Free and Open Software for Personal Computing

IT1306

Level I - Semester 1

Managing Files and Folders in FOSS OS

References

For more information refer

- Oracle VM Virtual Box, User Manual

https://www.virtualbox.org/manual/UserManual.html#virt-why-useful

- Installing Ubuntu as Primary Operating System

http://ubuntu-manual.org/downloads

- Using Command Line in Ubuntu

https://tutorials.ubuntu.com/tutorial/command-line-for-beginners#0

FOSS OS Installation

FOSS OS Installation using Oracle VM Virtual Box

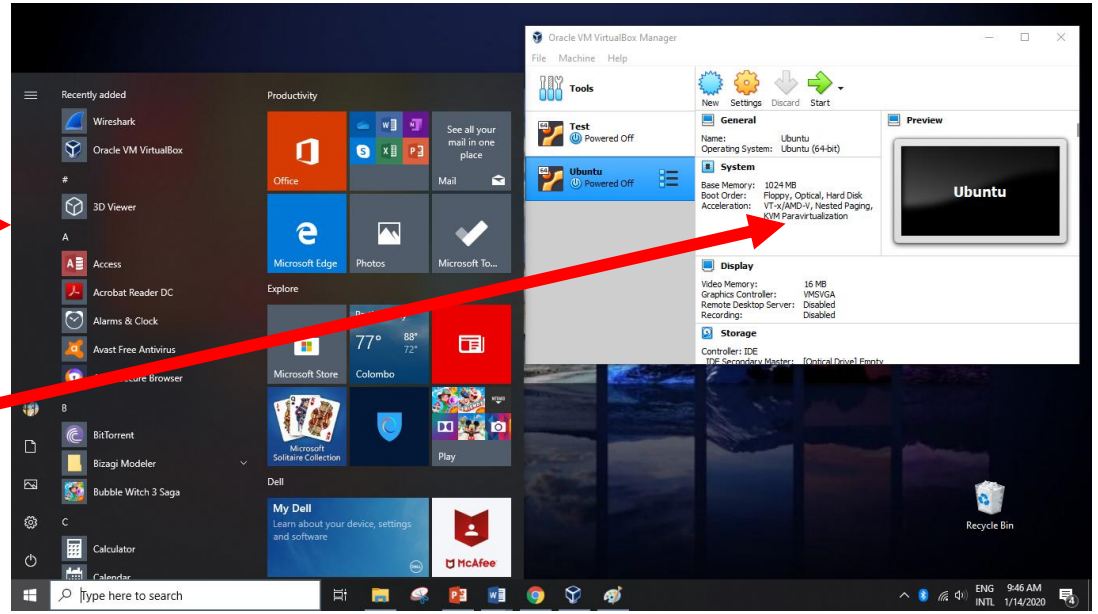
Installing Ubuntu on a Virtual Box (using Oracle VM Virtual Box)

Oracle VM VirtualBox is a cross-platform virtualization application.

It can be installed in the existing computer so that another OS will run inside the virtual box.

Primary OS Windows

Running Ubuntu inside the Virtual Box



FOSS OS Installation using Oracle VM Virtual Box

What is a 'Oracle VM VirtualBox'?

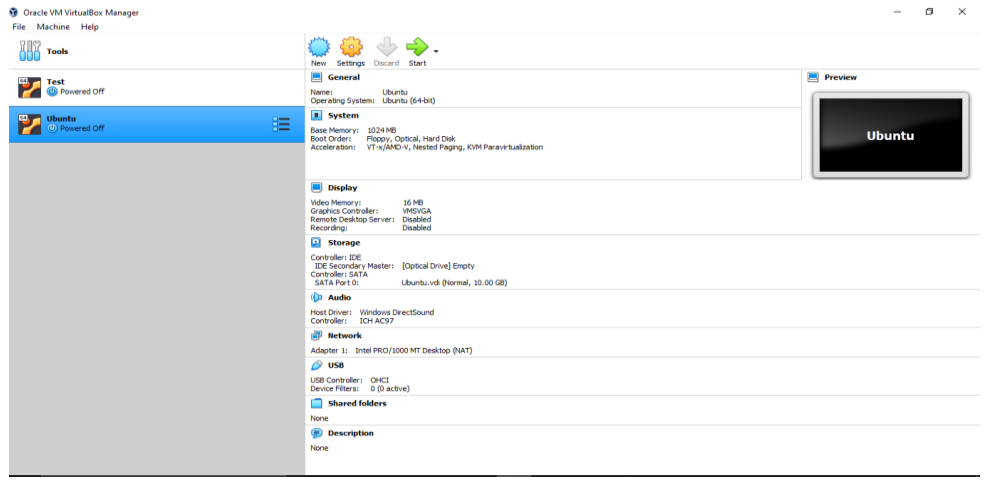
- A free and open-source hosted hypervisor for virtualization.
- Developed by Oracle Corporation.
- Oracle VM VirtualBox
  - can be installed on Windows, macOS, Linux, Solaris and Open Solaris.
  - can load multiple guest OSes under a single host operating-system (host OS). Each guest can be started, paused and stopped independently within its own virtual machine (VM).

FOSS OS Installation using Oracle VM Virtual Box

Installing Oracle VM Virtual Box

- Download Oracle VM Virtual Box from http://www.virtualbox.org
- Double click on the downloaded package file (.exe)
- Setup wizard dialog box will guide you through the required steps.

Shows the installed Operating Systems. When you first install Virtual Box, this pane would be empty



FOSS OS Installation using Oracle VM Virtual Box

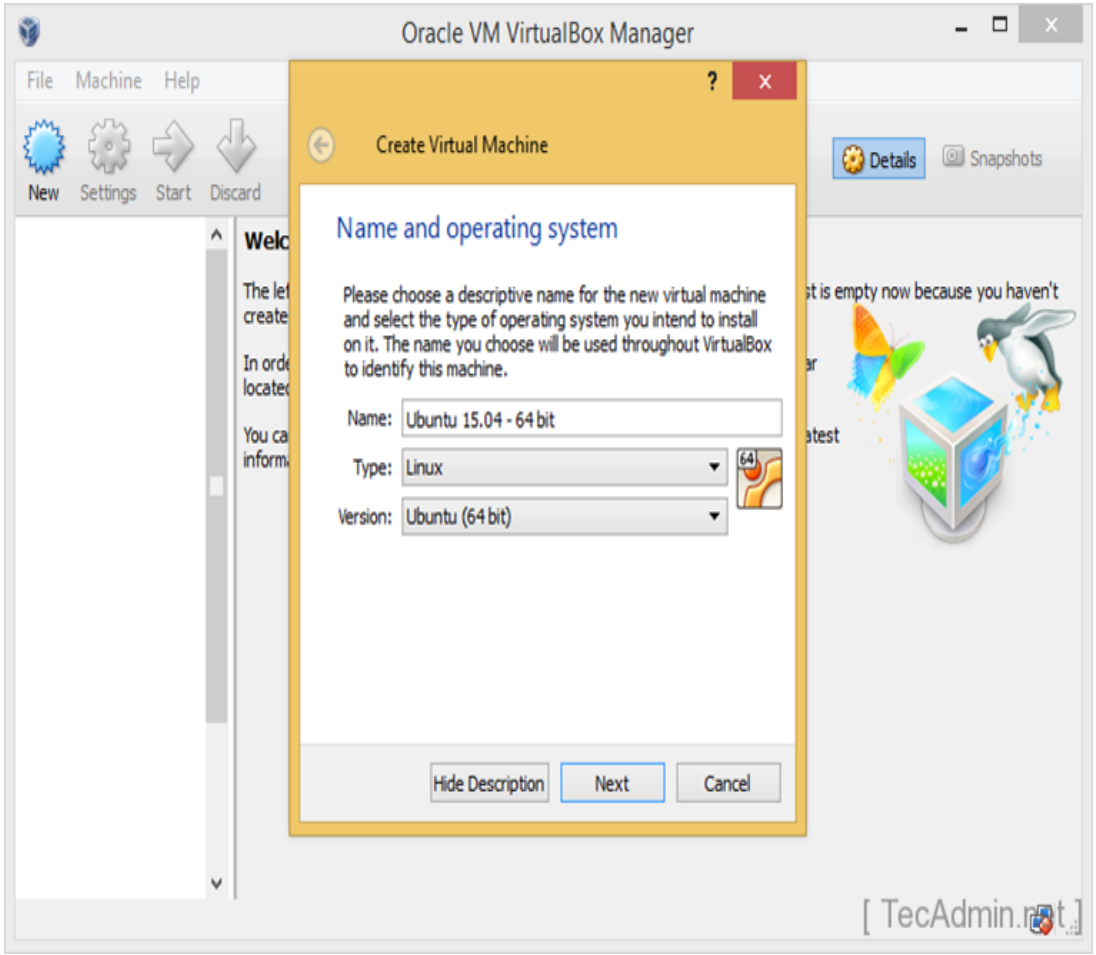
Setting up Oracle VM Virtual Box to run Ubuntu

- Open the Virtual Box.
- Click *New* on the top left corner of the window.

FOSS OS Installation using Oracle VM Virtual Box

Setting up Oracle VM Virtual Box to run Ubuntu

- **Enter a name** for your virtual machine.
  - Type whatever you want to name your virtual machine (e.g., Ubuntu) into the "Name" text field.
- **Select Linux as the "Type" value.** Click the "Type" drop-down box, then click **Linux** in the resulting drop-down menu
- **Select Ubuntu as the "Version" value.**



FOSS OS Installation using Oracle VM Virtual Box

Setting up Oracle VM Virtual Box to run Ubuntu

- Memory Size
  - Click and drag the slider left or right to decrease or increase the amount of RAM that VirtualBox will have available for the Ubuntu virtual machine.
  - The ideal amount of RAM will automatically be selected when you get to this page.
  - Make sure not to increase the RAM into the red section of the slider; try to keep the slider in the green.

FOSS OS Installation using Oracle VM Virtual Box

Setting up Oracle VM Virtual Box to run Ubuntu

- Create your virtual machine's virtual hard drive.

Select "*Create a Virtual Hard Disk Now*" to set up the hard disk for the virtual machine and Click "Create"

FOSS OS Installation using Oracle VM Virtual Box

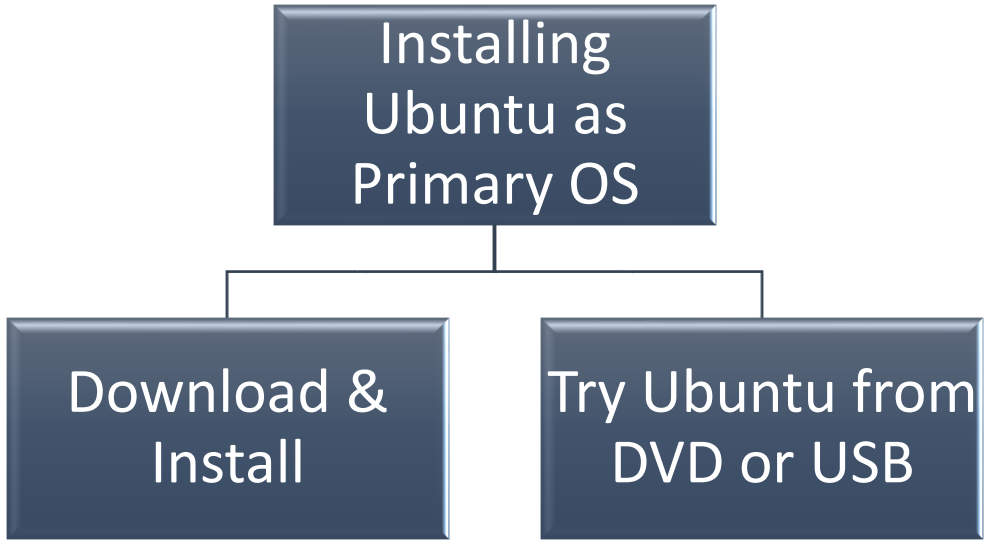
Setting up Oracle VM Virtual Box to run Ubuntu

- Create your virtual machine's virtual hard drive.

Select the folder location and the size of the virtual hard disk and click *Create*

FOSS OS Installation as a Primary OS

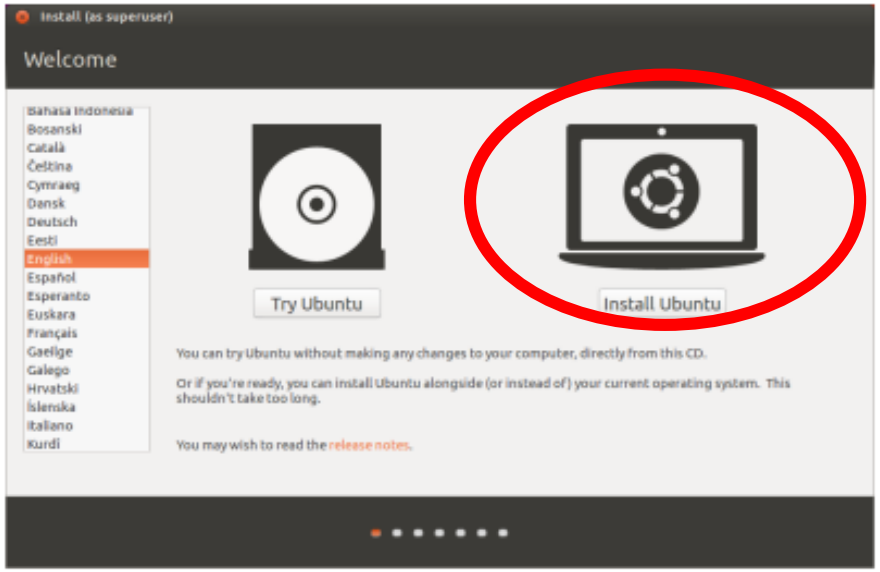
- Download Ubuntu from http://www.ubuntu.com/download
- There are two options for installing Ubuntu



FOSS OS Installation as a Primary OS

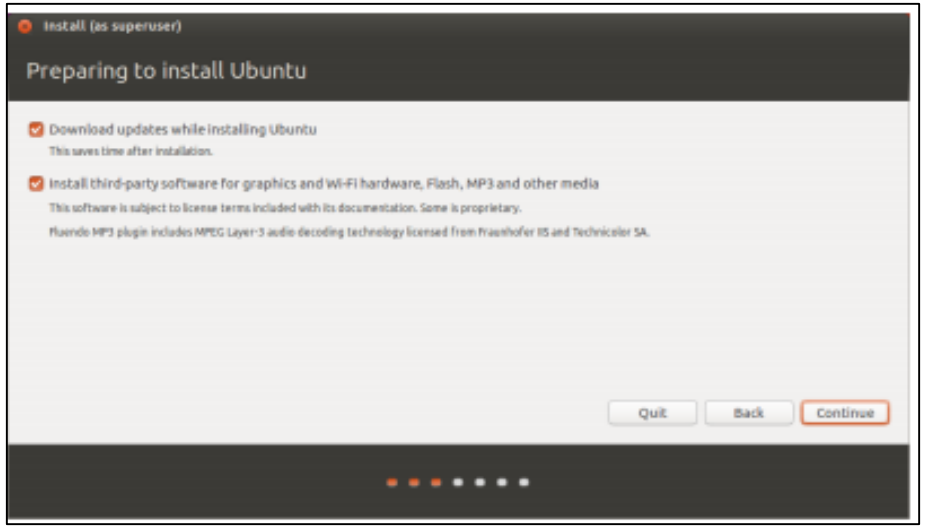
Download and Install Ubuntu

- Select 32 bit / 64 bit and download file
- Create the bootable DVD or USB if required
  - For creating the bootable DVD burn the .iso file downloaded into a DVD
  - For creating the bootable USB, follow the instructions *Easy ways to switch to Ubuntu* in download website and follow the instructions
  - Insert a bootable DVD or USB with Ubuntu and restart the computer
  - When the computer finds the bootable method, Welcome screen will be available
  - Select the language you prefer
  - Click *Install Ubuntu*

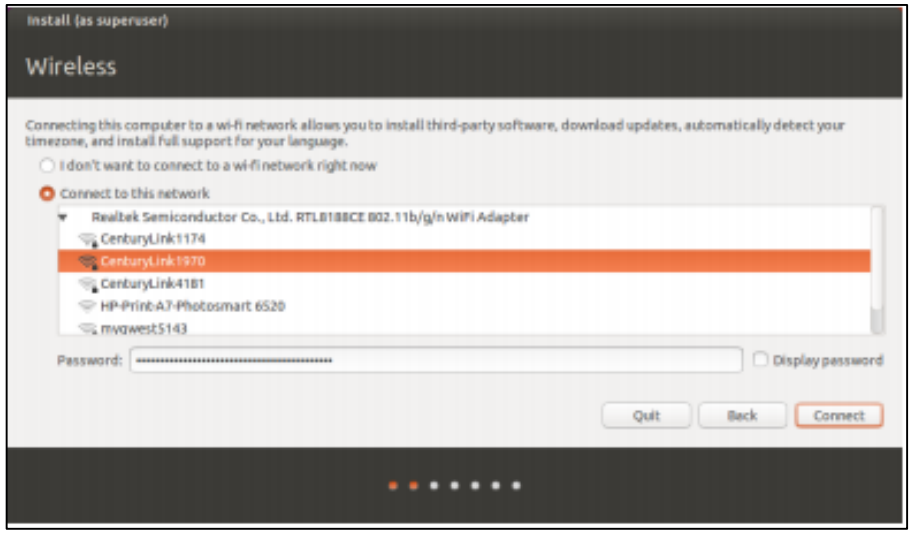


FOSS OS Installation as a Primary OS

Download and Install Ubuntu cont...



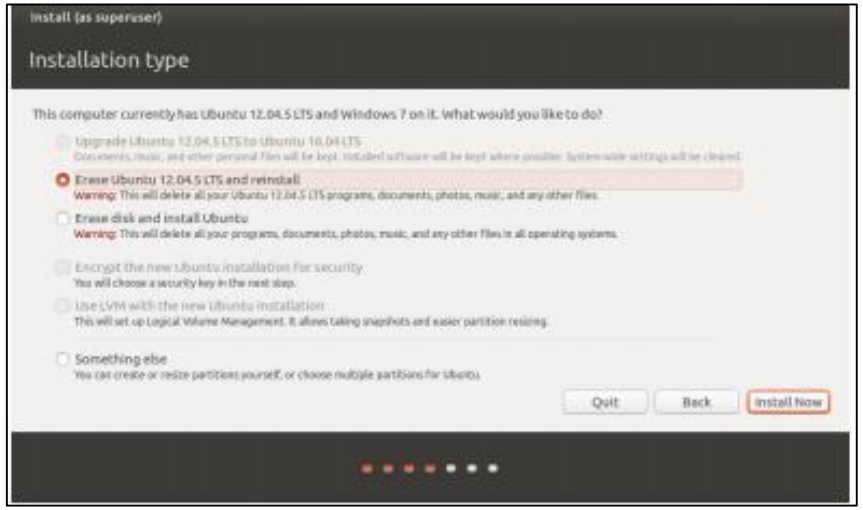
Step 01 – Preparing to install screen lets you know if you have enough disk space. If enough, click *Continue*



Step 02 – Select the wireless network you want to connect from the available networks and give the WEP/WPA key as the password. Finally click *Connect*

FOSS OS Installation as a Primary OS

Download and Install Ubuntu Cont..

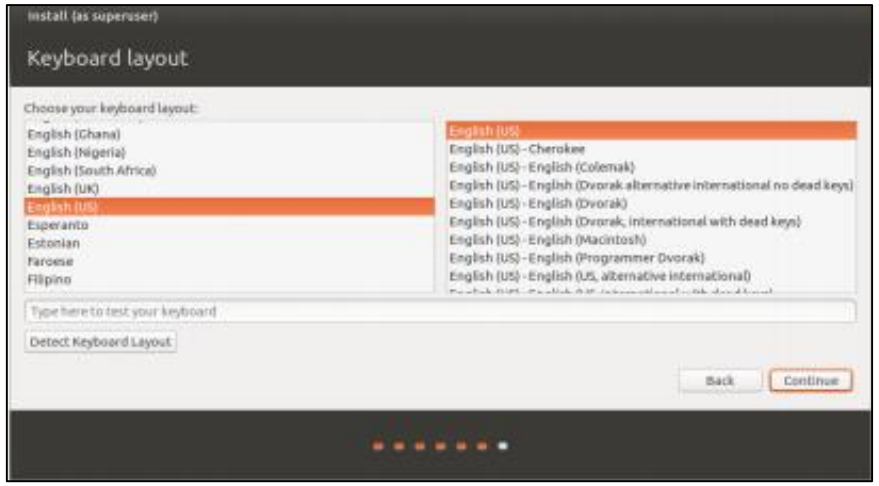


Step 03 – Select whether you want to *Erase Disk and Install Ubuntu* or *Upgrade Ubuntu*. Erasing disk will erase all other Operating systems installed on that disk. Click *Install Now.*

Step 04 – Select using the mouse or type the location where you are to customize time and date settings Click *Continue*

FOSS OS Installation as a Primary OS

Download and Install Ubuntu Cont..

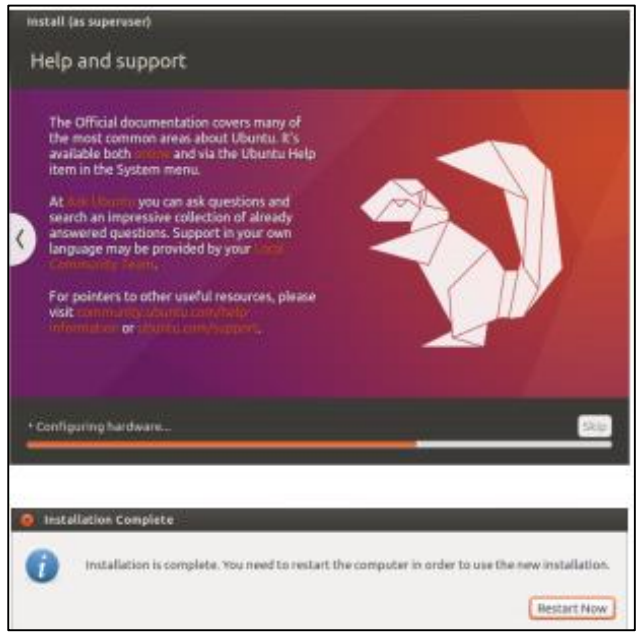


Step 05 – Select the keyboard layout and click *Continue*

Step 06 – Type your name, your computer name, password etc. to customize your computer and click *Continue*

FOSS OS Installation as a Primary OS

Download and Install Ubuntu Cont..



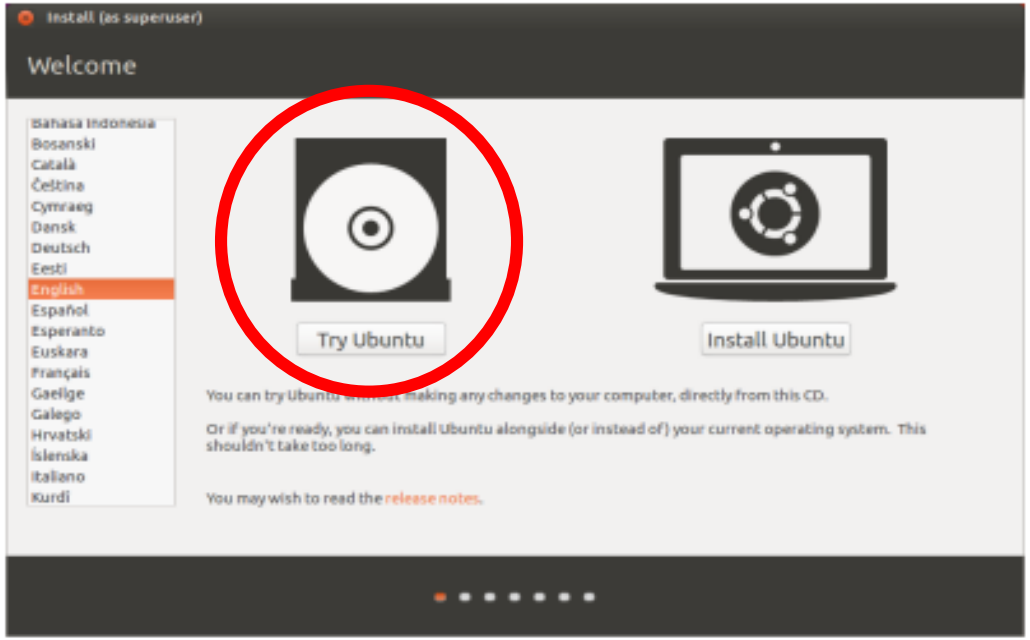
Step 07 – After the installation is complete, Restart your computer

Step 08 – This shows the welcome screen

FOSS OS Installation as a Primary OS

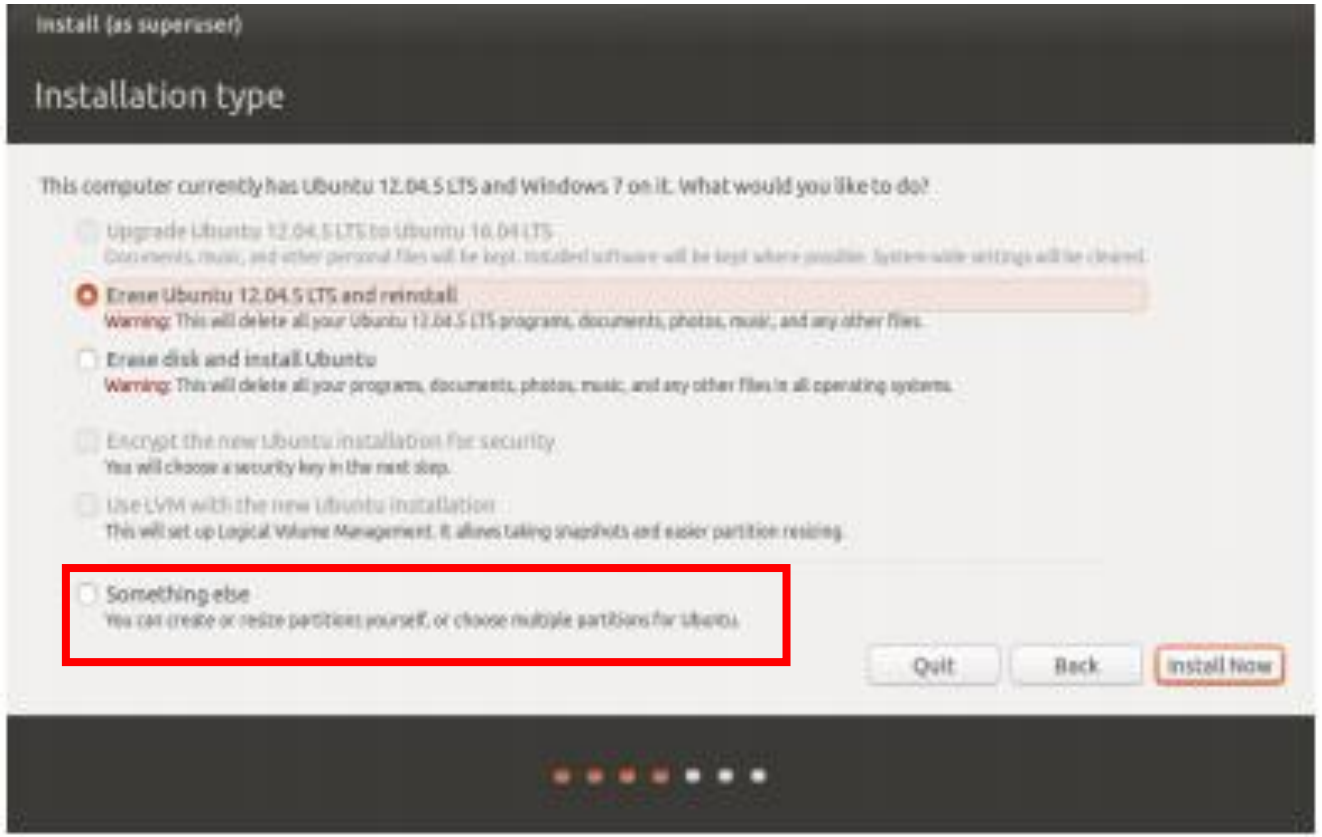
Try Ubuntu

- Insert a bootable DVD or USB with Ubuntu and restart the computer
- When the computer finds the bootable method, Welcome screen will be available
- Select the language you prefer
- Click *Try Ubuntu*
- After you have finished, restart the Computer by clicking power button On the top right corner of the desktop

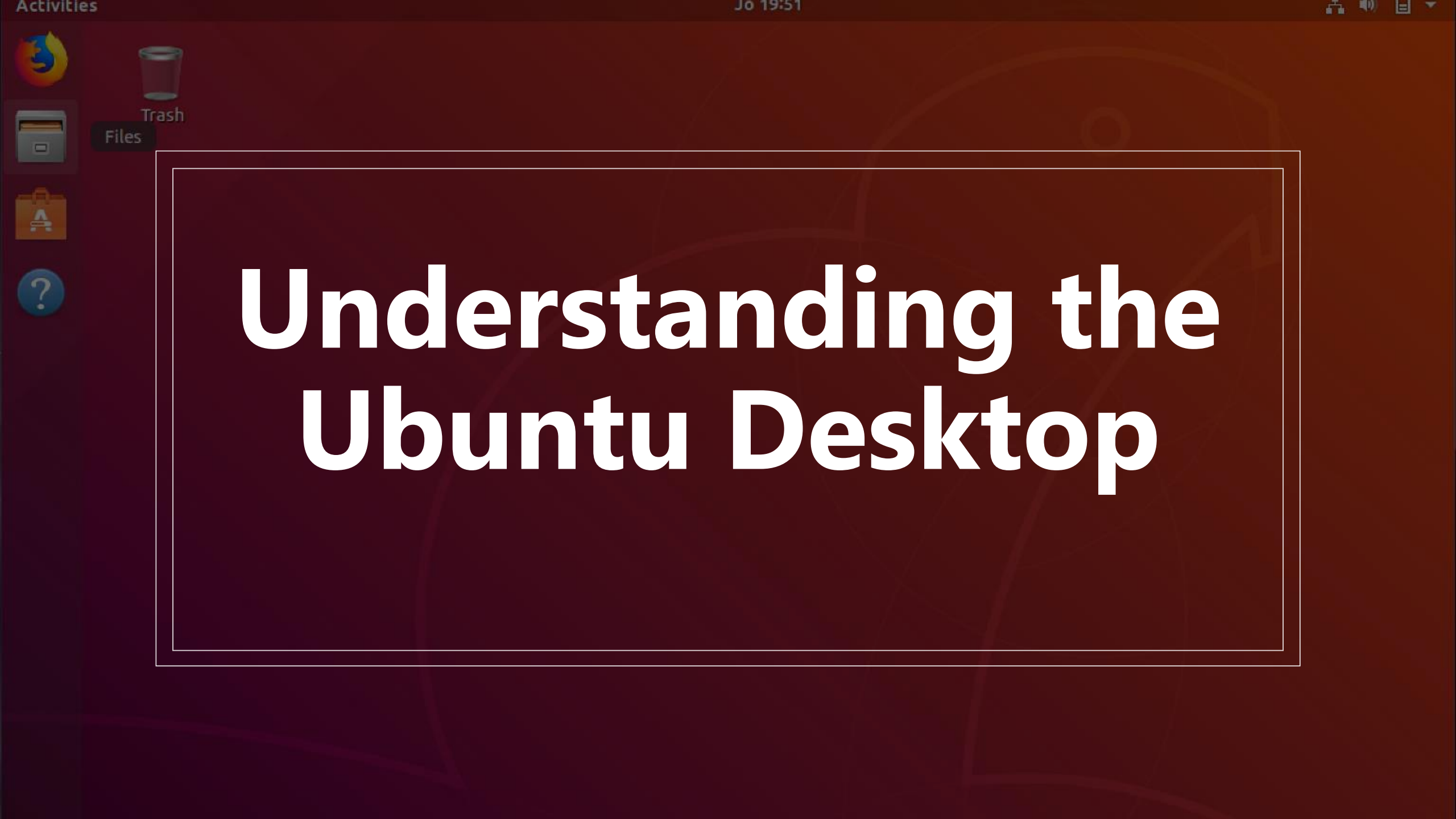


FOSS OS Installation – Dual Booting

Installing Ubuntu with another OS – Dual Booting



During the normal installation process, select *Something else* and provide the partitions manually, in the Installation type dialog box to continue dual booting


Activities
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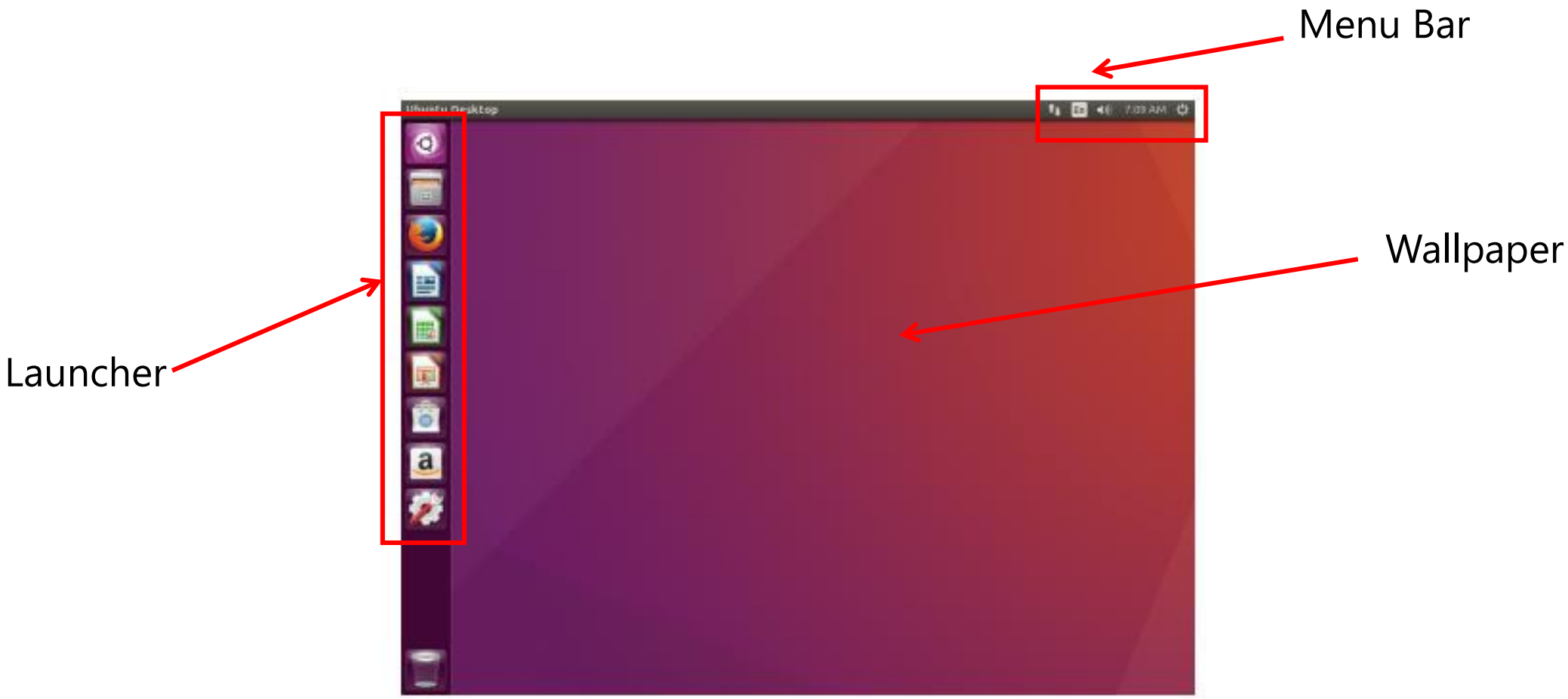
Trash
Files
Understanding the Ubuntu Desktop

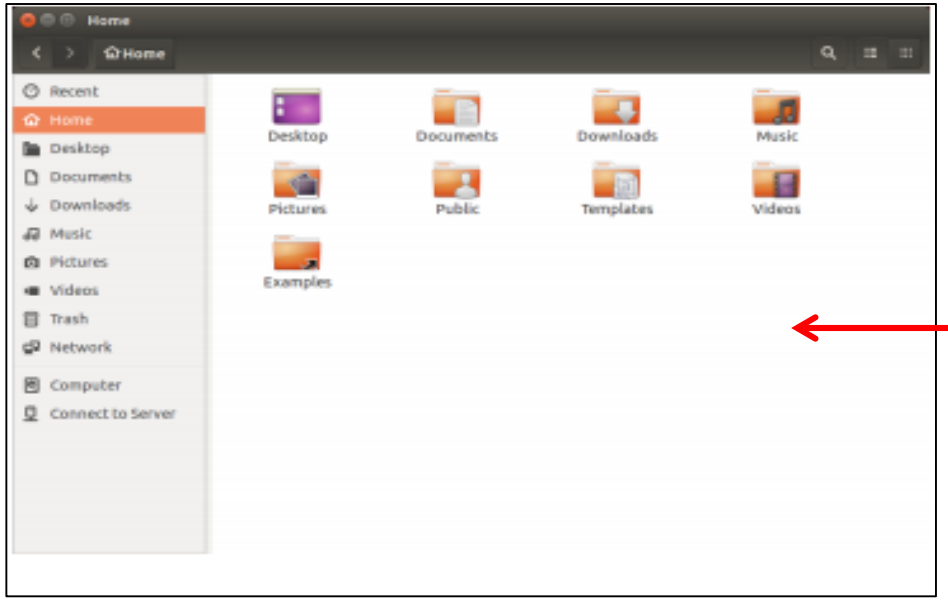
Ubuntu Desktop



Ubuntu File Manager

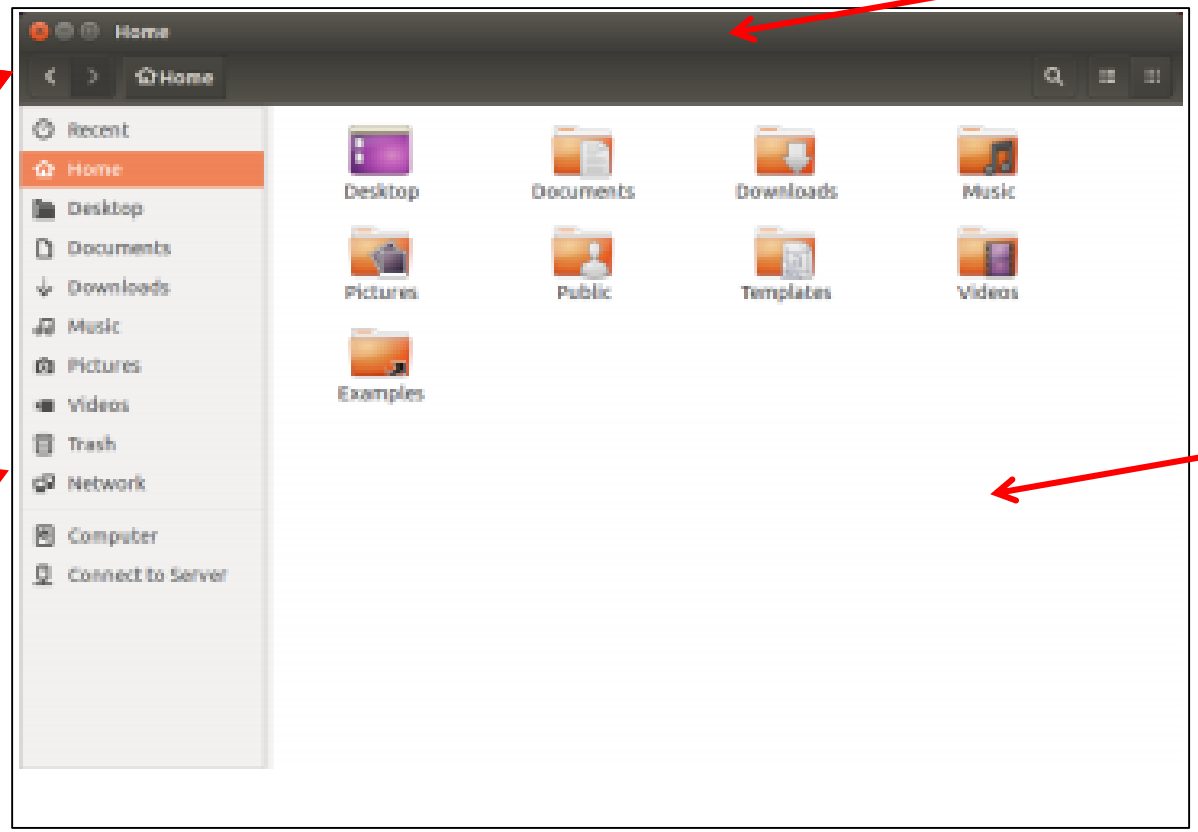
Browsing files on the machine

- Use the Dash to search files
- Directly access the file from its location from the Home Directory [Directory is a similar word for a Folder]



File Manager in Ubuntu

Ubuntu File Manager



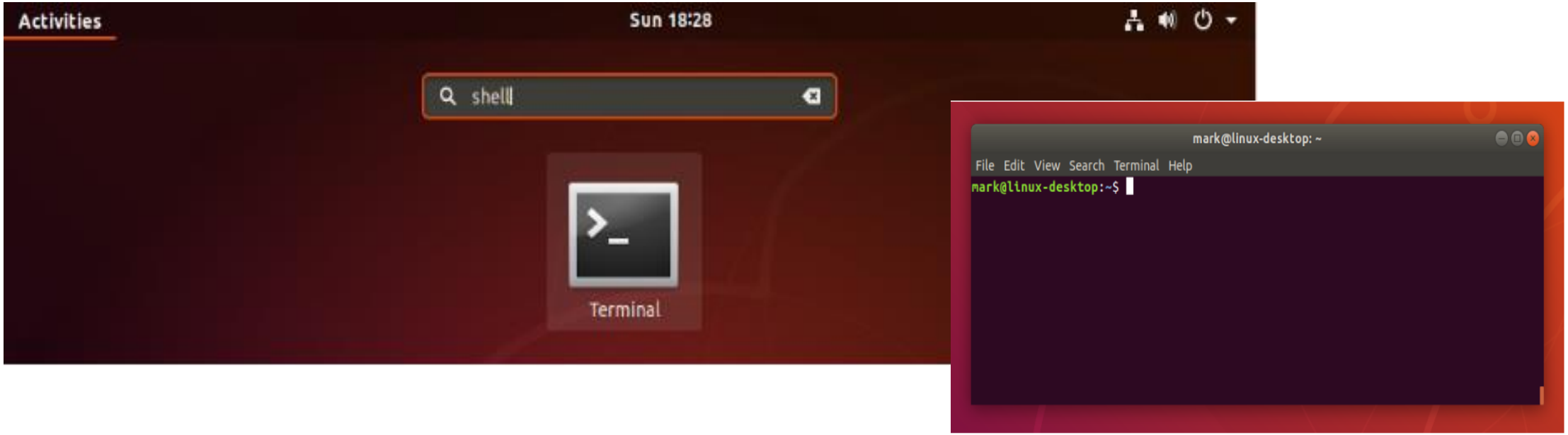
Ubuntu File Manager

- Opening Files
  - Double click on the file
- Creating new directories
  - Right click in the blank area and select “New Folder”
  - Rename the folder as of your wish
- Copying and moving files
  - *Ctrl + X, Ctrl + C, Ctrl + V* for Cut, Copy, Paste shortcuts respectively
  - Right click and select the option

Ubuntu Command Line

Opening a Terminal

- Type Terminal, Command, Prompt or Shell to browse for Terminal
- Key board Shortcut to get the Terminal: *Ctrl + Alt + T*



Ubuntu Command Line

- Press Enter after finish typing a command

IMPORTANT COMMANDS

- pwd Display the current working directory (**p**rint **w**orking **d**irectory)

Change **D**irectory- **cd**

- cd / Goes to the Root Directory [An alternative is cd / home]
- cd .. Takes you up one directory level
  - Relative Path – the place you end up at depends on your current working directory. The path given relative to the next and previous directories.
  - Absolute Path – any path that starts with a forward slash. The path given exactly by typing the exact location using slashes.
    - "/" at the start of your path - "starting from the root directory...".
    - the tilde character ("~") at the start of your path - "starting from my home directory...".

NOTE: COMMANDS ARE CASE SENSITIVE

Ubuntu Command Line

IMPORTANT COMMANDS (Creating Files and Folders)

Make Directory - mkdir

- mkdir create a new directory

  e.g.: mkdir dir1 – creates a directory named dir1

  mkdir dir1 dir2 dir3 - creates 3 directories named dir1, dir2 and dir3

  mkdir -p dir4/dir5/dir6 - Makes a directory named dir4 and inside that a dir5 and inside dir5 a dir6

HOW to CREATE a DIRECTORY with a SPACE in the NAME

```
mkdir "folder 1"
mkdir 'folder 2'
mkdir folder\ 3
mkdir "folder 4" "folder 5"
mkdir -p "folder 6"/"folder 7"
```

← Methods to create directory names with spaces

Ubuntu Command Line

IMPORTANT COMMANDS

List - ls

- Lists all files and folders in your current working directory.
- You can also specify paths to other directories if you want to view their contents.

Moving and Manipulating Files and Folders **- mv**

- mv Moves Files and Folders
- mv abc.txt dir1 Moves the file “abc.txt” to the directory dir1

Deleting Files and Folders

- rm Remove files inside a directory [rm dir4 deletes all files inside the dir4]
- rmdir delete a whole folder [rmdir dir4 deletes the dir4 directory with all its contents]

Summary

- FOSS OS Installation
  - Installing Ubuntu in Virtual Box
  - Installing Ubuntu as the Primary OS
  - Installing Ubuntu with another OS (Dual Booting)
- Understanding Ubuntu Desktop
- File Manager in Ubuntu
- Using Command Line in Ubuntu
  - Opening a Terminal
  - Creating Files and Folders
  - Moving and manipulating files and folders

Activity

Create the following folder structure using commands in a terminal

- Create a folder called “UCSC”. Inside the “UCSC” folder create the following folders and files
  - “External” Folder & inside
    - “BIT” Folder
  - “Postgraduate” Folder & inside
    - “MSC” Folder
    - MIT.txt File
  - “Undergraduate” Folder & inside
    - “CS” Folder
    - “IS” Folder