2020

Go2Linux

LINUX UBUNTU TRAINING GUIDE

Introduction

This tutorial is about step by step guide on downloading and installing Ubuntu Operating system in Linux using virtual machine (VMware). Some of the features, working and commands of the Ubuntu OS has been described and elaborated in this training guide.

Overview of Ubuntu

Ubuntu OS is Linux-based operating system that is intended to operate in PCs, smartphones, and network servers. A UK based firm known as Canonical Ltd designed Ubuntu OS. The principles for developing and designing the Ubuntu software is particularly based on the codes of Open Source software development.

Features of Ubuntu

Ubuntu has following significant features:

- It supports all the windows softwares such as Chrome, Mozilla Firefox, VLC, etc.
- It has an inbuilt software for email named Thunderbird that gives users the access to open Gmail, Hotmail, etc.
- It supports LibreOffice.
- Free applications to edit and share photos and videos are available in Ubuntu.
- It has a smart searching facility that assists user to find the content easily and fast.
- It is available for free on internet and is backed by open source community.

Ubuntu Environment

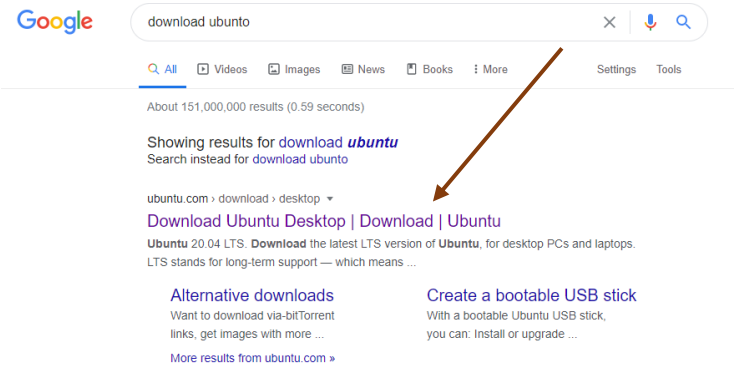
Before installing Ubunto OS, it must be ensured that system has enough hard disk space available. System requirements for installing Ubuntu are mentioned below:

Disk Space	25 – 30 GB of free disk drive space
Processor	2 GHz dual core processor or better
RAM	Recommended 2 GB
Other Requirements	Fast and continous internet connection to make download easy

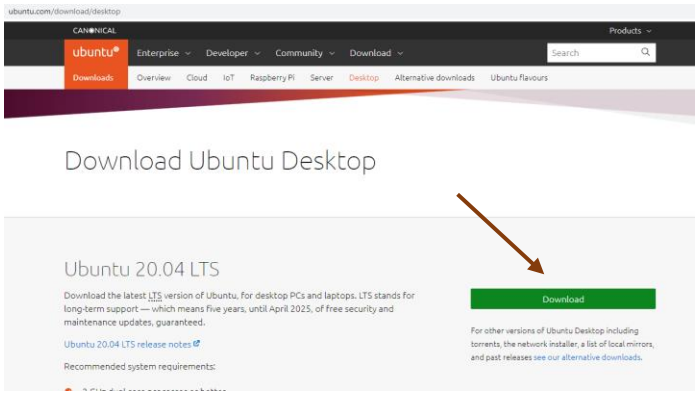
Download Ubuntu OS

Go to Google search engine and write “Download Ubunto”.

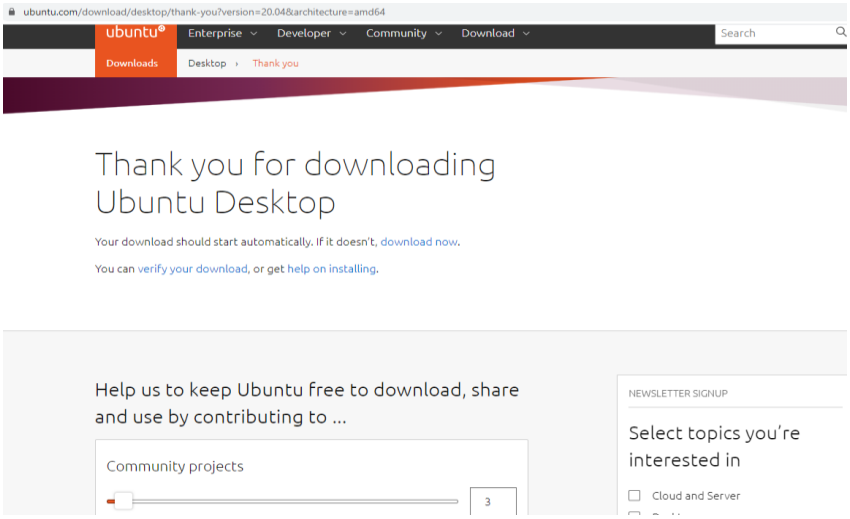
Click on the first search option appearing at the top.



A website for downloading Ubuntu will open up, click on the “Download” button represented in green colored box.



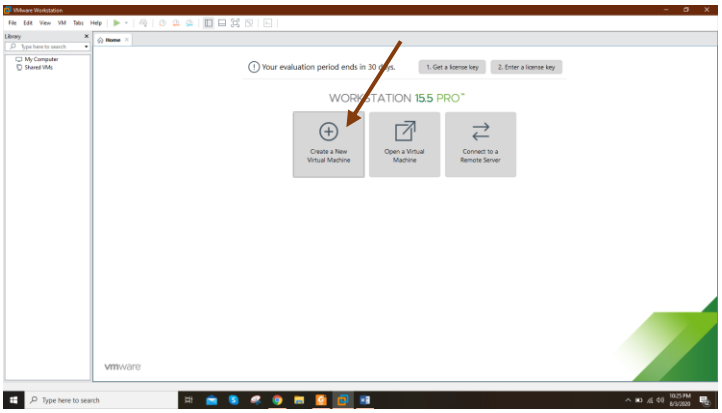
In the next step, downloading of “.iso file” will start in few seconds and following page will appear.



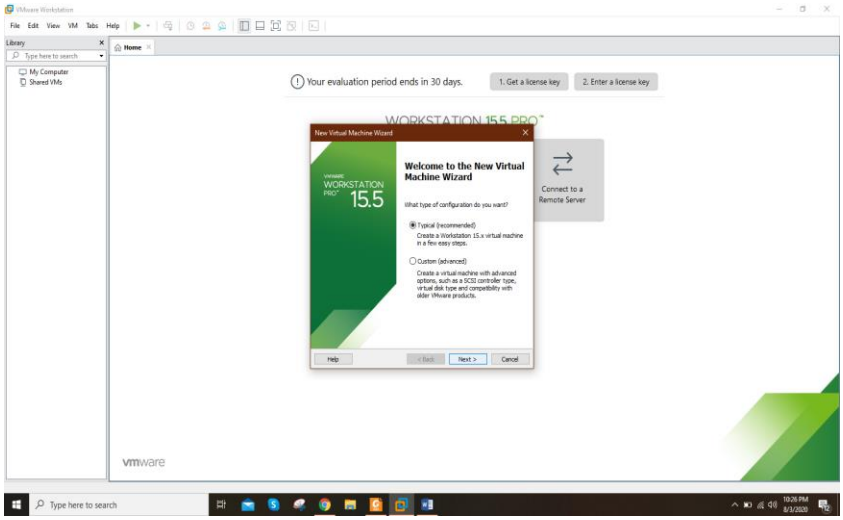
Installation of Ubuntu OS

Before installing Ubuntu OS, make sure that VMware (virtual machine workstation) is already installed in the system because this process of installing and working of Ubuntu is processed through VMware.

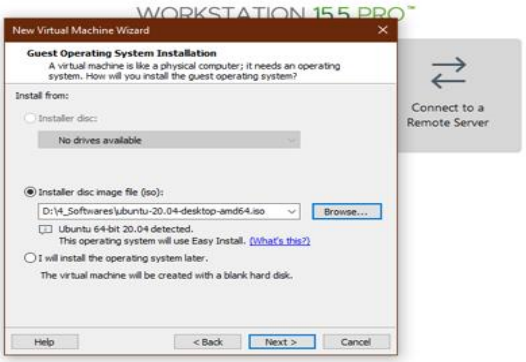
To install Ubuntu OS, open Virtual Machine workstation as shown in figure below and click on “create a new Virtual machine”



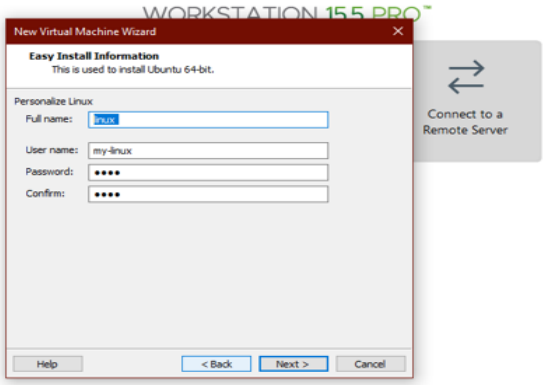
A welcome message with two options will pop-up, select “Typical (Recommended)” and click next.



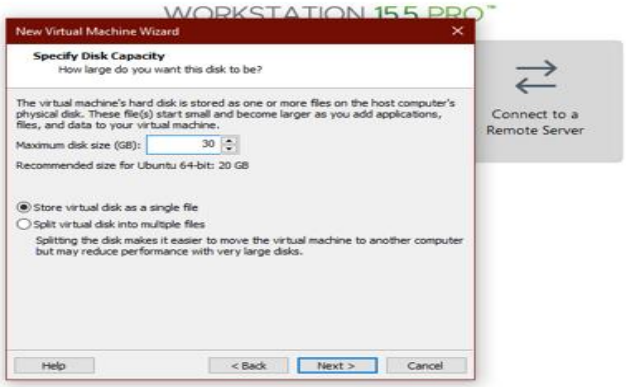
Browse the “.iso” file of Ubuntu from a place where it is downloaded and click Next.



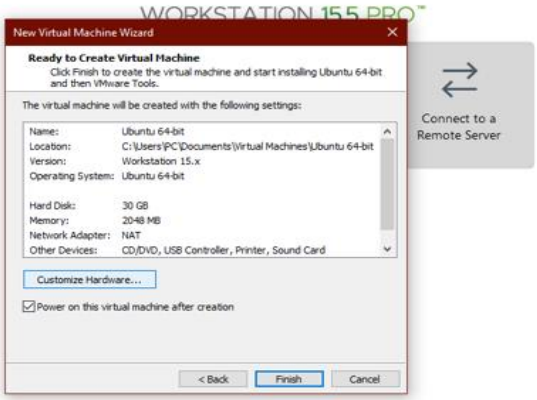
The OS will require “user name” and “password” to personalize and create the default account on Linux. Make sure there is no space between the username you mention and then click Next.



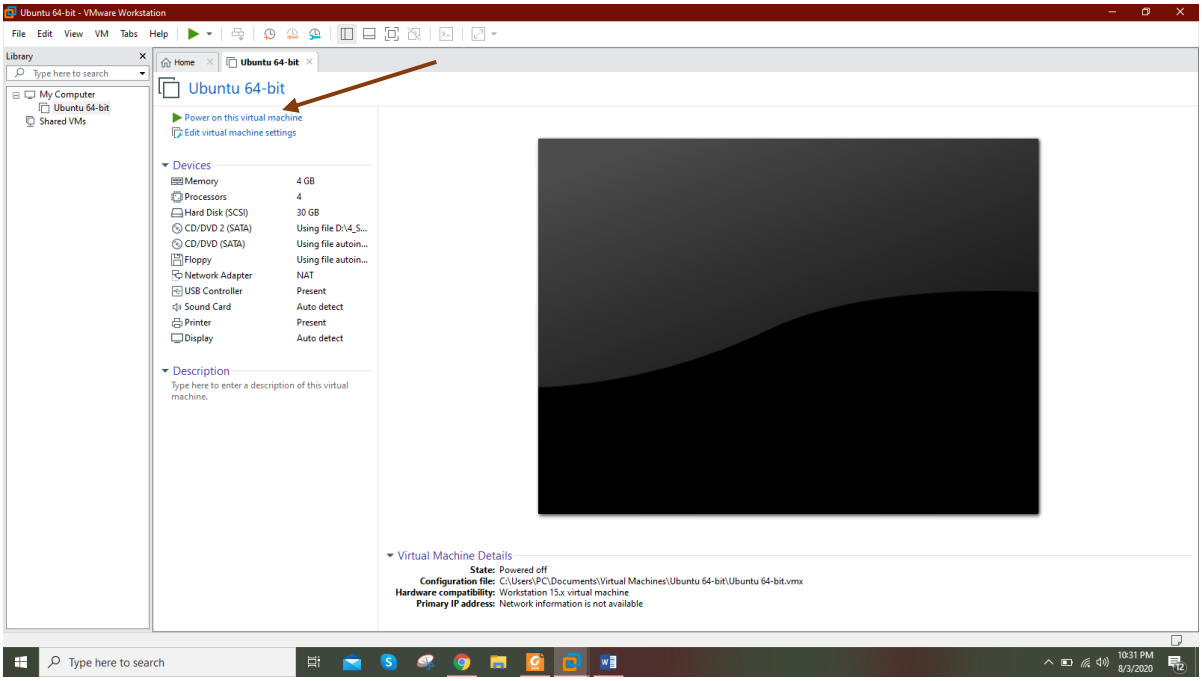
As mentioned in system requirement section that a space of 25 to 30 GB is recommended for system to work, so, disk partitioning pop up will appear. Scroll up the number to 30 GB on “Maximize disk size” block.



In the next step, select the option “Finish”.



Following screen will appear after clicking “finish” in previous step. Click on “Power on this virtual machine” at the upper left corner under Ubuntu 64 bit. Installation of Ubuntu OS will start.



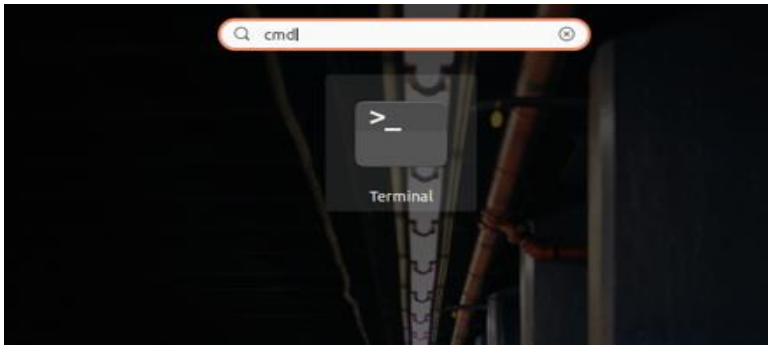
Command Line Operations

- *Listing of files and command line attributes*

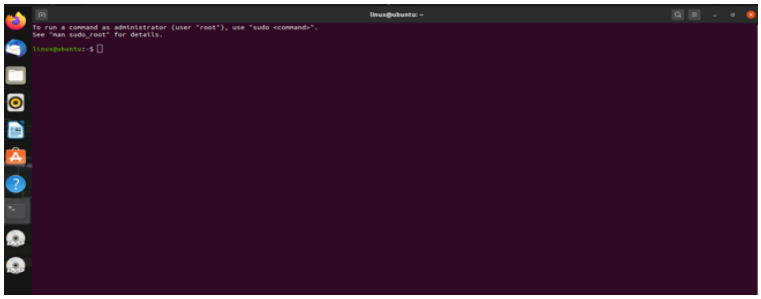
After installation, open Ubuntu OS thru virtual machine. It is because using VMware, any OS can run simultaneously on windows just like any other application runs.

Now, several command line operations will be demonstrated in this training guide ahead.

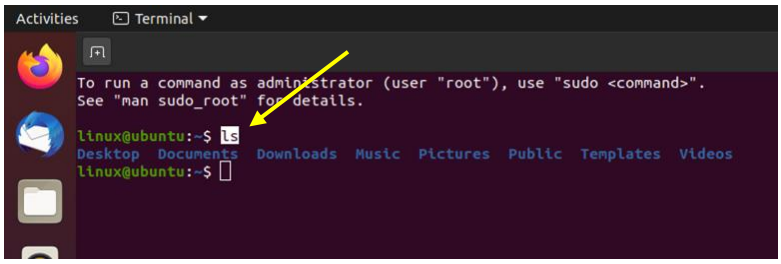
Open a new terminal by writing "cmd" in search box in Ubuntu OS as shown in figure below.



A new terminal window will open where different commands will be given for any action to be done as seen below.

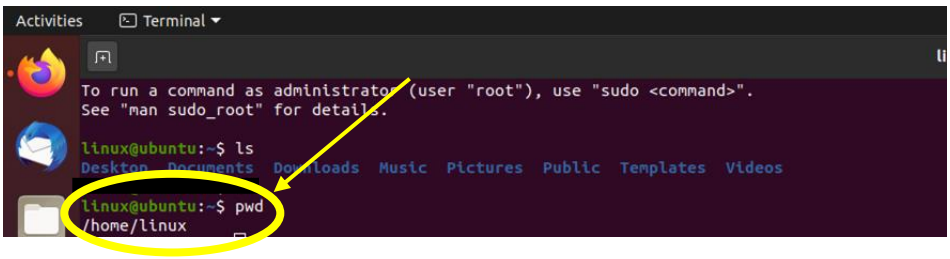


Write "*$ ls*" in terminal and press "Enter". It will show you the list of all the applications present in the current directory as shown in figure below.



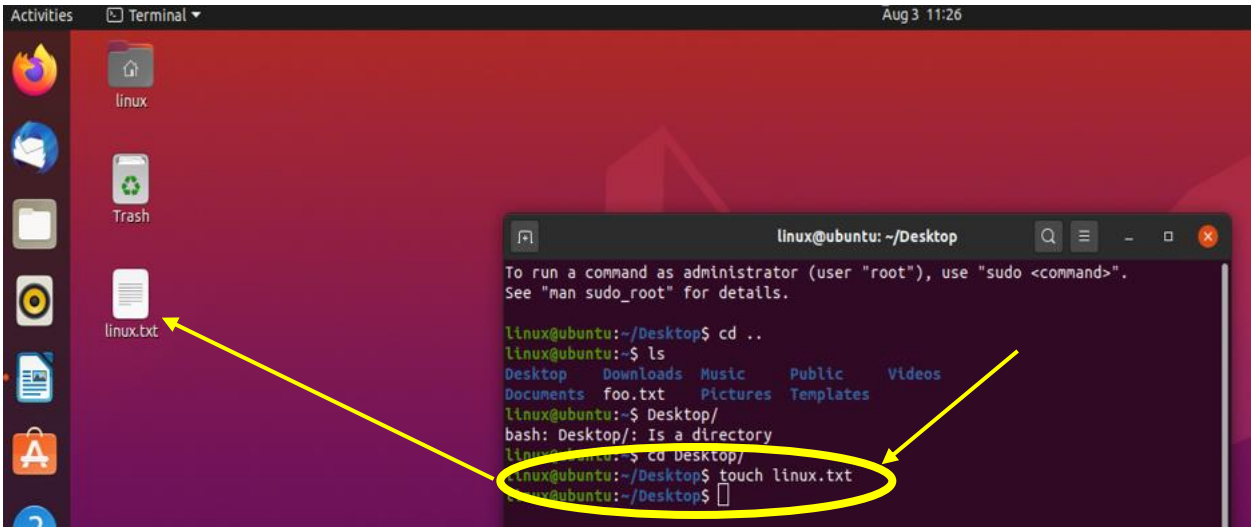
- *Current directory*

To know about the current directory (cd) of your work place, type "$ pwd" in terminal, it will show the current directory. Here it shows that current directory is "Home/linux".

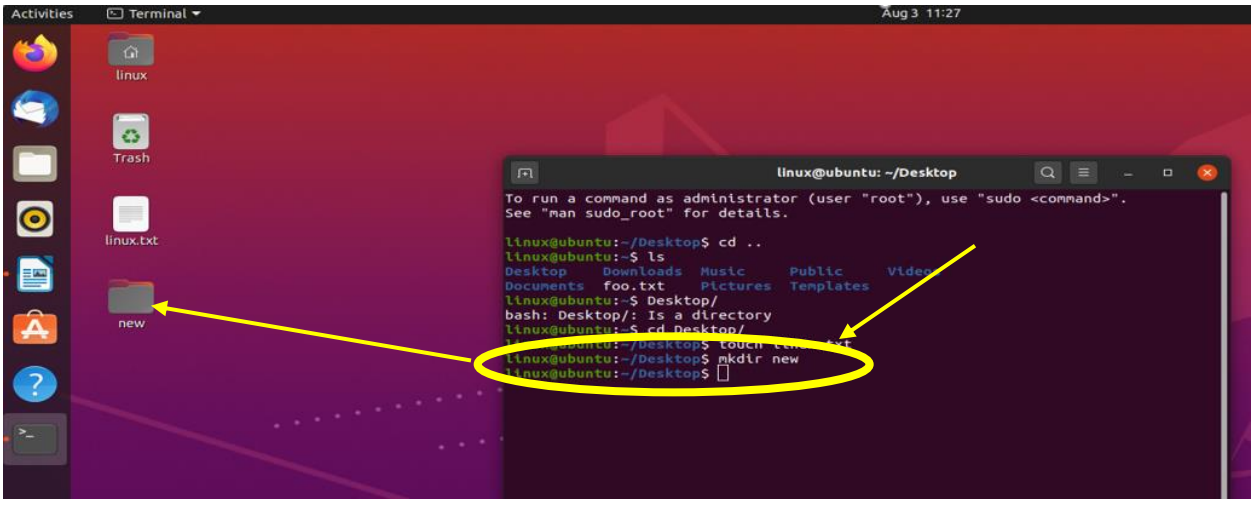


- *Creating file and copying it to different directory*

To create a file, use command "touch" and name the file by giving text file extension ".txt". In this guide, a new file has been created by typing "$ touch linux.txt" in terminal.

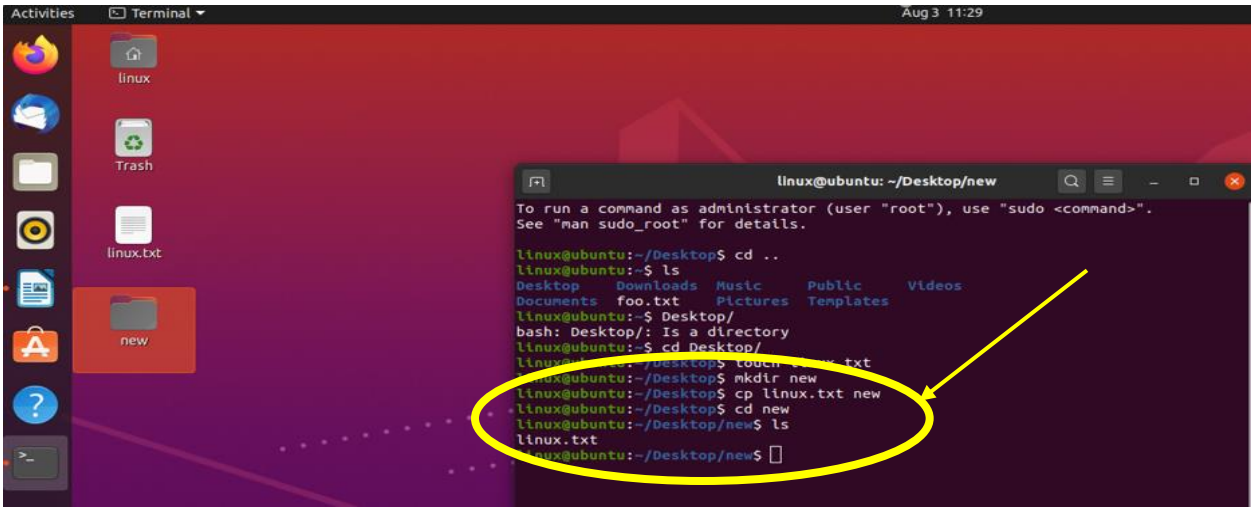


To copy the created file into different directory, a new directory (folder) is needed for which command "mkdir" is given in terminal and the name of the new folder to be created is provided as done in this tutorial such as "$ mkdir new" where "new" is the name of the folder created.



Now copy the text file “linux.txt” into “new” directory. Give the command, “$ cp linux.txt new”, where *cp* is the command used to copy the desired file.

To see if the file has been copied to the new directory or not, go to new directory by typing “$ cd new” and give command for listing all the files present in this folder, “$ ls”. It will show the file of “linux.txt” present in new directory.

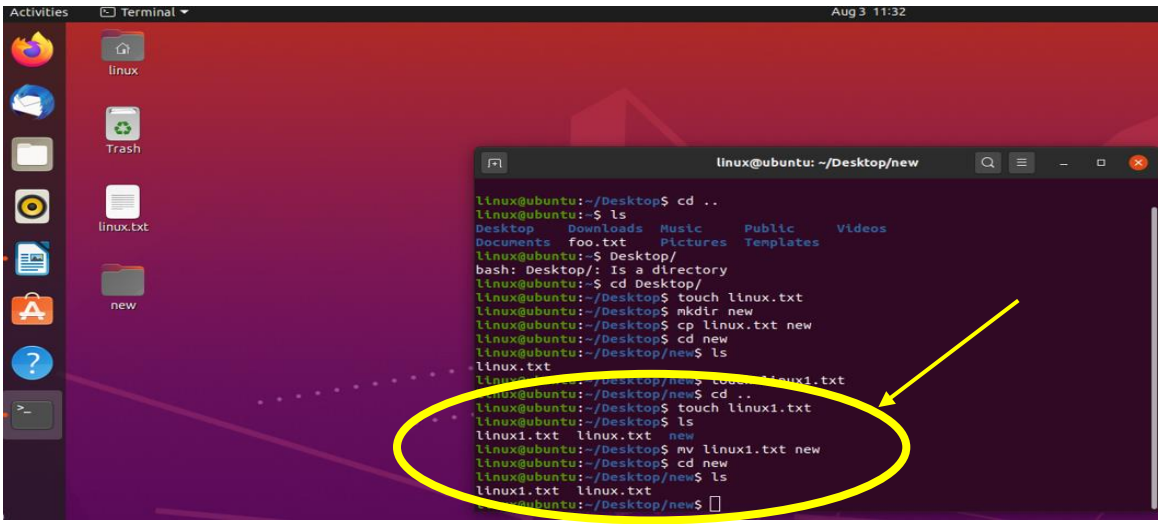


- *Create a second file and move it to a different directory*

As you are present in “new” directory and need to go back, give command “$ cd . .”. Using this, you will come back to the desktop directory. Here create a second text file by giving command “$ touch linux1.txt”. Using “$ ls” command will show the list of all the files present in desktop.

To move the second text file to the new directory, type “$ mv linux1.txt new” where “mv” is the command used to move the file.

Go to the new directory by using command “$ cd new” and give command to show the list of all files present in new directory using “$ ls”. It will show the already copied file of “linux.txt” and moved second file “linux1.txt”.

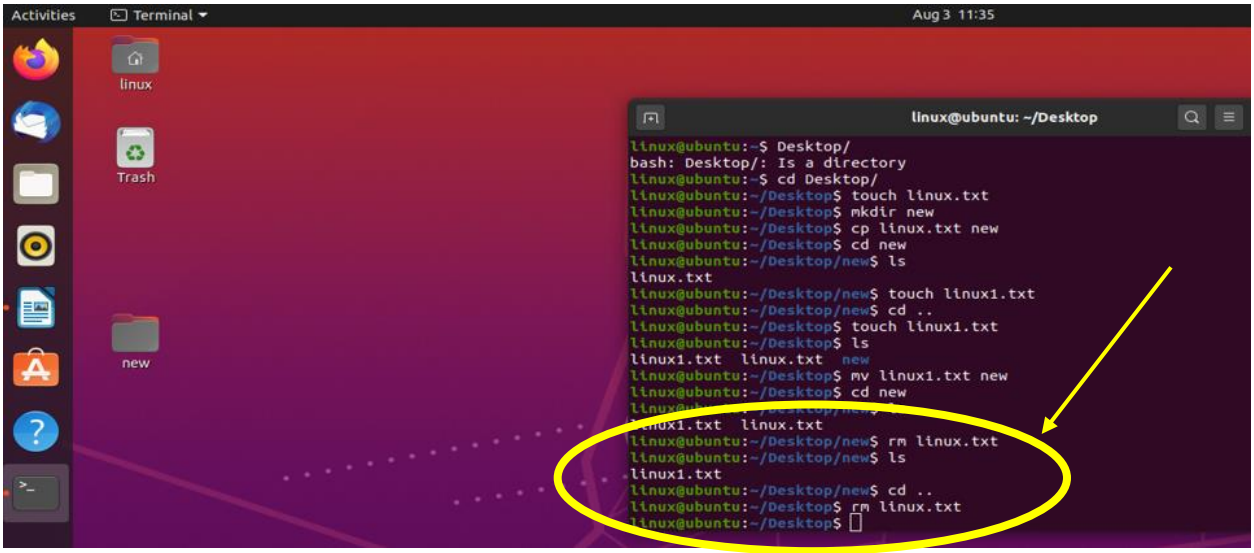


- *Remove the first file as well as the copy created*

While being in new directory, copied file will be removed from here first by using command "$ rm linux.txt".

To check if the file has been removed or not, type command "$ ls", it will show only second file (linux1.txt).

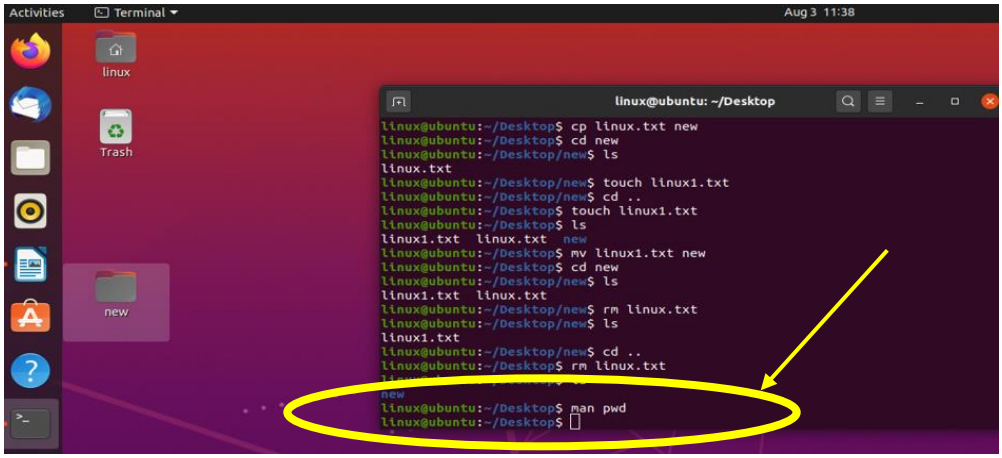
We need to remove the first file from the desktop also, so go back to the desktop directory using command "$ cd. ." and again write "$ rm linux.txt" to remove. First file will be removed from desktop too.



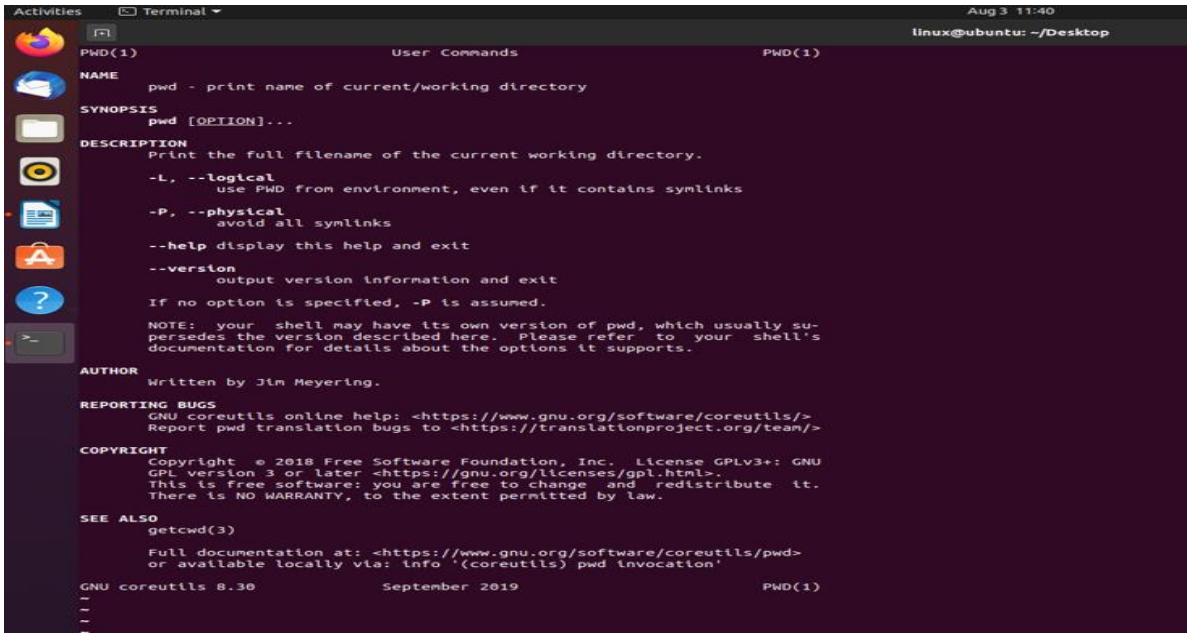
- *The manual page for a given command*

"man command" in Ubuntu displays user manual of any command provided to run on the terminal. Using this command, a detail of that specific command displays such as Name, Synopsis, Description, Author, Bugs, Copyright and See also.

In this guide, the user manual of current directory is displayed by giving command "$ man pwd" to the terminal.



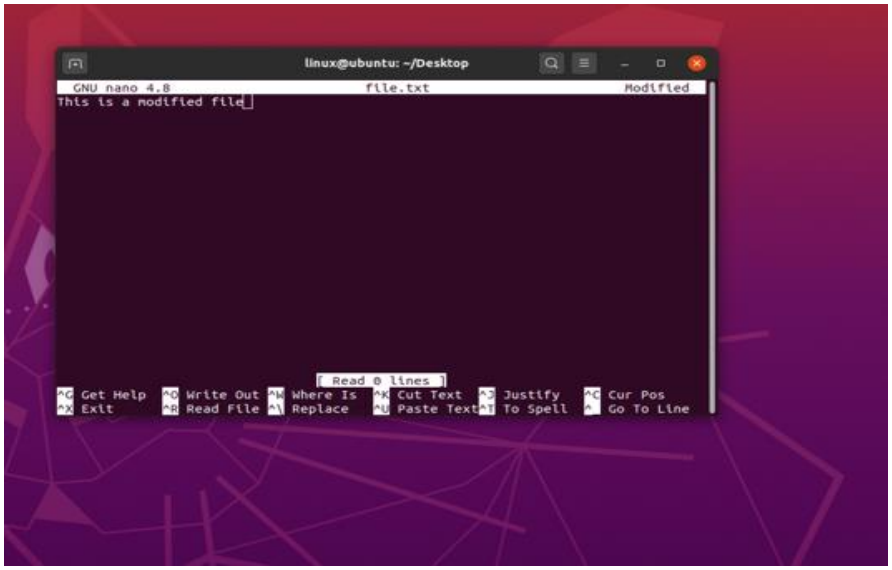
Following information appears regarding current directory.



- *Create a text file, then use an editor to modify the content. Then display the content of the modified file*

To create a new text file, type "$ touch file.txt" in terminal window. As it will be an empty file, to modify it, use "nano" command. Nano is an editor to modify the content in file.

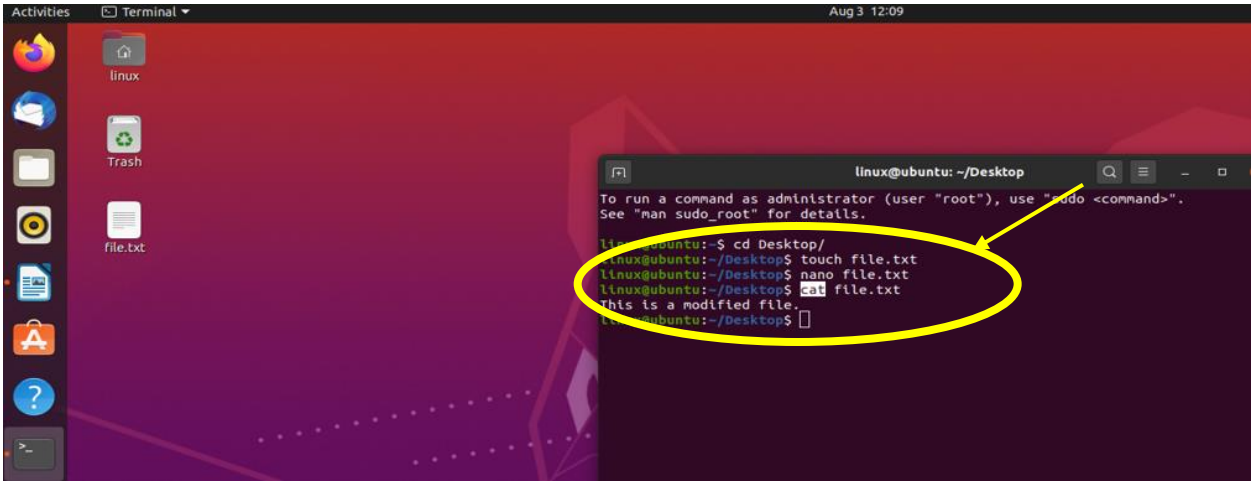
Type "$ nano file.txt" to modify the file and press enter. Following window will appear.



To modify the file, press "^o" to write out something in the file as here "this is a modified file" is written as shown in figure above.

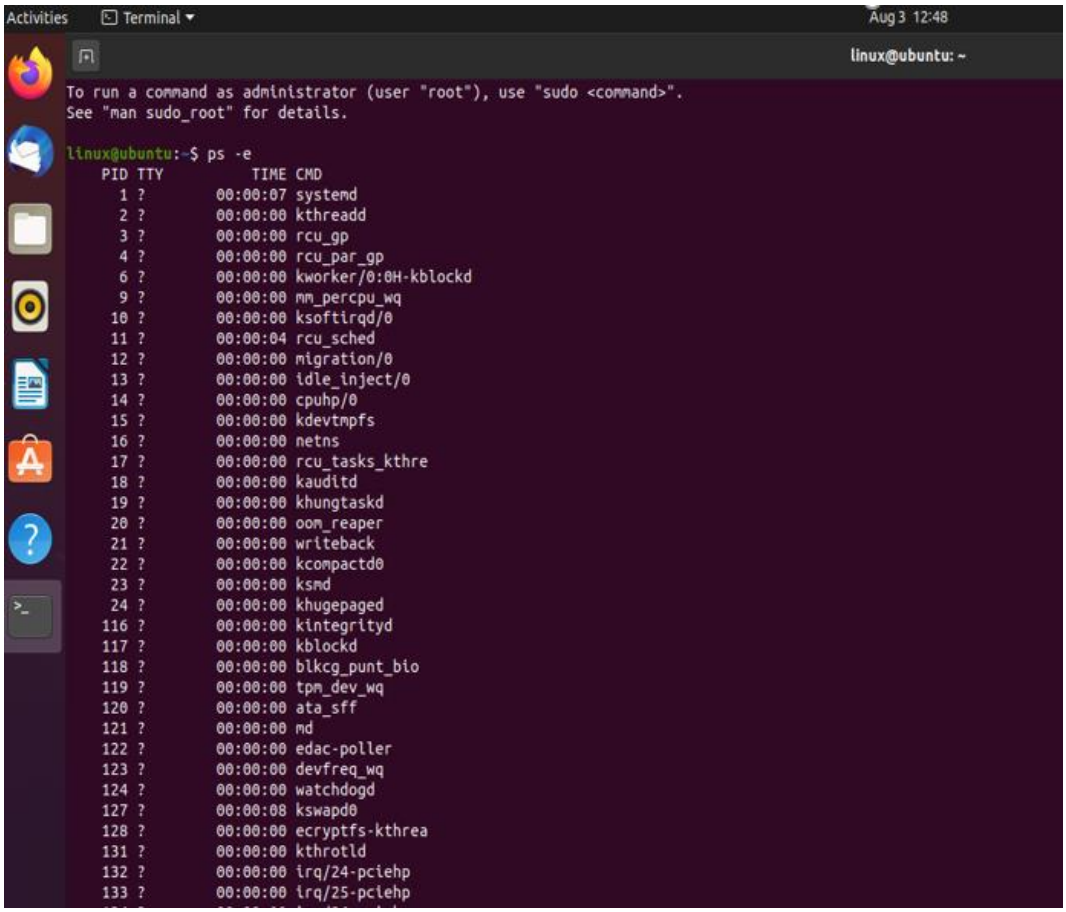
To exit from this screen, press "^x".

In the next step, to display the modified content give command “$ cat file.txt” in terminal window and it will show the content of the file.



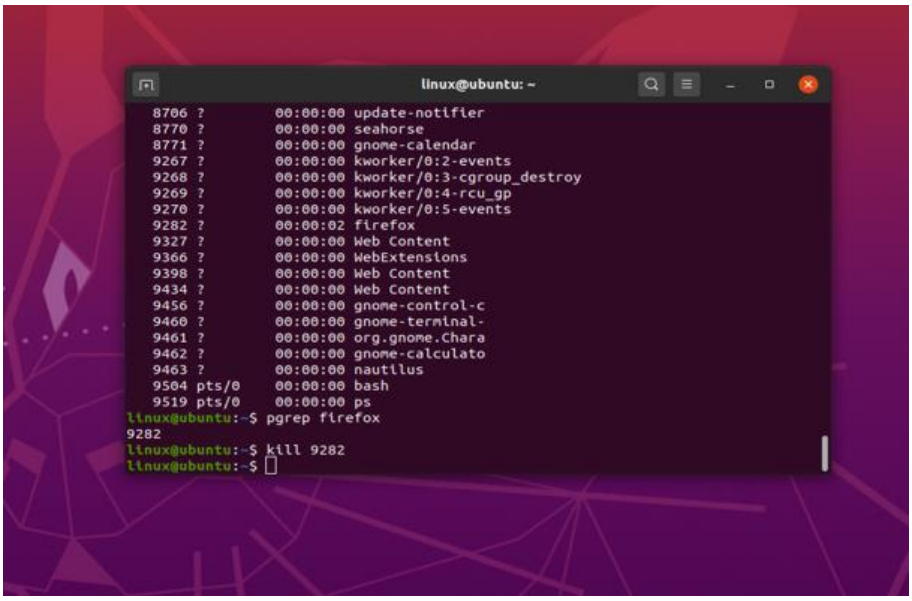
- *Show running process on the system. Demonstrate how to search for a specific process*

To show the running process in the system, write “$ ps” in the terminal window. “ps” command is used to provide all the information regarding running processes in the system with their identification numbers.



To search for a specific running process e.g if anyone needs to find the “firefox process”, type command “$ pgrep fireforx” and press enter. Its process identification number (PID) will display in the terminal window.

To forcibly stop that running process, use “kill” command and write PID of that specific process. As shown in figure below that command “$ kill 9282” has been used to stop the firefox process forcibly.



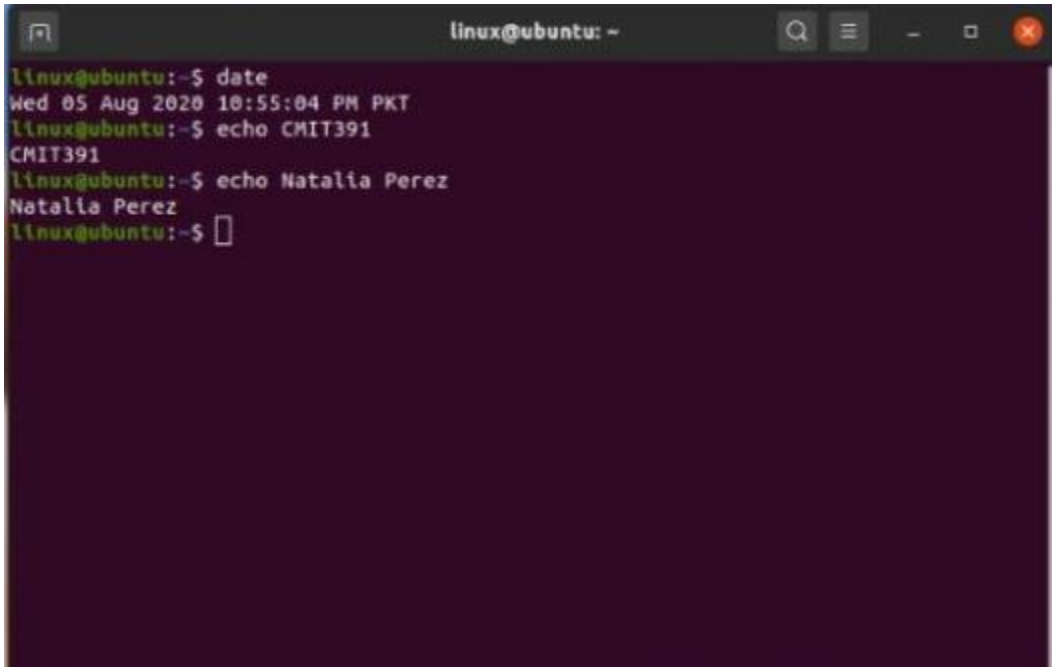
Submission Uniqueness

To show the uniqueness of the submission, following commands have been written in the terminal window.

"$ date" then press enter.

"$ echo CMIT391" then press enter.

"$ echo name" then press enter.



Summary

Linux is the most secure operating system to perform managerial tasks. It has stronger built in data encryption system than other operating systems. Administration tasks are usually time consuming, monotonous and difficult to perform but by implementing Linux system, it can be done easily even from remote location. As Linux is the open source system, therefore several softwares are available here for free. Linux provides the choice for softwares under company's use. Tasks in Linux like MS word and MS Excel have a huge amount of built in programs. This unique feature helps the employees to look for the best solution that will ensure them to get results according to the compatibility of the whole office or company.

In this guide, a complete training of using Ubuntu OS is summarized. A step by step process of downloading and Installation of Ubuntu OS using VMware has been elaborated in detail with the help of picture. The advantage of installing Ubuntu through VMware is that Ubuntu can be run on Windows just like all other applications. Command line interference (CLI) operations has been described and how to give command in terminal window of Linux is discussed. Commands like creating file, copy, move, remove and edit the file has been deliberately presented in this guide with pictures. To check the running processes and how to halt them forcibly has been described in detail in this training guide. This training guide will prove to be of a great help to the beginners of Ubuntu OS users.

References

[1] https://www.tutorialspoint.com/ubuntu/ubuntu_tutorial.pdf

[2] https://www.ubuntutor.com/ubuntu18eng/Ubuntu%201804%20english.pdf

[3]https://wiki.ubuntu.com/Training?action=AttachFile&do=get&target=DesktopCourseStudentGuide.pdf

[4] https://rmonnetworks.com/4-benefits-of-using-linux-for-business/