K. J. Somaiya Polytechnic, Mumbai-77

Batch No: C1

Enrollment No.: FCOW19118

Experiment No: 02

Experiment Name: Execution of basic Linux Commands.

Experiment No.: 02

Experiment Name: Execution of basic Linux Commands

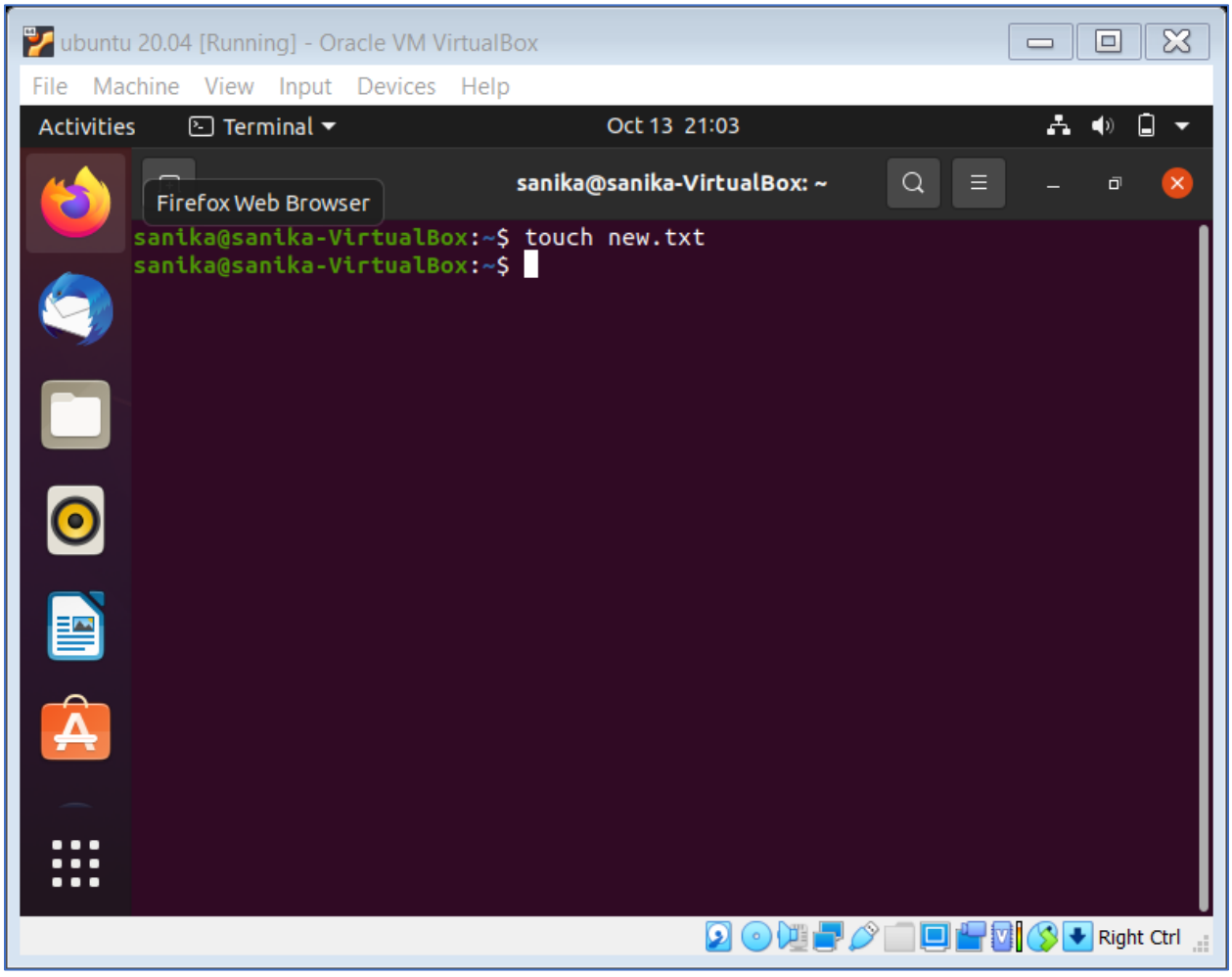
Course Outcome:

O18RC58.2	Execute basic & networking commands in Linux

Theory:

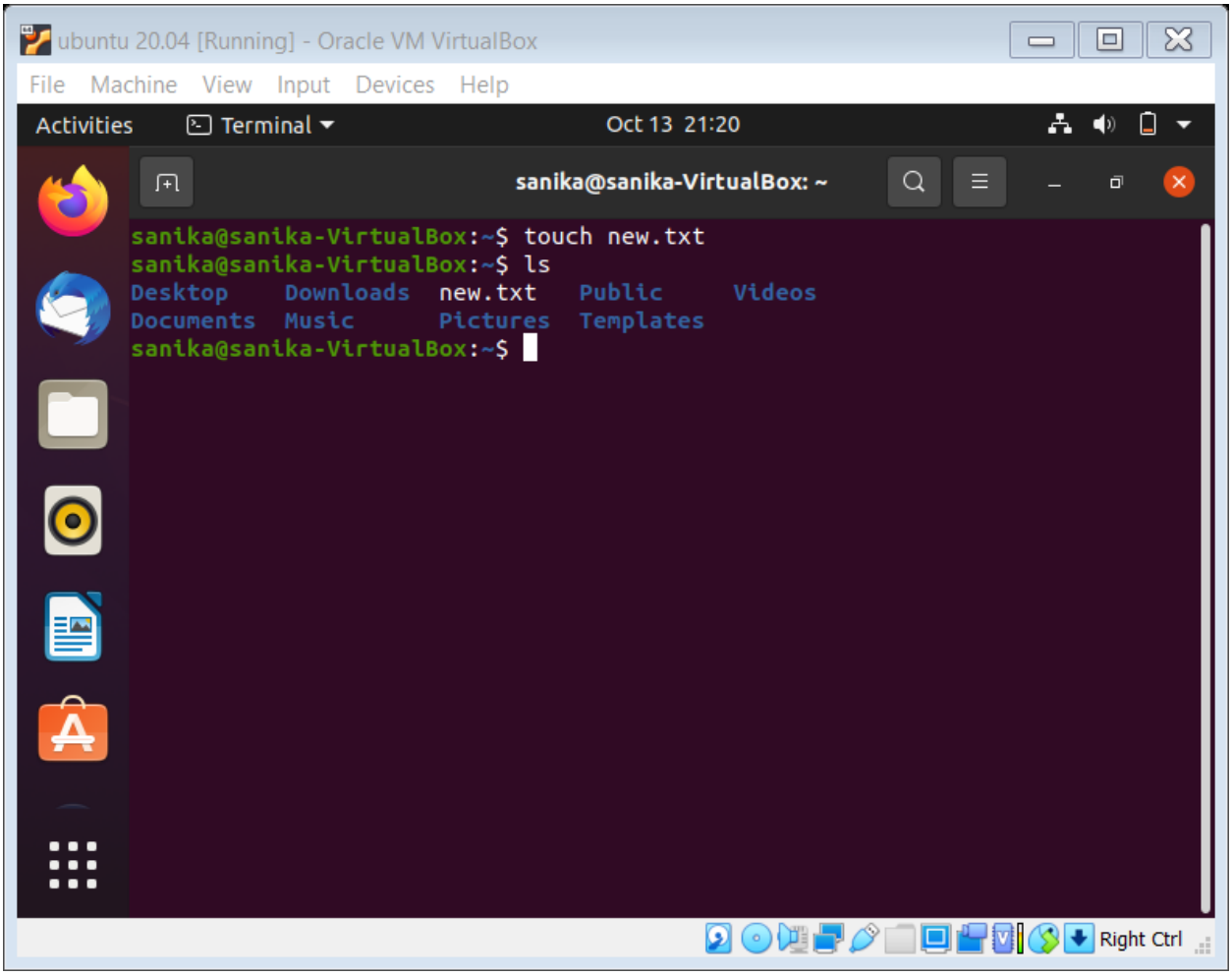
1. **touch command :- (touch FILE_NAME)**

The ***touch*** command is used to create a file without any content i.e., empty file. This command can be used when the user doesn't have data to store at the time of file creation.



2. ls command

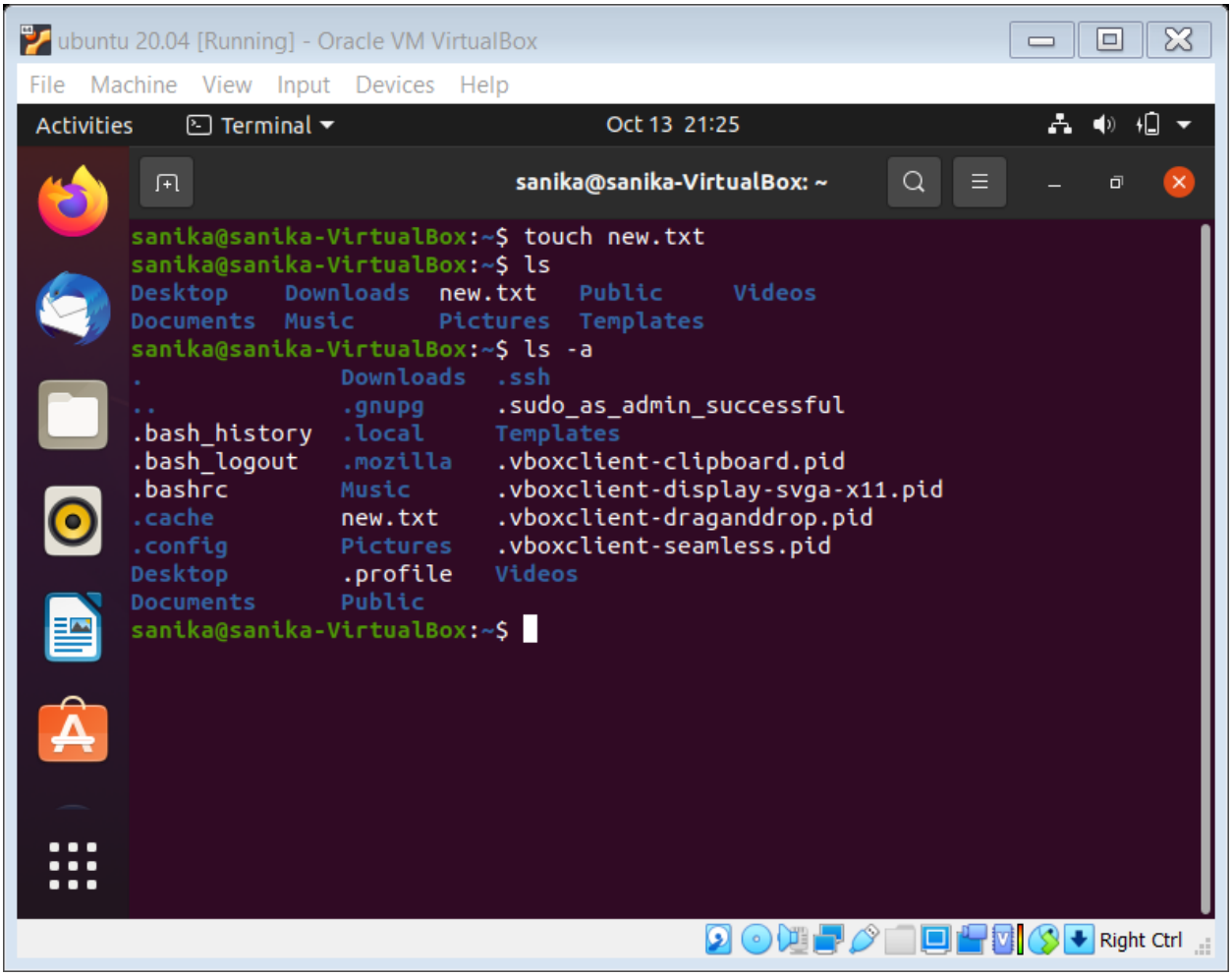
The ***ls*** command lists all the files and directories that exist within the file system.



3. ls -a

The ***ls -a*** command lists all the files and directories that exist within the file system along with all the **hidden files**. These files start with a '**.**' (dot).

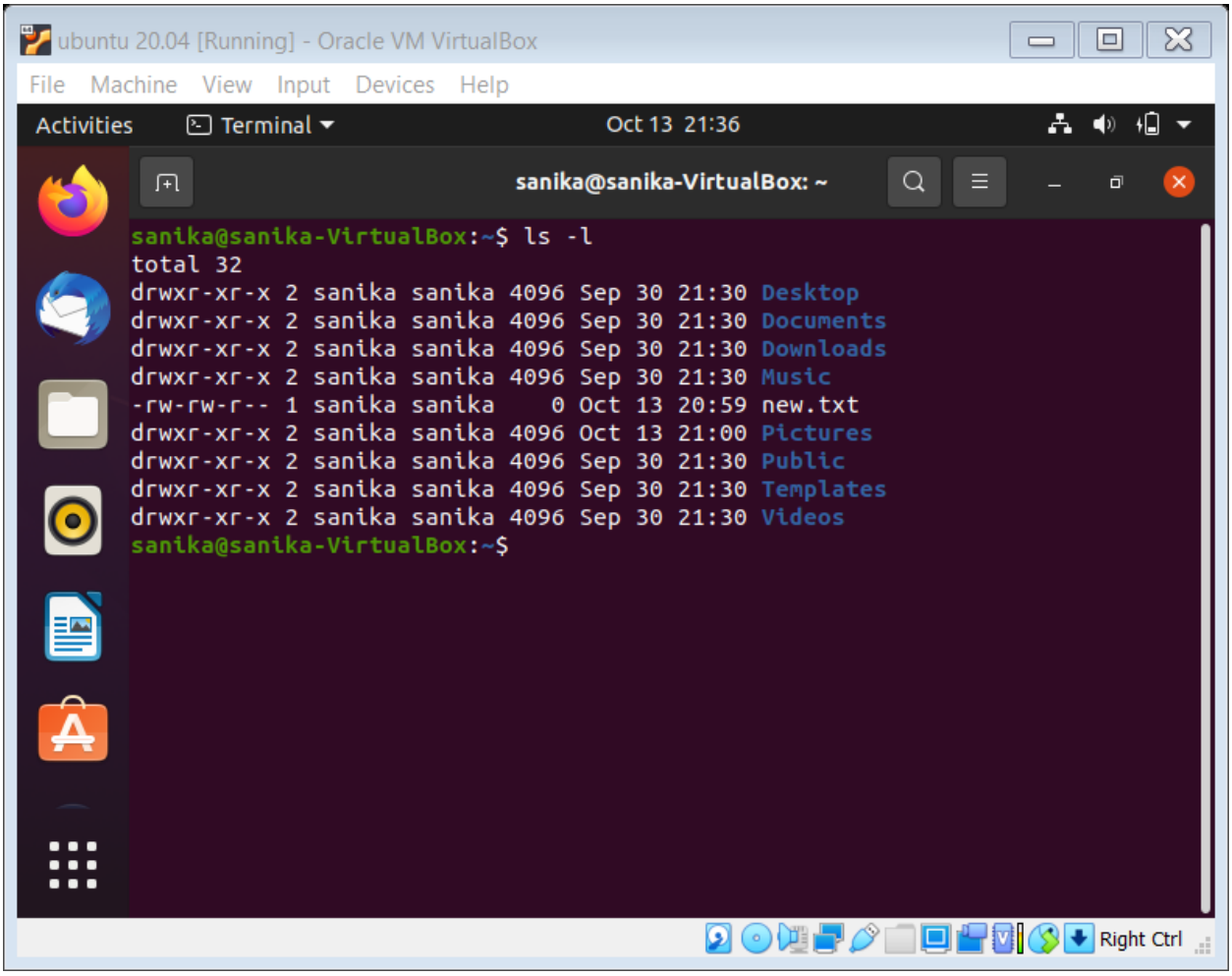
E.g.: .bash_history, .profile, etc are hidden files.



4. ls -l

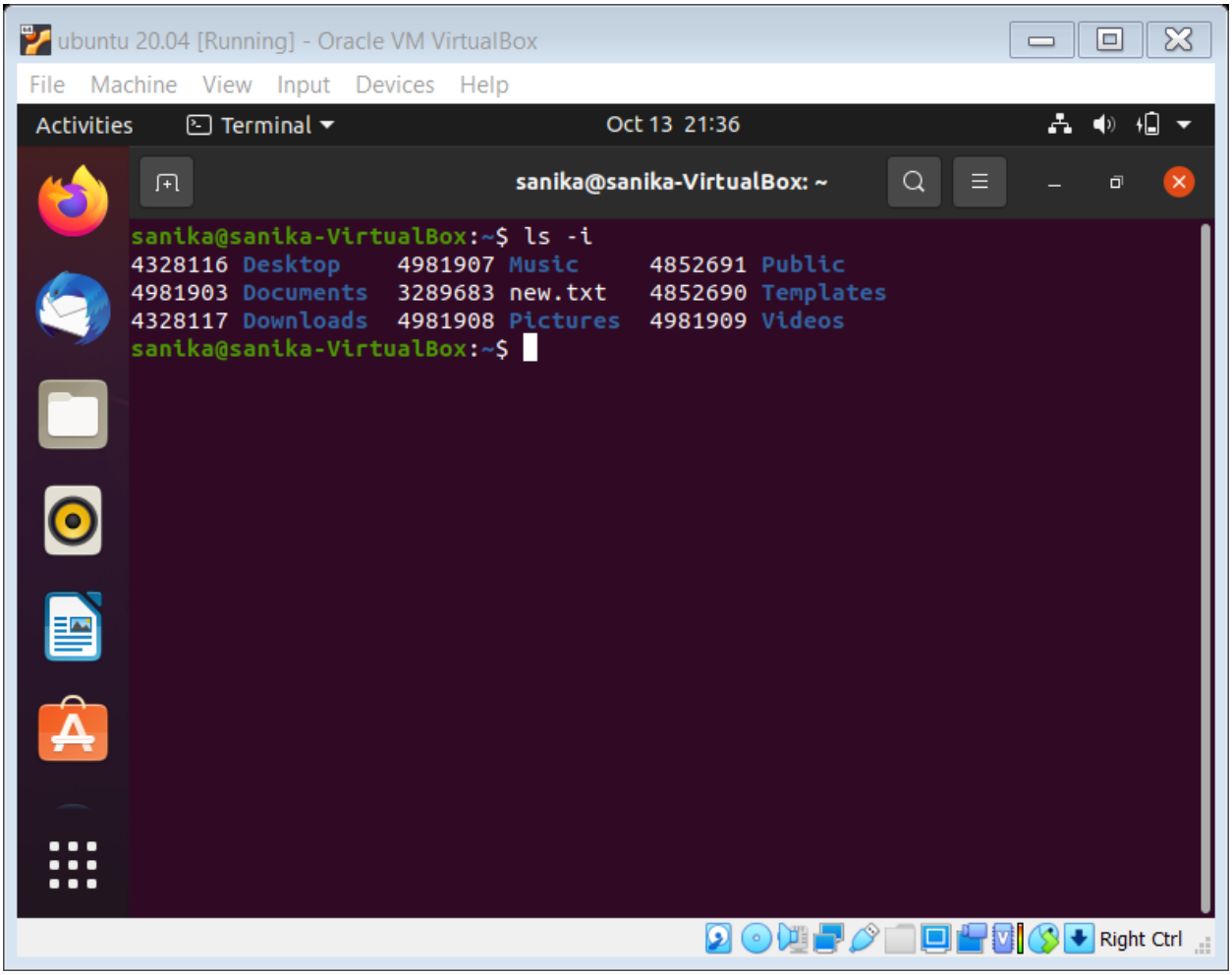
The ***ls -l*** is used to list information about files and directories within the file system. It is a **Long form** of listing. It shows the following information about files:

i) Total number of files
ii) Permissions
iii) creator's name
iv) file size
v) creation date
vi) creation time
vii) file name



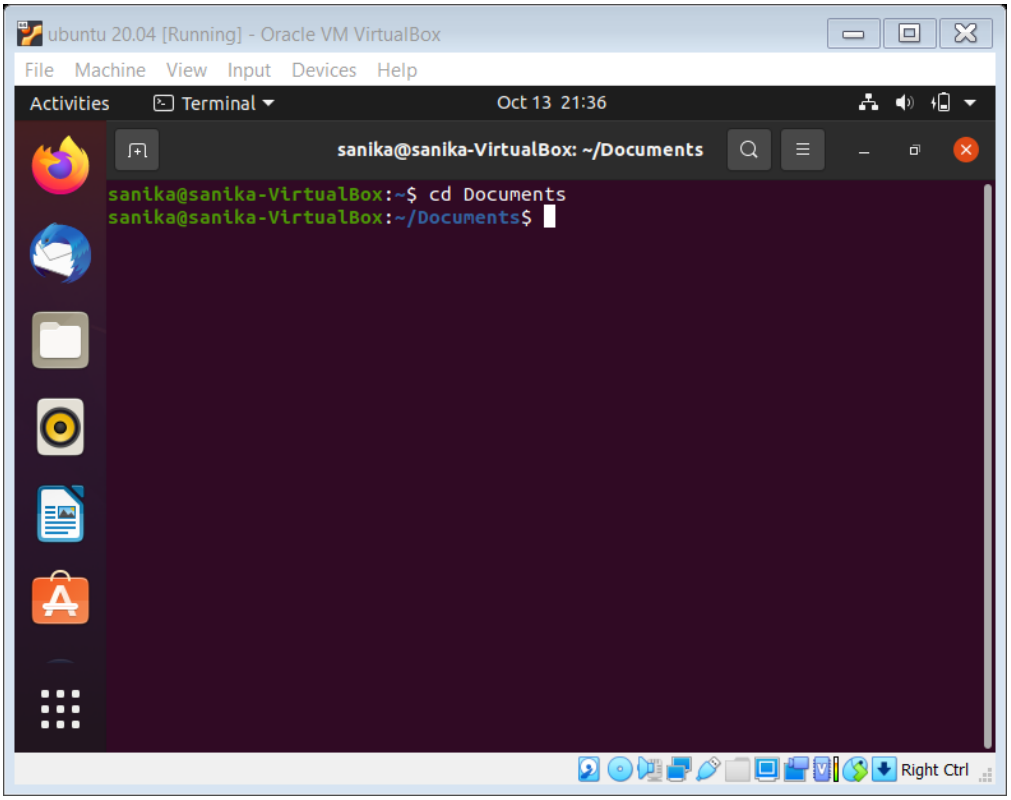
5. ls -i

The ***ls -i*** is used to list the file's inode number. An Inode number is a **uniquely existing number** for all the files in Linux. It is assigned to the file at the time of creation.

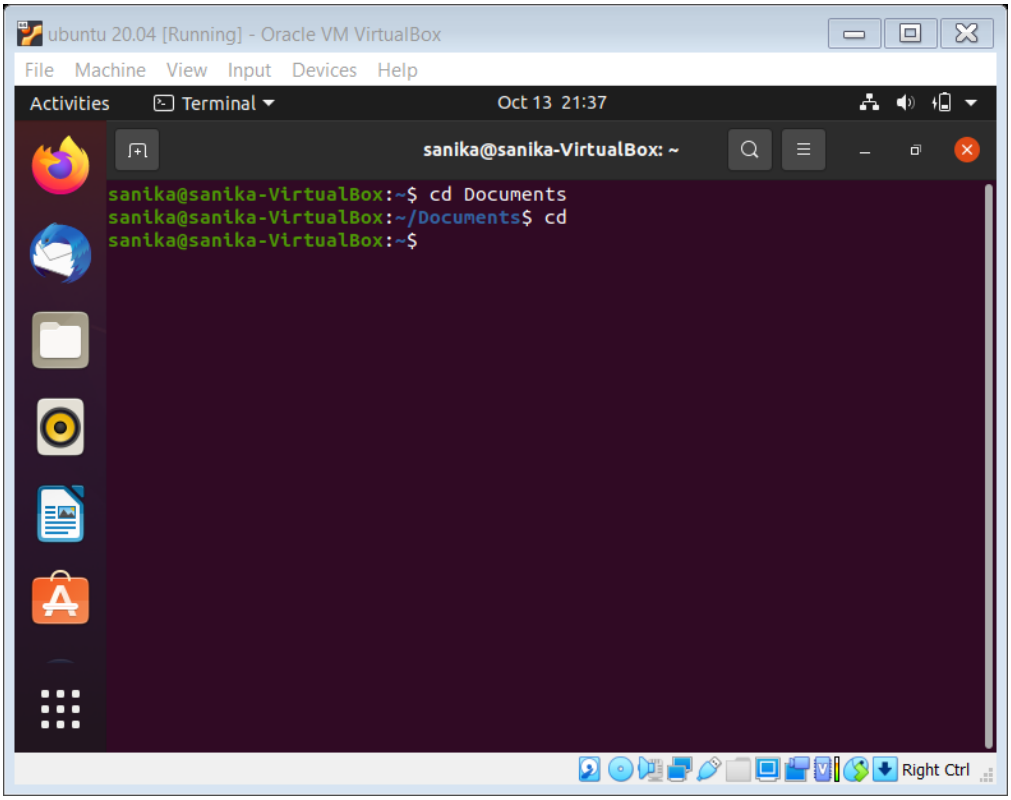


6. cd command :- (cd FOLDER_NAME)

The ***cd* command** is used to change the current working directory (i.e., in which the current user is working). The cd stands for **'change directory'**.

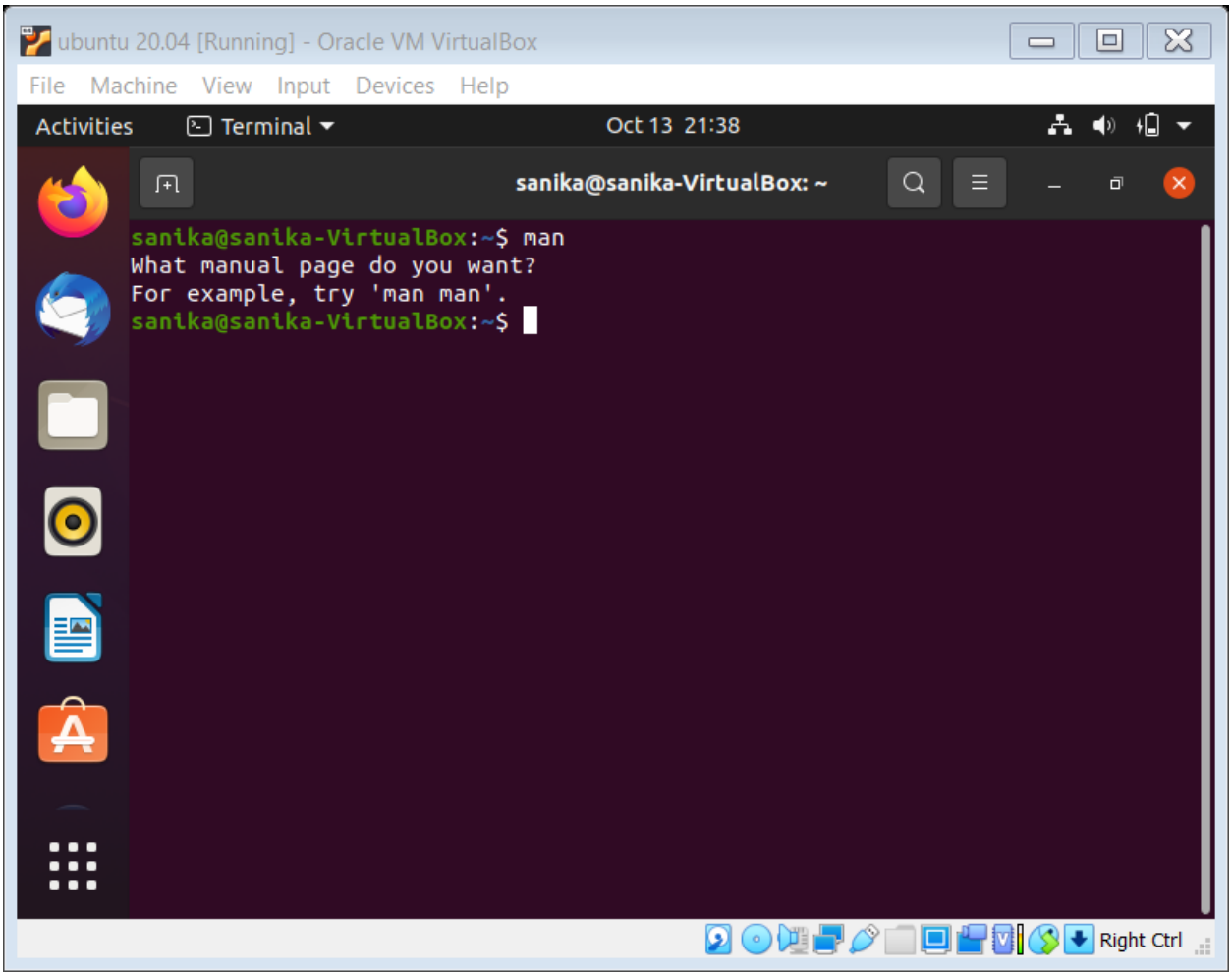


To come back to main directory simply type ***cd***.

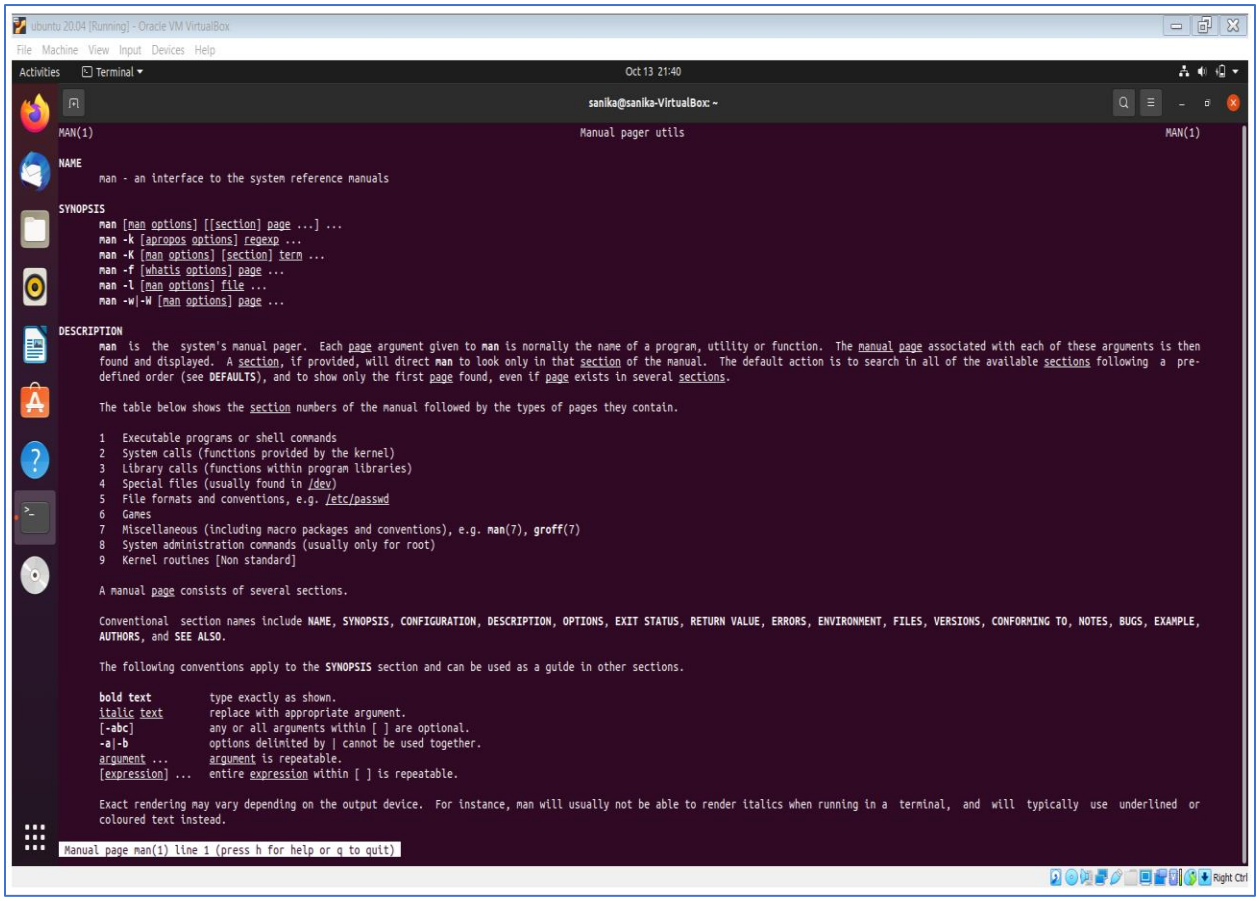


7. man command :- (man COMMAND_NAME)

The ***man* command** is used to display the user manual of any command that we can run on the terminal.



If we type the command ***man man***, it shows the entire manual page that includes all the commands, as shown below:

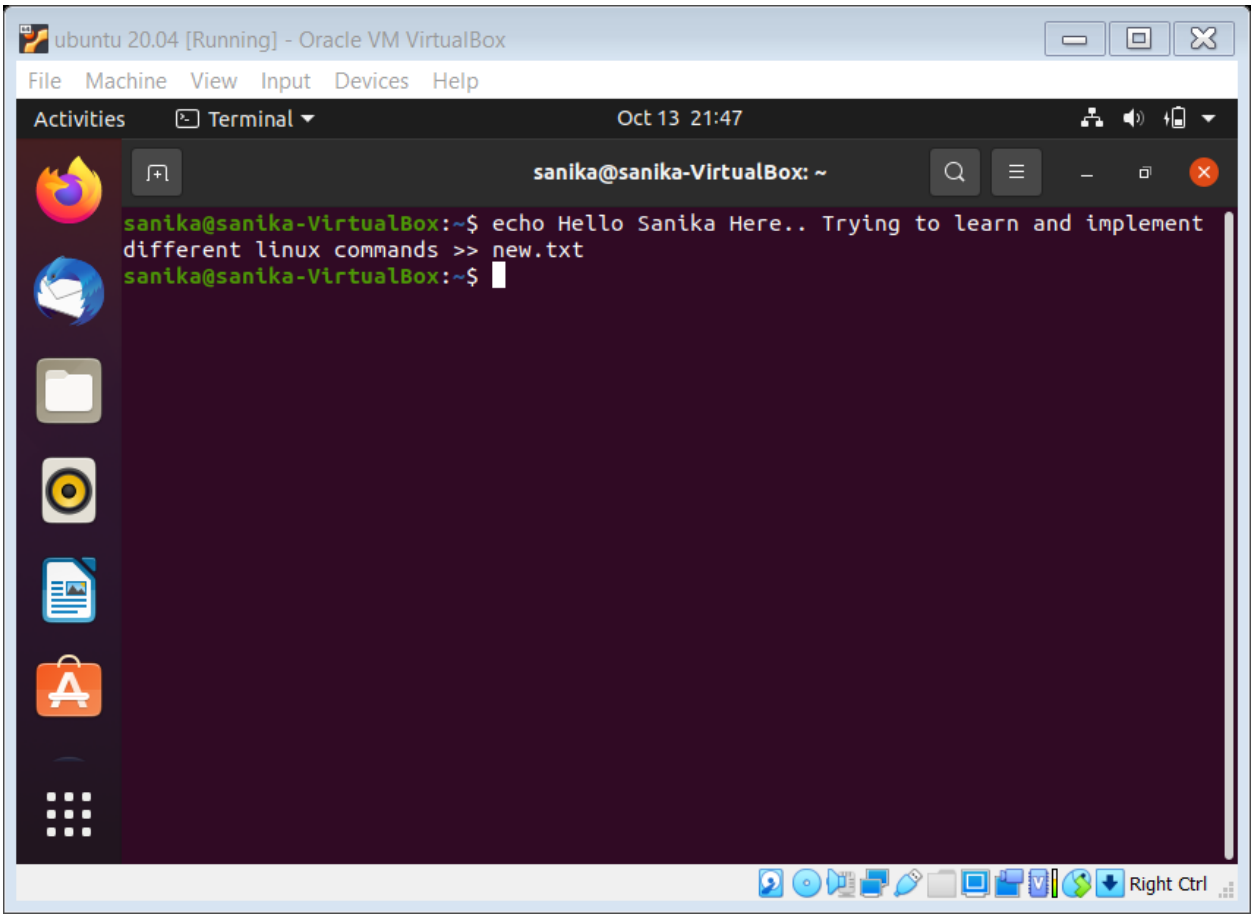


8. echo

The ***echo* command** in linux is used for displaying lines of text or string which are passed as arguments on the command line.

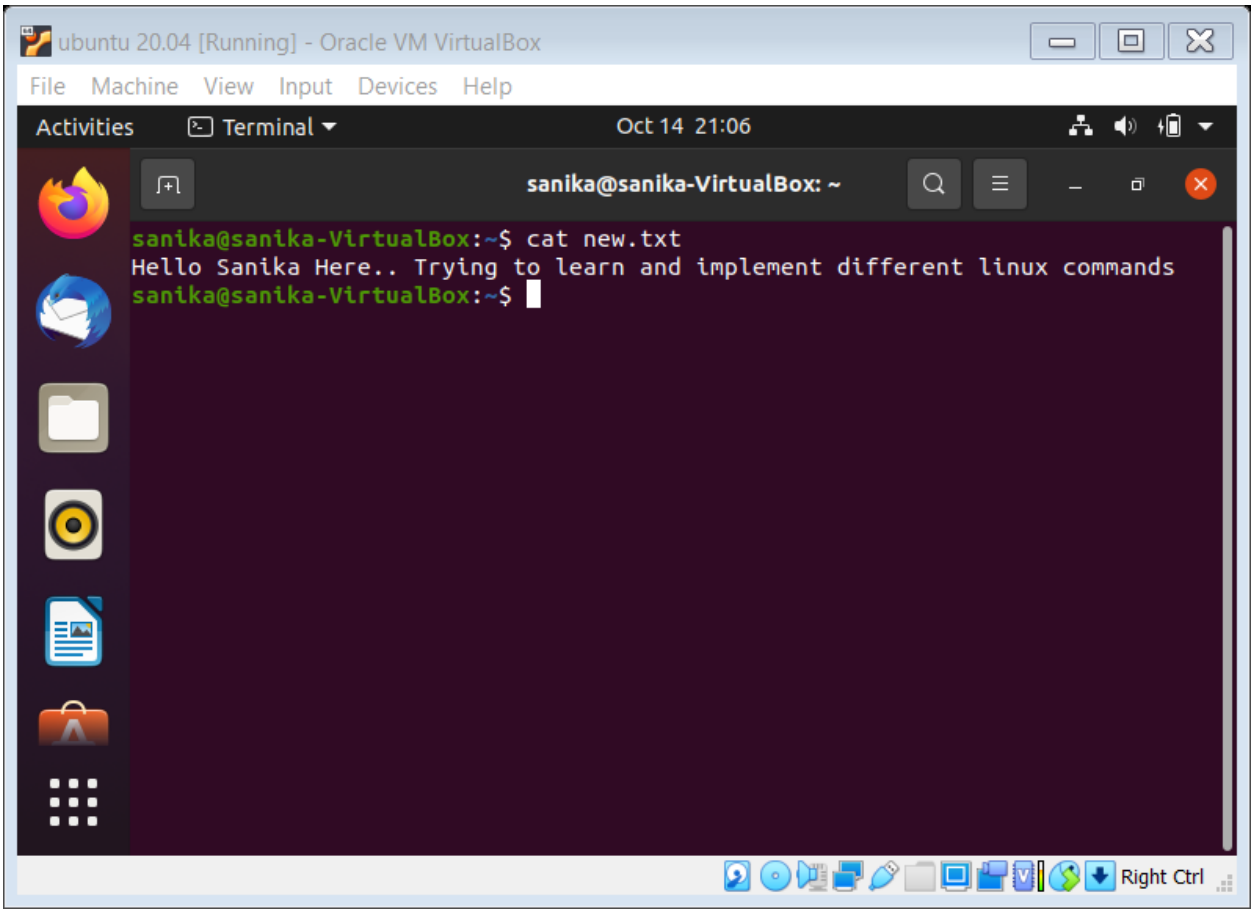
echo LINE_OF_TEXT >> FILE_NAME

The above line of command is used to enter the specified line of text into an already existing file (i.e., in the specified file_name).



9. cat command :- (cat FILE_NAME)

The ***cat* command** allows us to view content of a file (i.e., redirect output in terminal or files). It reads data from the file and gives their content as output.



10. vi

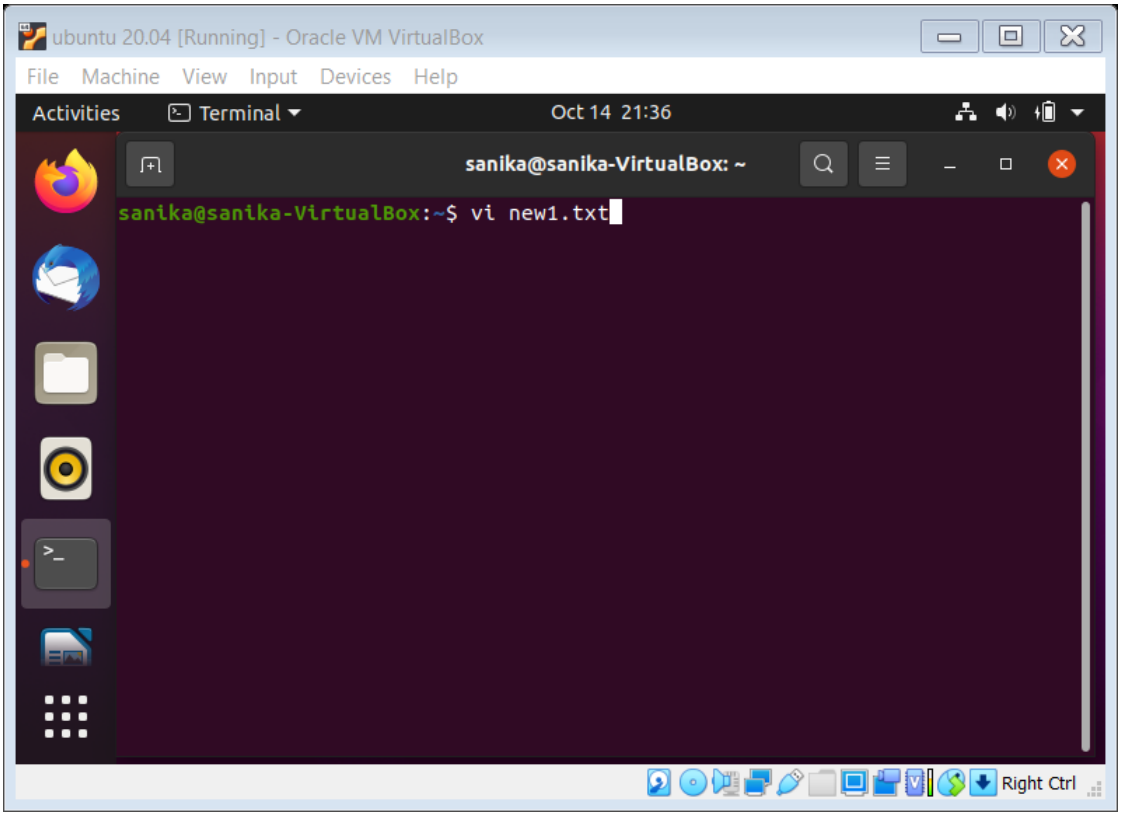
vi or the ***Visual Editor*** is the default text editor that comes with most Linux systems. It is a Terminal-based text editor. It operates in three modes:

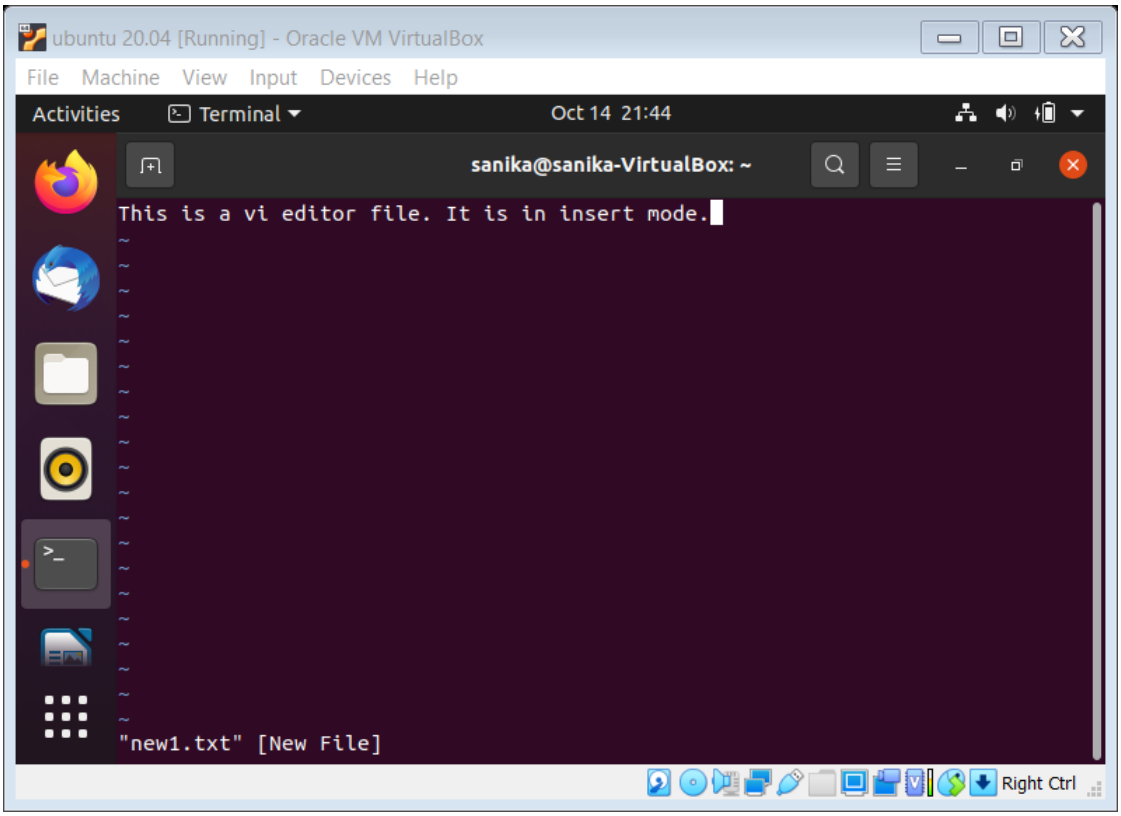
i) Command mode (*default*)
ii) Insert mode
iii) Escape mode

In the command mode, we can move through text, search for words and save a file but cannot insert anything in that file.

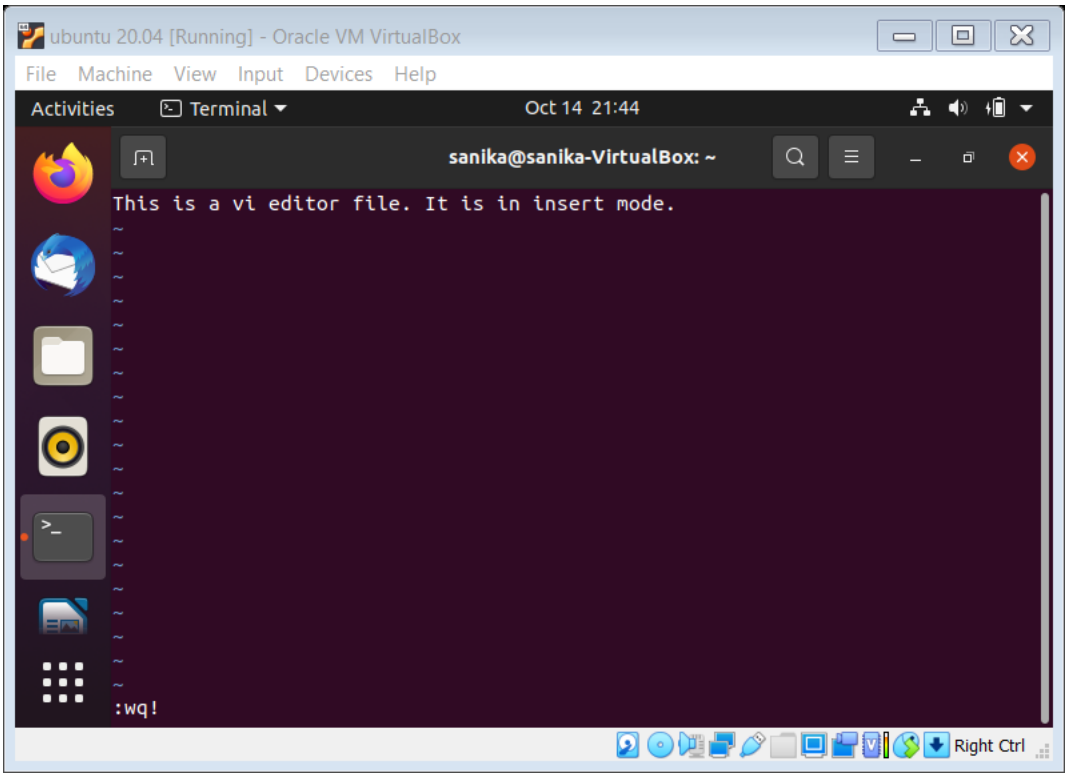
In the insert mode, we can type into the file and edit the text.

To create a file, we type the command: (**vi FILE_NAME).** It opens the file in command mode. To switch to insert mode we need to hit ***'escape'*** then type ***i***. After editing, to save and switch back to command mode, we need to hit ***'escape'*** then type :***wq!*** And hit 'enter'.

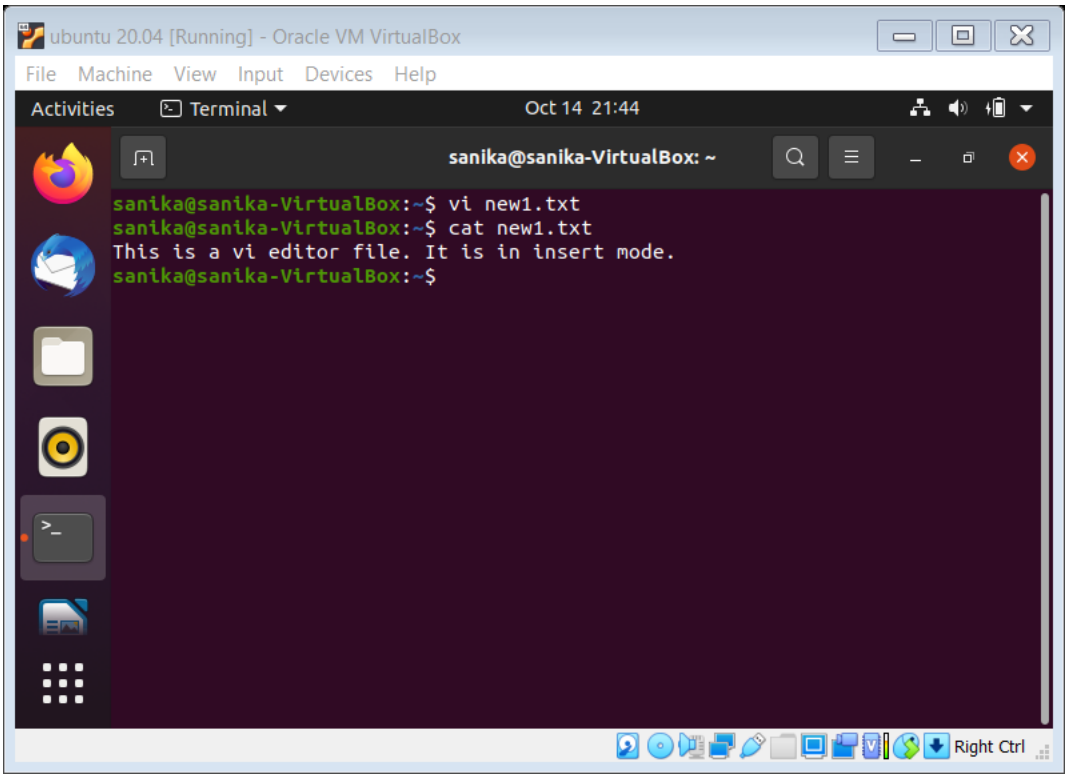




Now the above specified text is inserted in the ***new1.txt***



:wq! This saves and closes the file. To check whether the text is inserted in the file or not, we should type: ***cat new1.txt***



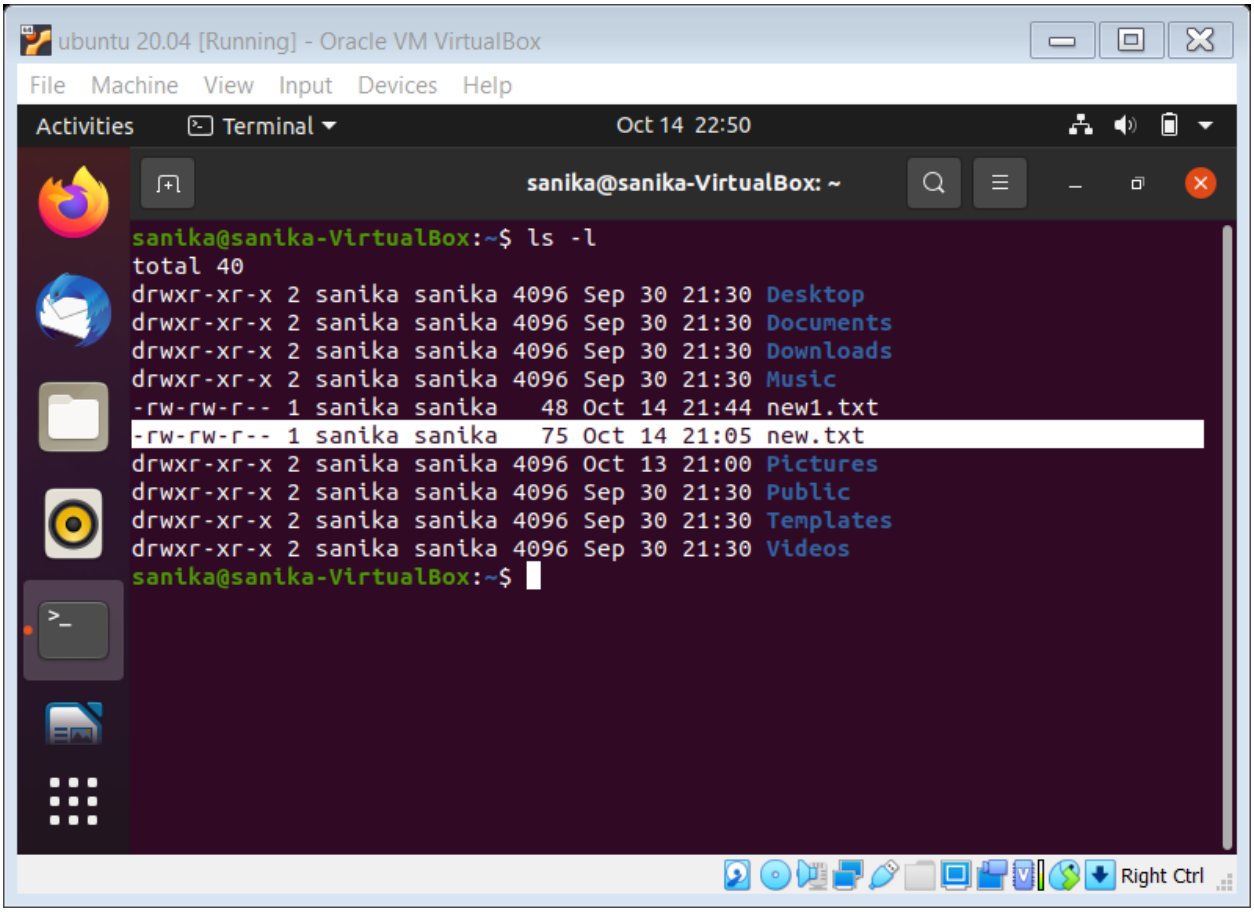
11. chmod :- (chmod OPTIONS_CODE FILE_NAME)

The chmod command is used to change the access mode of a file. It is used to change the directory permissions using symbolic code/ numeric code.

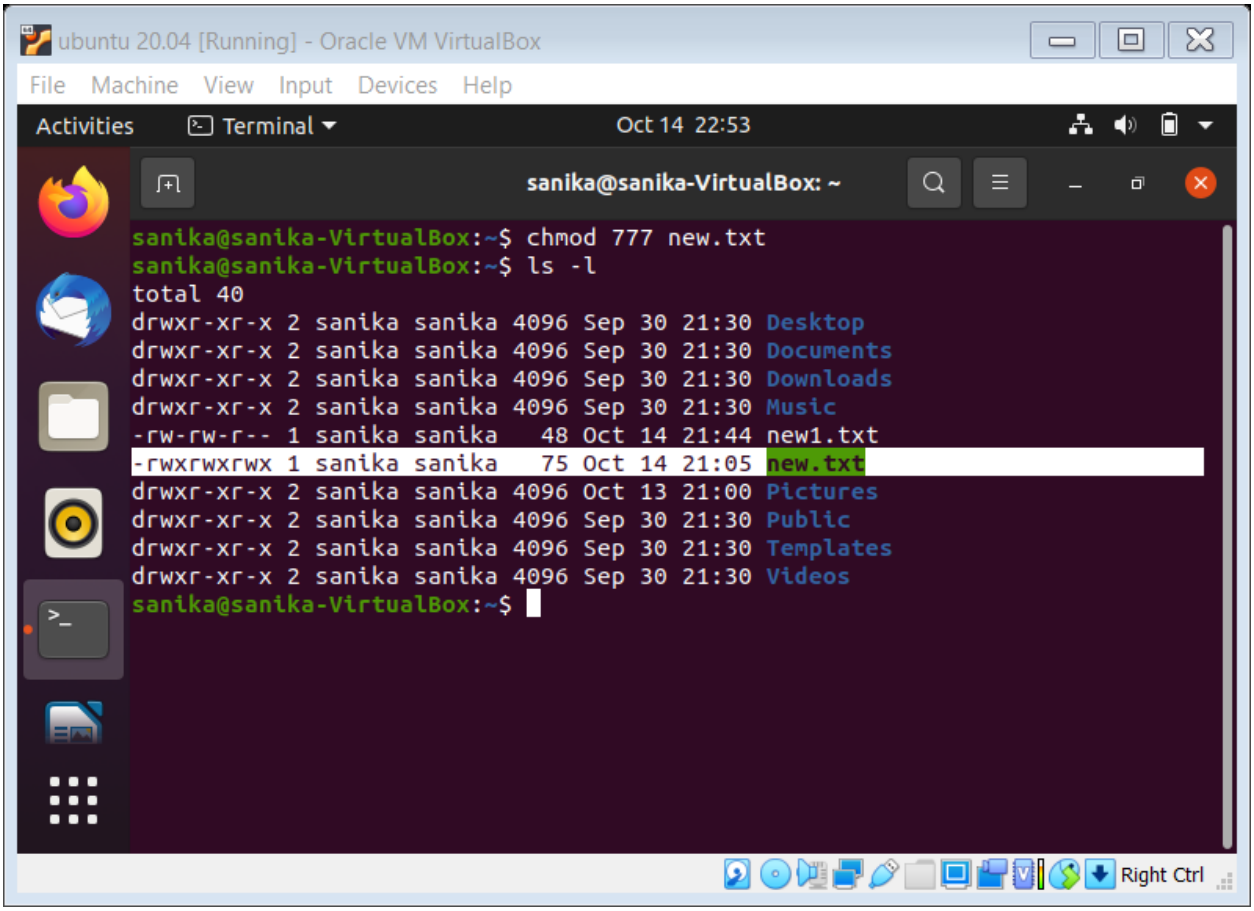
In Numeric code, each ***write***, ***read***, and ***execute*** permissions have the following number value:

- r (read) = 4
- w (write) = 2
- x (execute) = 1
- no permissions = 0

new.txt has the following permissions:



After using chmod, the permissions are changed as follows:

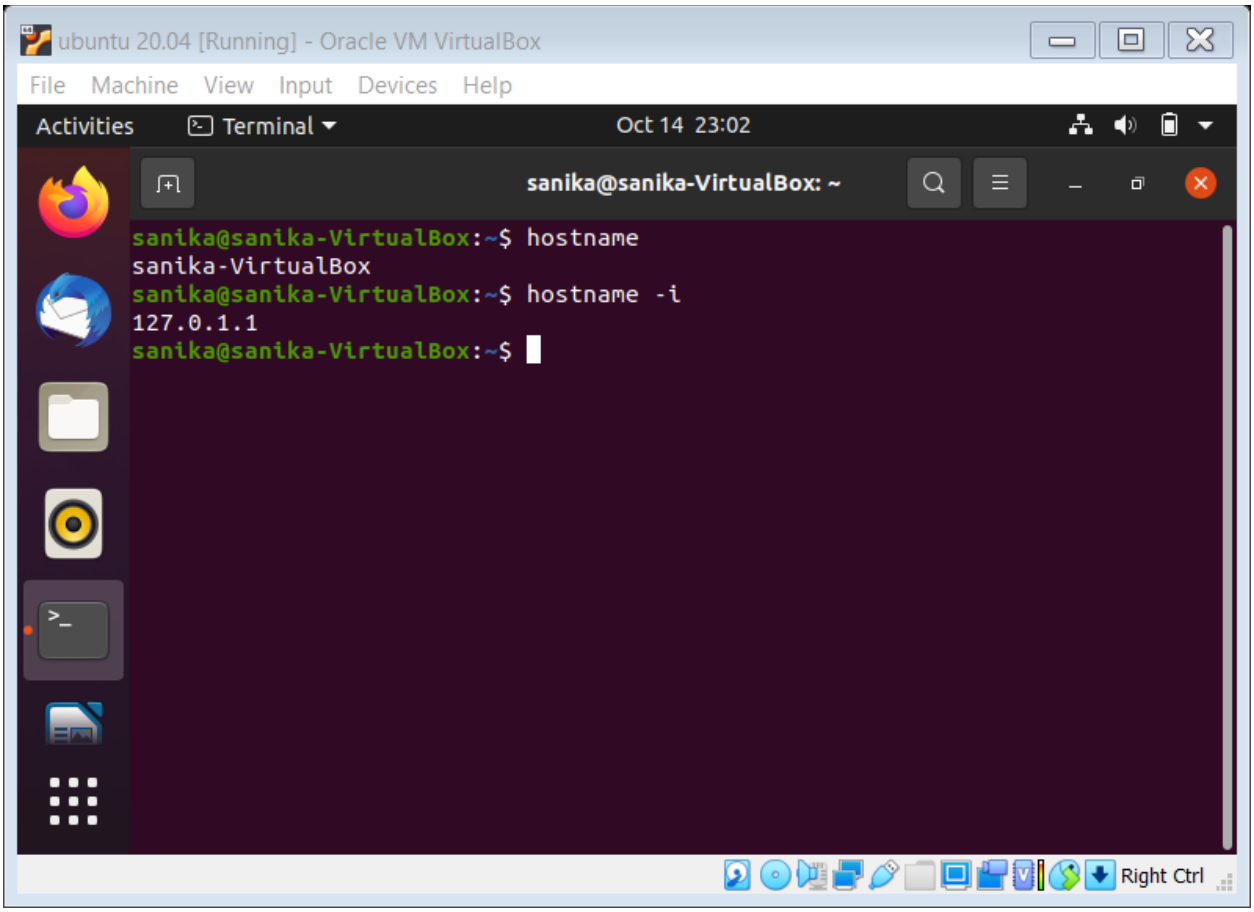


12. hostname

The ***hostname* command** is used to obtain the DNS (Domain Name System) name and set the system's hostname or NIS (Network Information System).

13. hostname -i

The ***hostname -i* command** is used to obtain the IP address of the system we are currently working on.



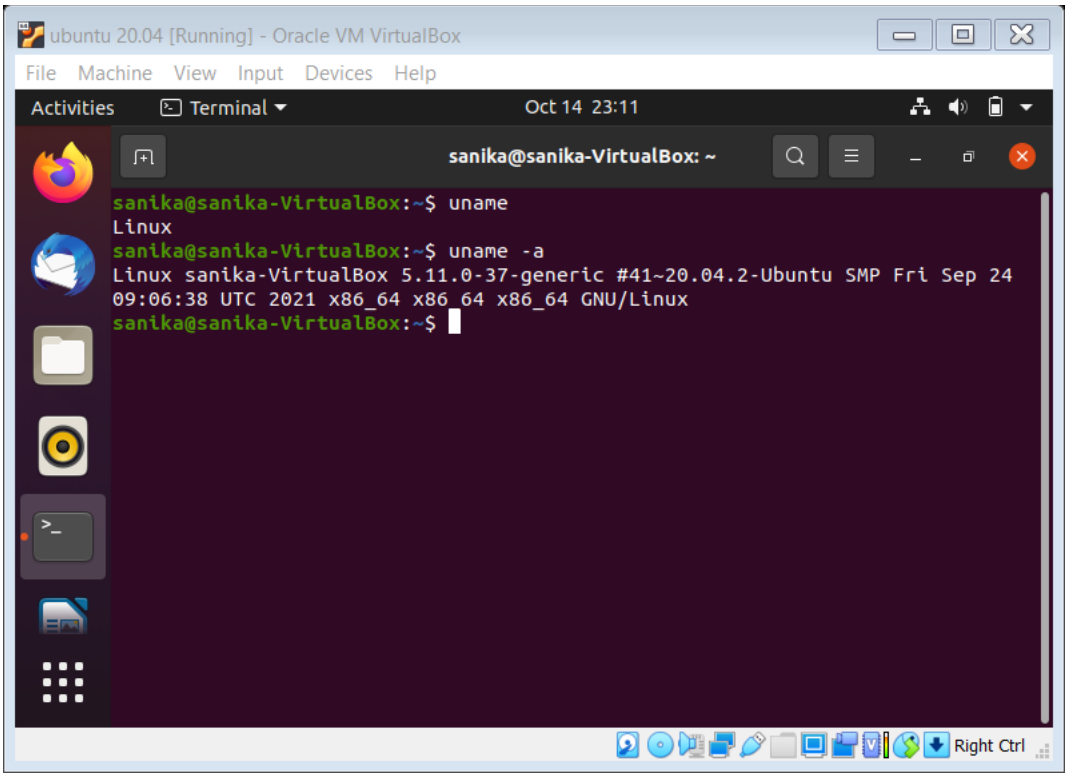
14. uname

We use the ***uname* command** to display system information, check the operating system, etc.

uname :- Shows name of the Operating System

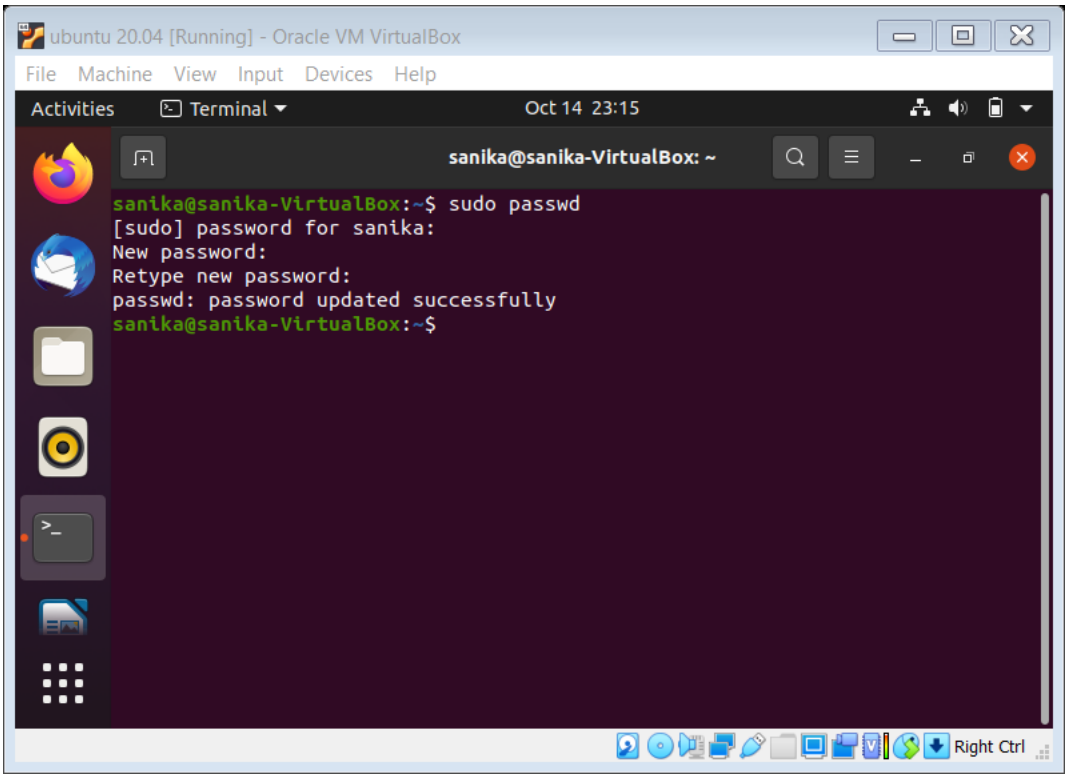
uname -a :-Shows information which includes the following details:

- kernel name
- node name
- kernel release
- kernel version
- h/w name
- processor type
- h/w platform
- operating system name



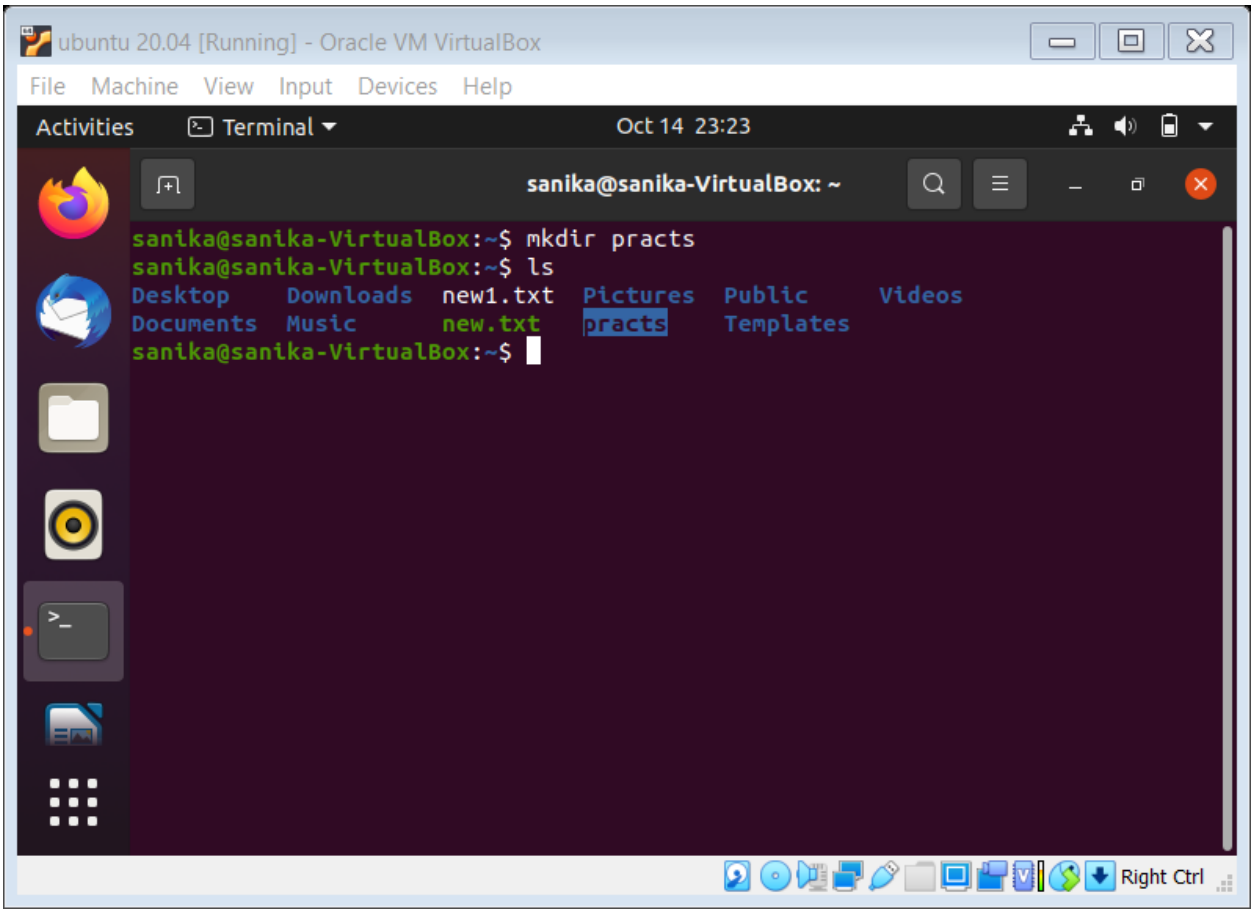
15. sudo passwd

The ***sudo passwd* command** is used to change the current password and set a new password.



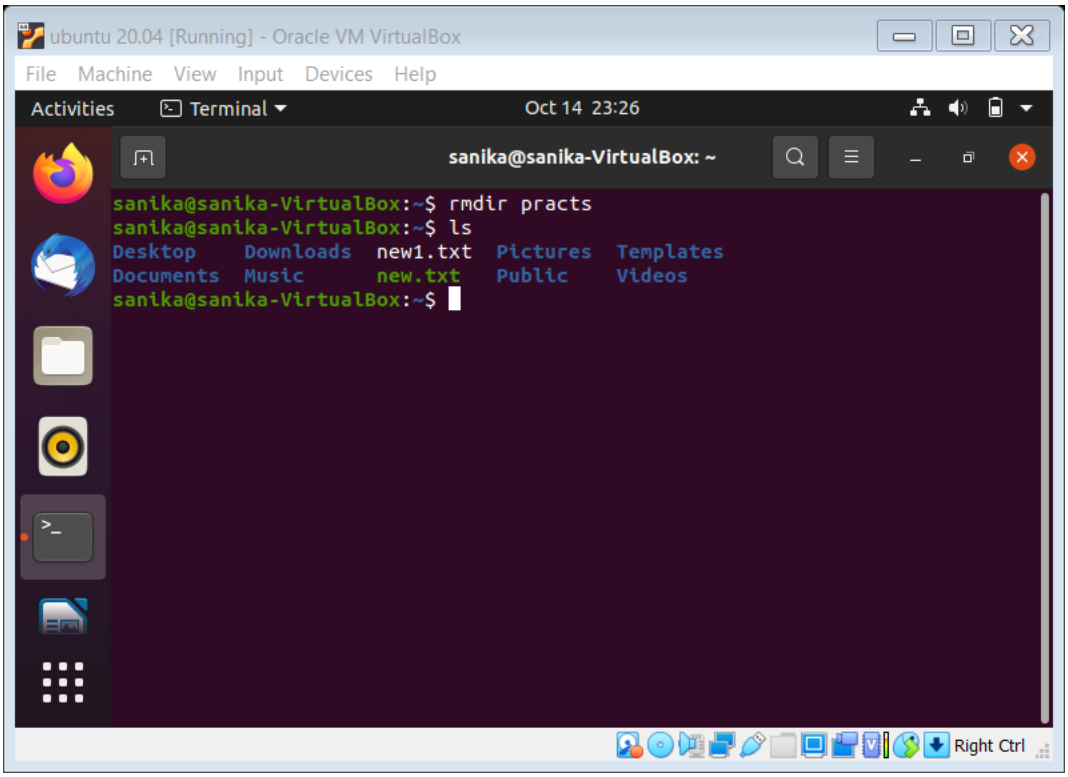
16.mkdir :- (mkdir DIRECTORY_NAME)

The ***mkdir command*** allows the user to create directories. mkdir stands for '***make directory***'.



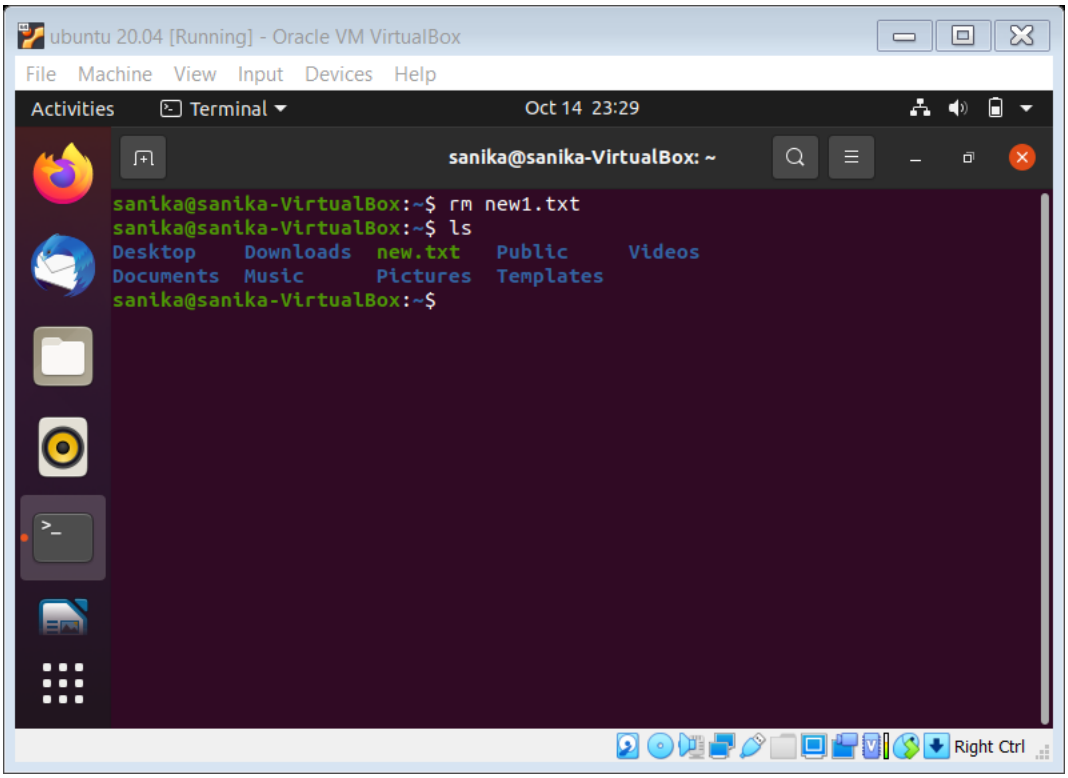
17. rmdir :- (rmdir DIRECTORY_NAME)

The ***rmdir command*** is used to remove a directory from the system. rmdir stands for '***remove directory***'.



18. rm :- (rm FILE_NAME)

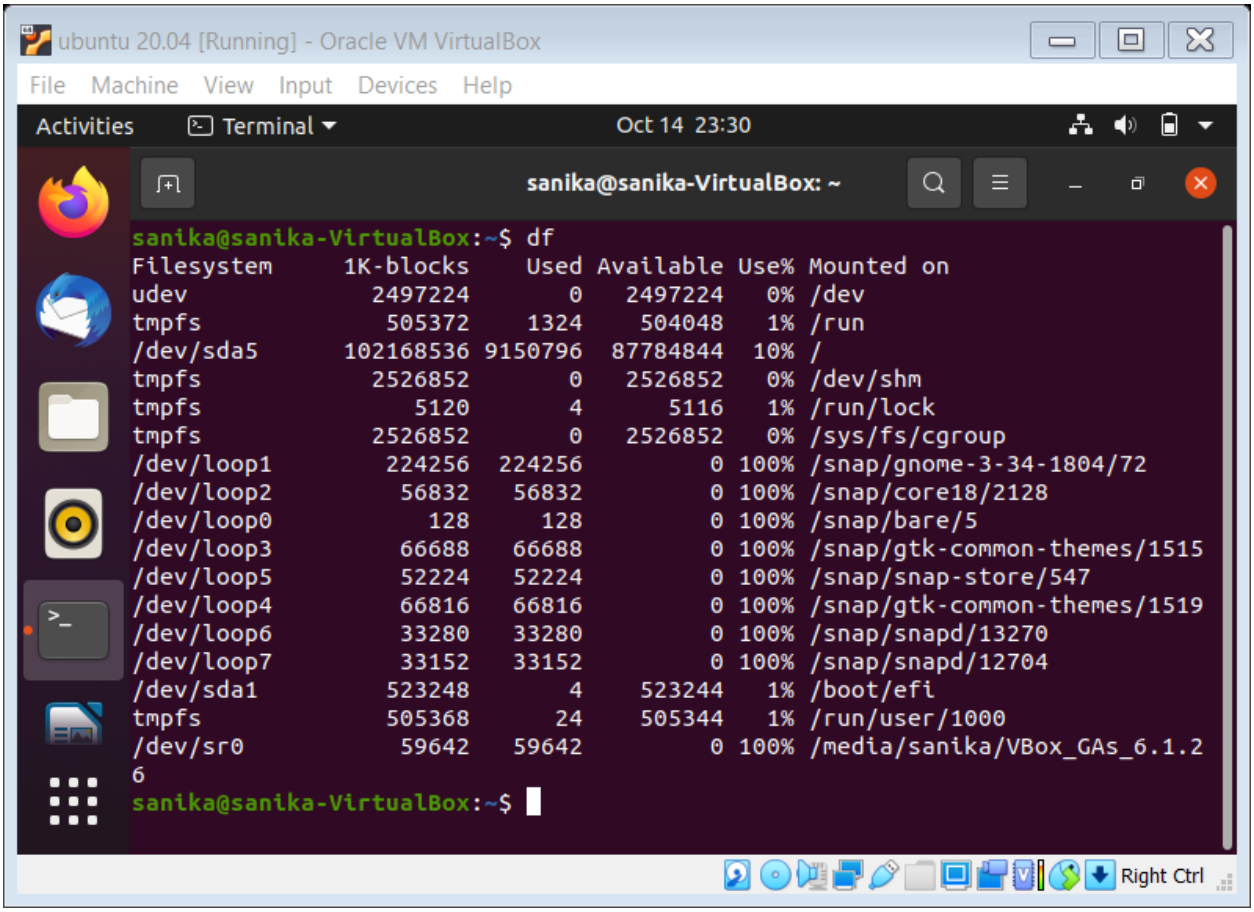
The ***rm command*** is used to remove a file from the system. It stands for '**remove**'.



19. df

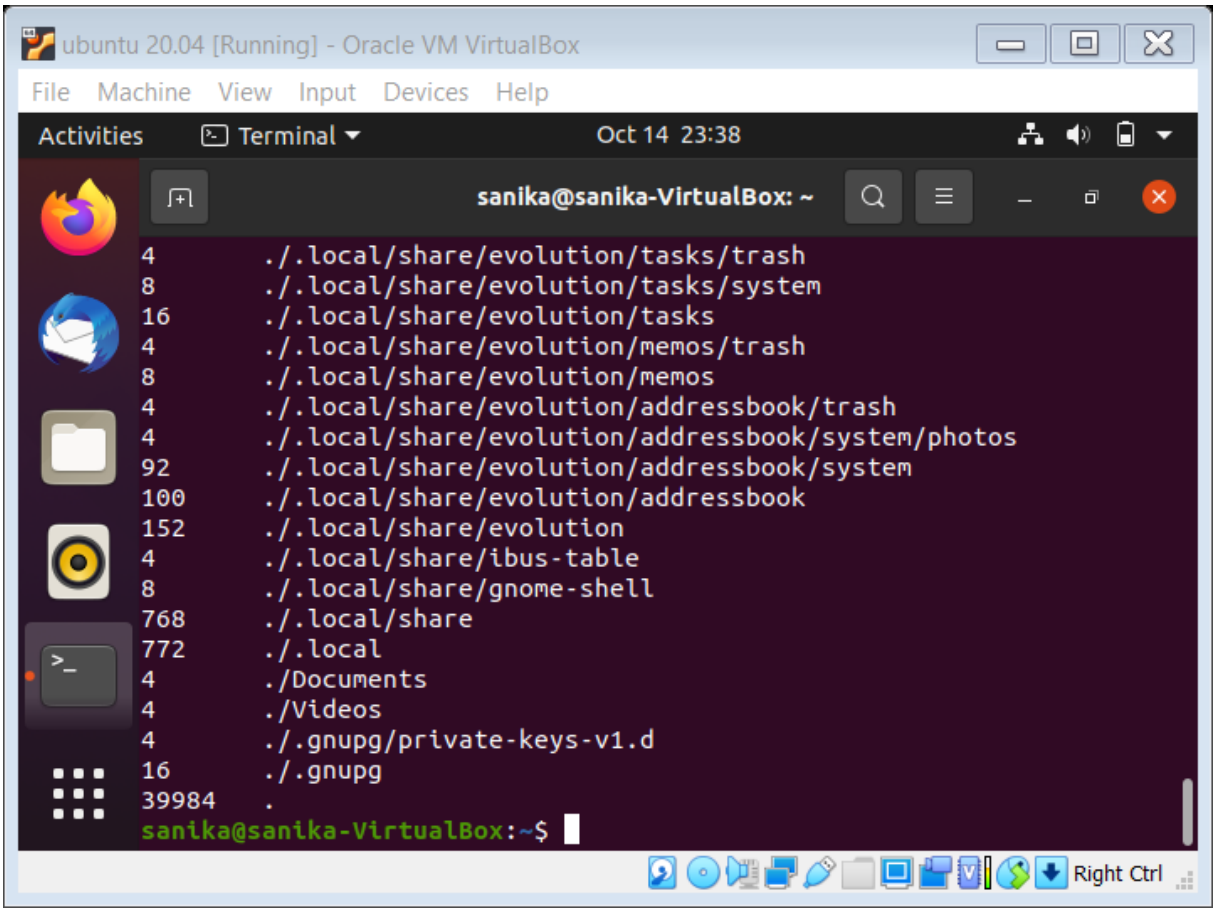
The '**df**' stands for "**disk filesystem**". Is used to display the disk space used in the file system. It shows the following information:

- Filesystem
- Blocks
- Used space
- Available space
- Used %
- Mounted on which file system.



20. du

'du' stands for ***Disk Usage***. It is used to check the information of disk usage of files and directories on a system. It displays a list of all the files along with their respective sizes.



Conclusion: Thus we have executed basic Linux Commands.