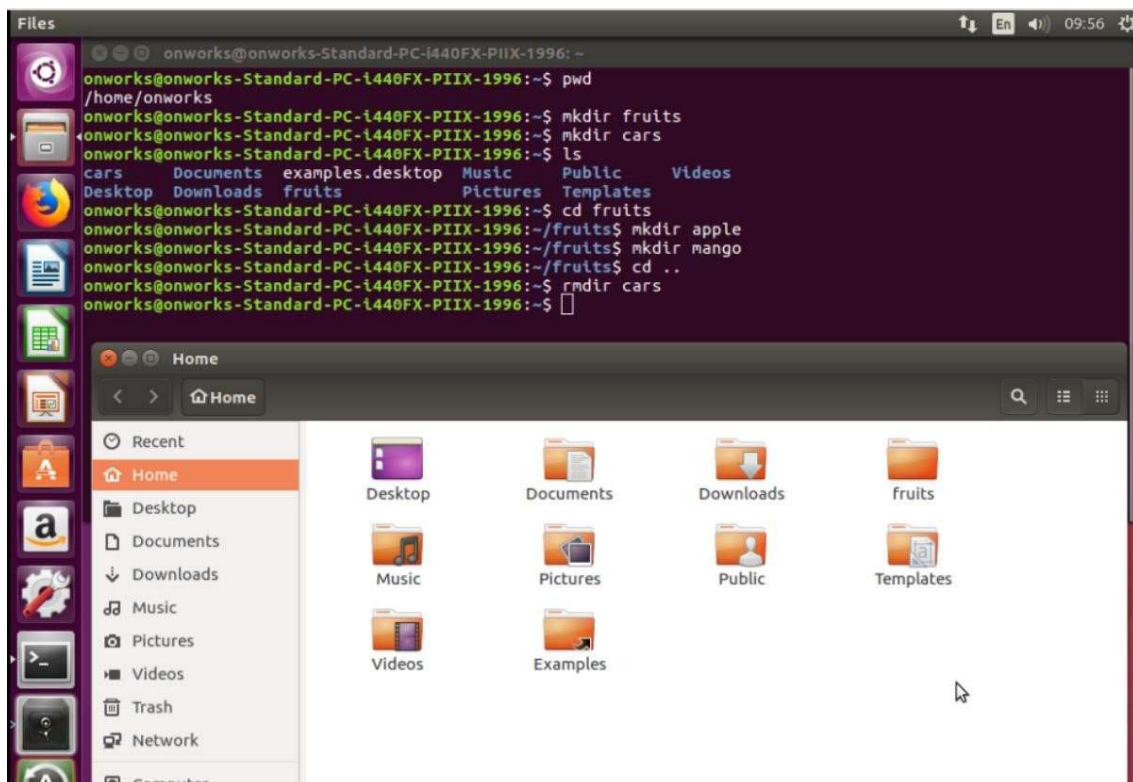
\$ cd ..

To go back to the home directory run the cd command without any arguments. **\$ cd**



5. rmdir Command

The `rmdir` command deletes an empty directory. For example, to delete or remove the `tutorials` directory, run the command:



\$ rmdir tutorials

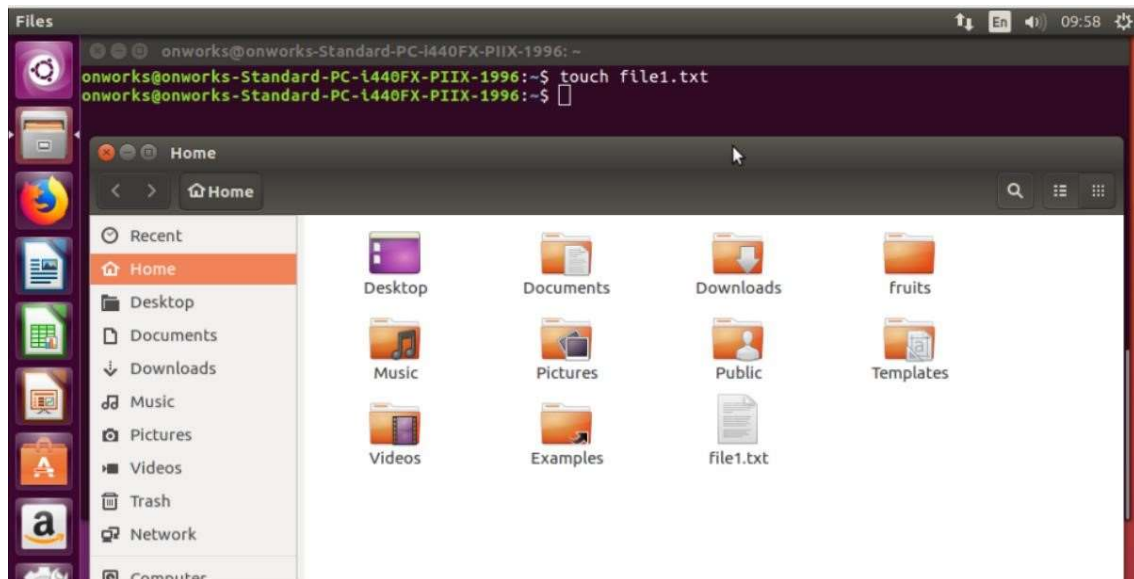
6. touch Command

The touch command is used for creating simple files on a Linux system. To create a file, use the syntax:

\$ touch filename

For example, to create a file1.txt file, run the command:

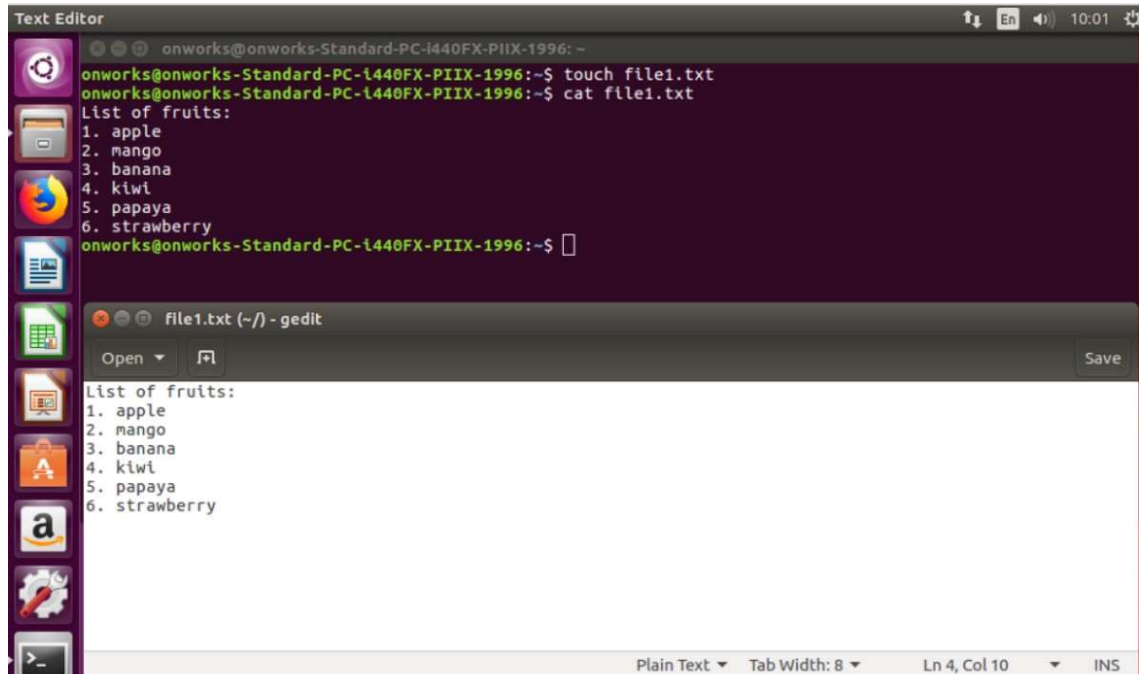
\$ touch file1.txt



7. cat Command

To view the contents of a file, use the cat command as follows:

\$ cat filename



The screenshot shows a Linux desktop environment. In the background, a terminal window titled 'onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~' displays the following commands and output:

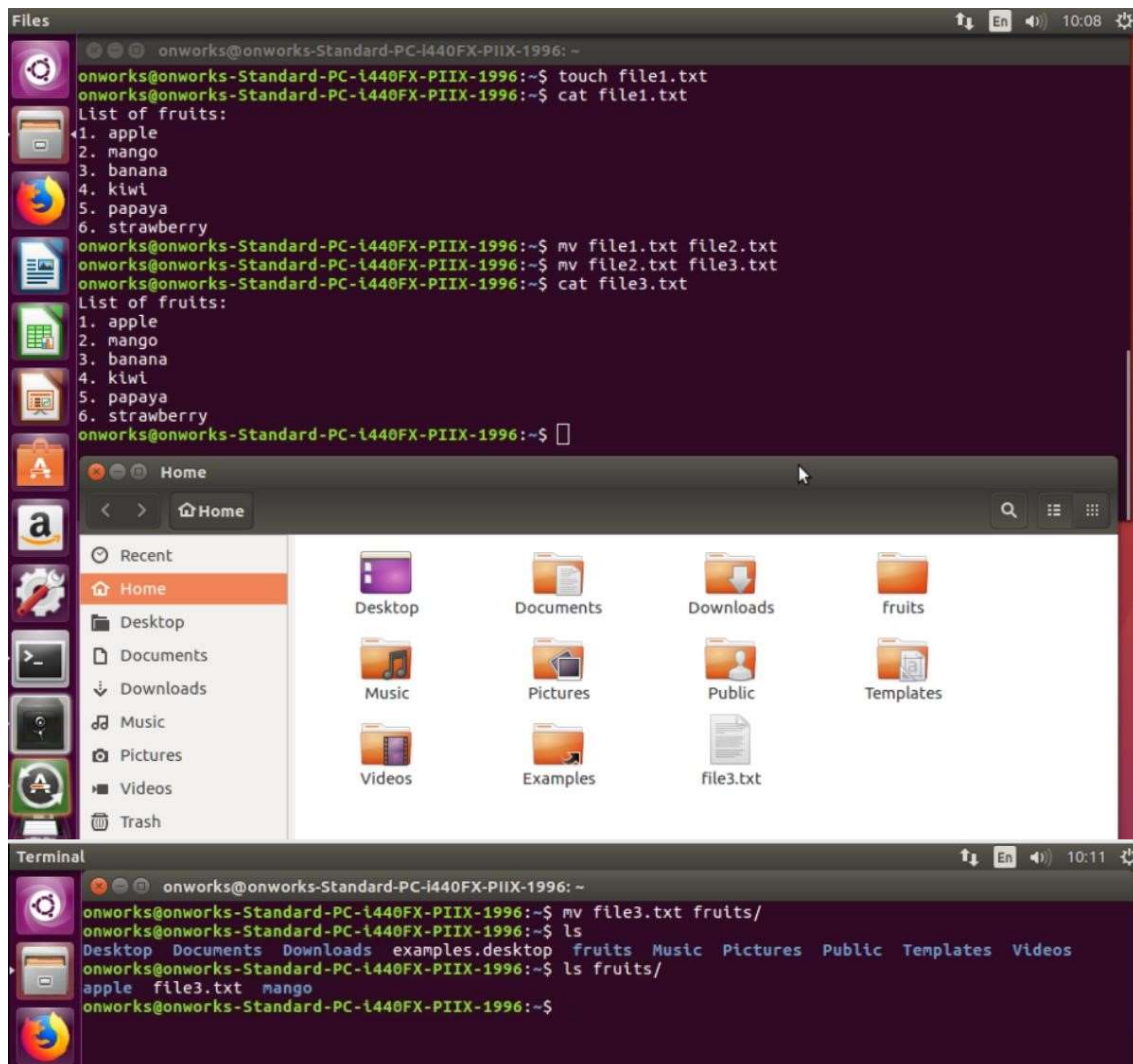
```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ touch file1.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cat file1.txt
List of fruits:
1. apple
2. mango
3. banana
4. kiwi
5. papaya
6. strawberry
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

In the foreground, a text editor window titled 'file1.txt (~/) - gedit' is open, showing the same text as the terminal output. The editor has a menu bar with 'Open' and 'Save' options. The status bar at the bottom indicates 'Plain Text', 'Tab Width: 8', 'Ln 4, Col 10', and 'INS'.

8. mv Command

The mv command is quite a versatile command. Depending on how it is used, it can rename a file or move it from one location to another. To move the file, use the syntax below:

\$ mv filename /path/to/destination/

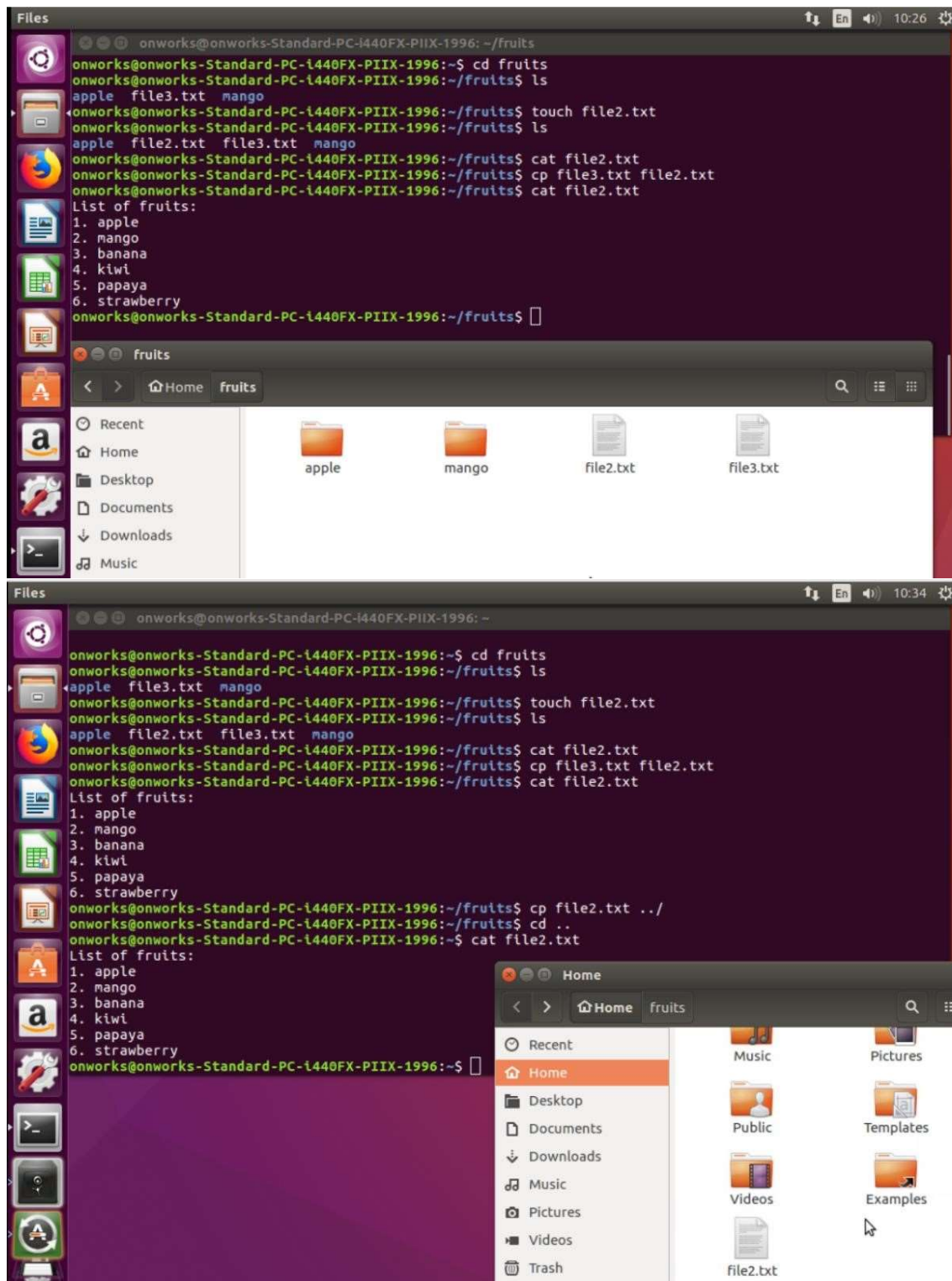


9. cp Command

The cp command, short for copy, copies a file from one file location to another. Unlike the move command, the cp command retains the original file in its current location and makes a duplicate copy in a different directory.

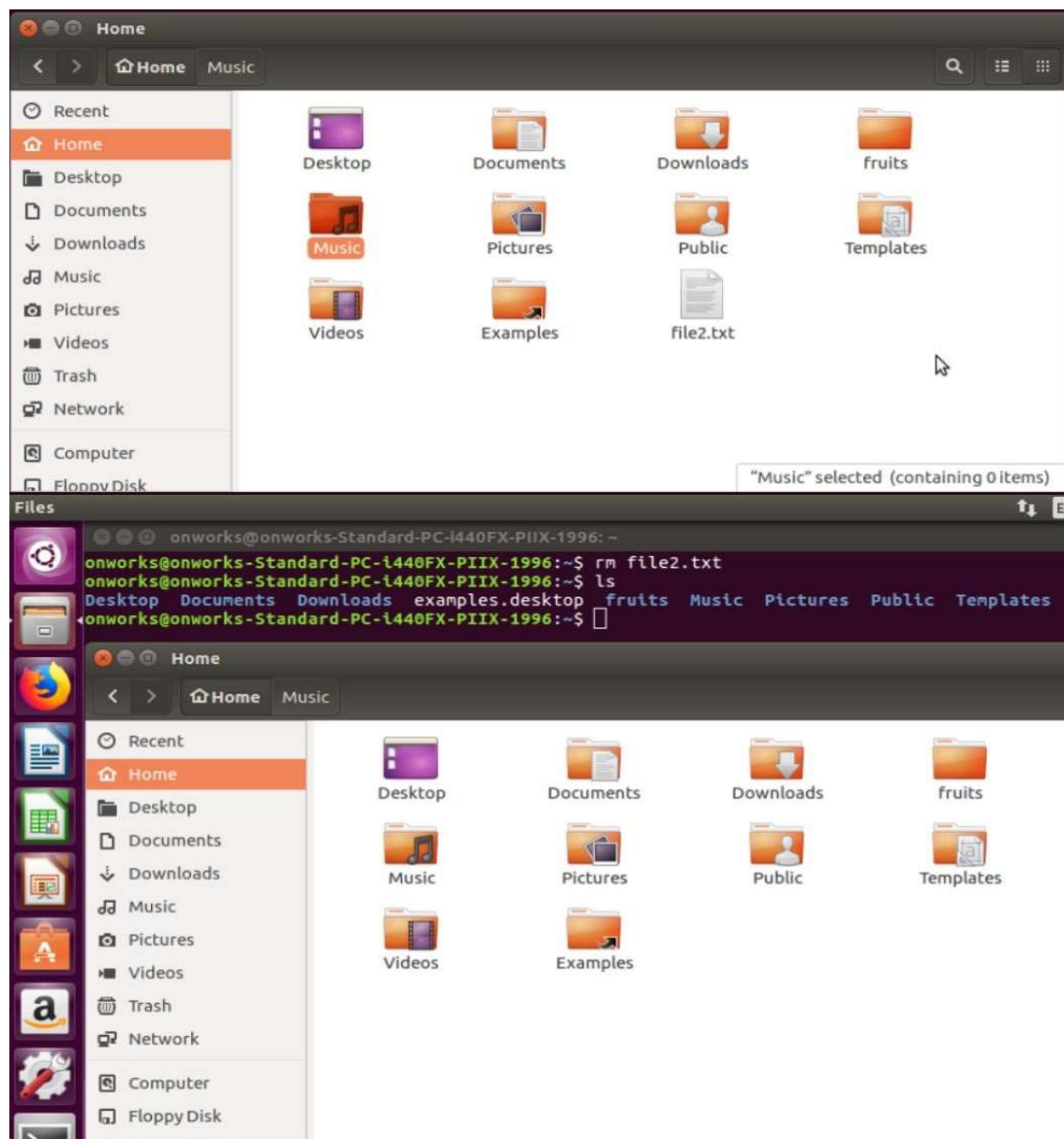
The syntax for copying a file is shown below.

\$ cp /file/path /destination/path



10. Deleting a File

`rm` command could be used to delete a file. It will remove the filename file from the directory.



\$rm filename

Also try the following commands

Directory and file commands

<code>cd /home</code>	enter to directory '/' home' [man]
<code># cd ..</code>	go back one level [man]
<code># cd ../../</code>	go back two levels [man]
<code># cd</code>	go to home directory [man]
<code># cd ~user1</code>	go to home directory [man]

# cd -	go to previous directory [man]
# cp file1 file2	copying a file [man]
# cp dir/* .	copy all files of a directory within the current work directory [man]
# cp -a /tmp/dir1 .	copy a directory within the current work directory [man]
# cp -a dir1 dir2	copy a directory [man]
# cp file file1	outputs the mime type of the file as text [man]
# iconv -l	lists known encodings [man]
# iconv -f fromEncoding -t toEncoding inputFile > outputFile	converting the coding of characters from one format to another [man]
# find . -maxdepth 1 -name *.jpg print -exec convert	batch resize files in the current directory and send them to a thumbnails directory (requires convert from Imagemagick) [man]
# ln -s file1 lnk1	create a symbolic link to file or directory [man]
# ln file1 lnk1	create a physical link to file or directory [man]
# ls	view files of directory [man]
# ls -F	view files of directory [man]
# ls -l	show details of files and directory [man]
# ls -a	show hidden files [man]
# ls *[0-9]*	show files and directory containing numbers [man]
# lstree	show files and directories in a tree starting from root(2) [man]
# mkdir dir1	create a directory called 'dir1' [man]
# mkdir dir1 dir2	create two directories simultaneously [man]
# mkdir -p /tmp/dir1/dir2	create a directory tree [man]

# mv dir1 new_dir	rename / move a file or directory [man]
# pwd	show the path of work directory [man]
# rm -f file1	delete file called 'file1' [man]
# rm -rf dir1	remove a directory called 'dir1' and contents recursively [man]
# rm -rf dir1 dir2	remove two directories and their contents recursively [man]
# rmdir dir1	delete directory called 'dir1' [man]
# touch -t 0712250000 file1	modify timestamp of a file or directory - (YYMMDDhhmm) [man]
# tree	show files and direct