Mawlana Bhashani Science and Technology University

Lab-Report

Report No: 01

Course code: ICT-3110

Course title: Operating Systems Lab

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Dept. of ICT

MBSTU.

Submitted To

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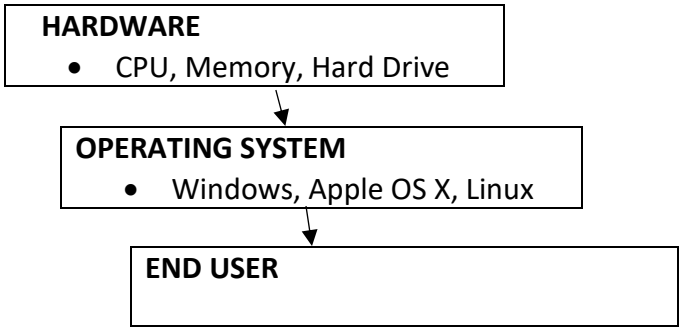
Experiment No : 01

Experiment Name : How to install Linux operating system.

Theory :

LINUX is an operating system or a kernel distributed under an open-source license. Its functionality list is quite like UNIX. The kernel is a program at the heart of the Linux operating system that takes care of fundamental stuff, like letting hardware communicate with software.



- Being open-source, anyone with programming knowledge can modify it.
- The Linux operating systems now offer millions of programs/applications to choose from, most of them free!
- Once you have Linux installed you no longer need an antivirus! Linux is a highly secure system. More so, there is a global development community constantly looking at ways to enhance its security. With each upgrade, the OS becomes more secure and robust
- Linux is the OS of choice for Server environments due to its stability and reliability (Mega-companies like Amazon, Facebook, and Google use Linux for their Servers). A Linux based server could run non-stop without a reboot for years on end.

Linux Distribution :

Well, now as you know that Linux is open-source, free to use kernel**.** It is used by programmers, organizations, profit and non-profit companies around the world to create Operating systems to suit their individual requirements**.**

To prevent hacking attempts, many organizations keep their Linux operating systems private.

Many others make their variations of Linux available publicly so the whole world can benefit at large.

These versions/ types /kinds of Linux operating system are called Distributions.

Different types of Linux Distribution ---

Distribution Name	Description
Arch	This Linux Distro is popular amongst Developers. It is an independently developed system. It is designed for users who go for a do-it-yourself approach.
CentOS	It is one of the most used Linux Distribution for enterprise and wen servers. It is a free enterprise class Operating system and is based heavily on Red Hat enterprise Distro.
Debian	Debian is a stable and popular non-commercial Linux distribution. It is widely used as a desktop Linux Distro and is user-oriented. It strictly acts within the Linux protocols.
Fedora	Another Linux Kernel based Distro, Fedora is supported by the Fedora project, an endeavor by Red Hat. It is popular among desktop users. Its versions are known for their short life cycle.
Gentoo	It is a source Based distribution which means that you need to configure the code on your system before you can install it. It is not for Linux beginners, but it is sure fun for experienced users.
LinuxMint	It is one of the most popular Desktop Distributions available out there. It launched in 2006 and is now considered to be the fourth most used Operating system in computing world.
OpenSUSE	It is an easy to use and a good alternative to MS Windows. It can be easily set up and can also run on small computers with obsolete configurations.
RedHat Enterprise	Another popular Enterprise based Linux Distribution is RedHat enterprise. It has evolved from Red Hat Linux which was discontinued in 2004. It is a commercial Distro and very popular among its clientele.
Slackware	Slackware is one of the oldest Linux Kernel based OS's. It is another easy Desktop Distribution. It aims at being a 'Unix Like' OS with minimal changes to its kernel.
Ubuntu	This is the third most popular desktop operating system after Microsoft Windows and Apple Mac OS. It is based on the Debian linux Distribution and it is known as its desktop environment.

Working process :

There are various methods to install ubuntu---

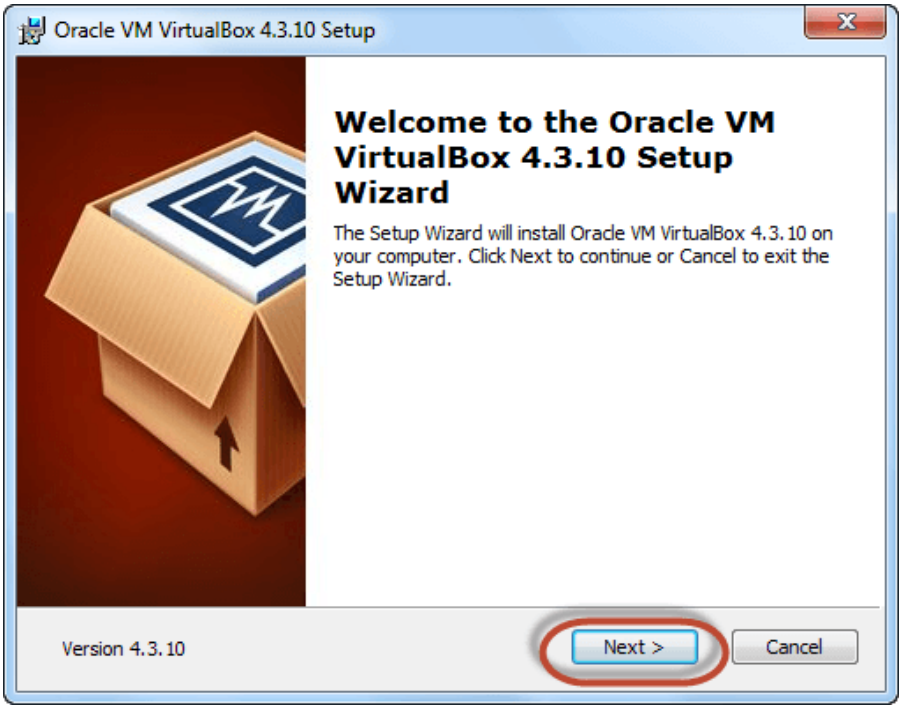
1. Using USB stick.
2. Using CD ROM.

3. Using Virtual Machine.

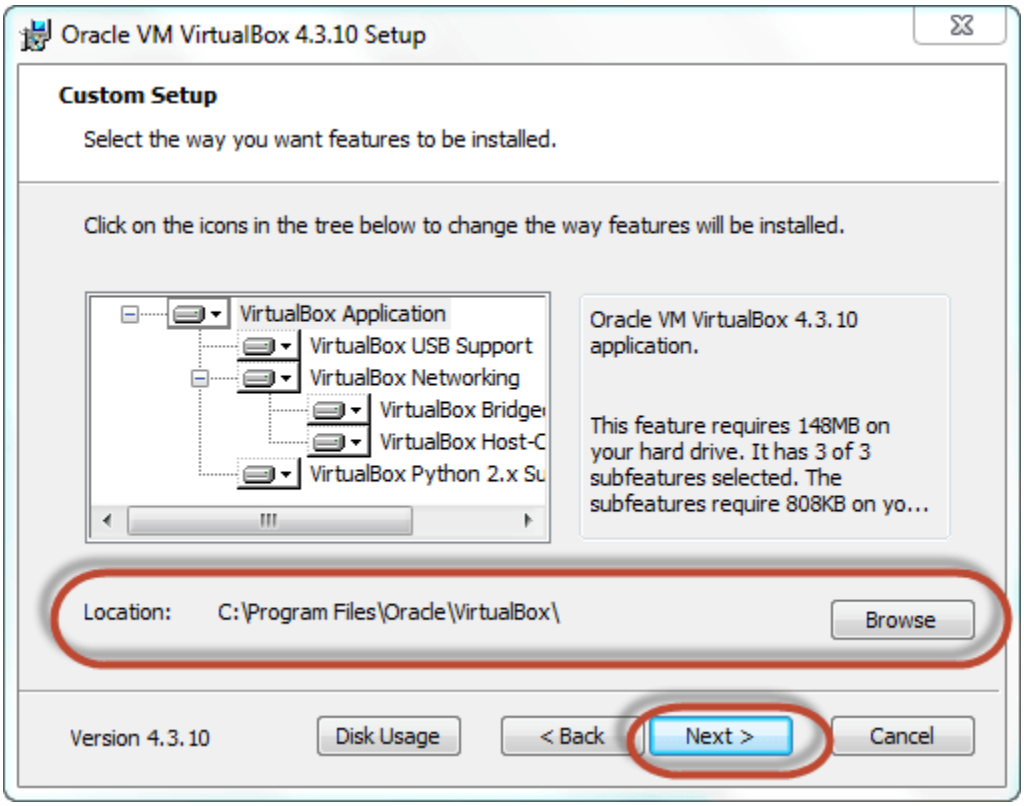
Here we will see how to install linux using **Virtual machine** --

Step-1: Download Virtual box-

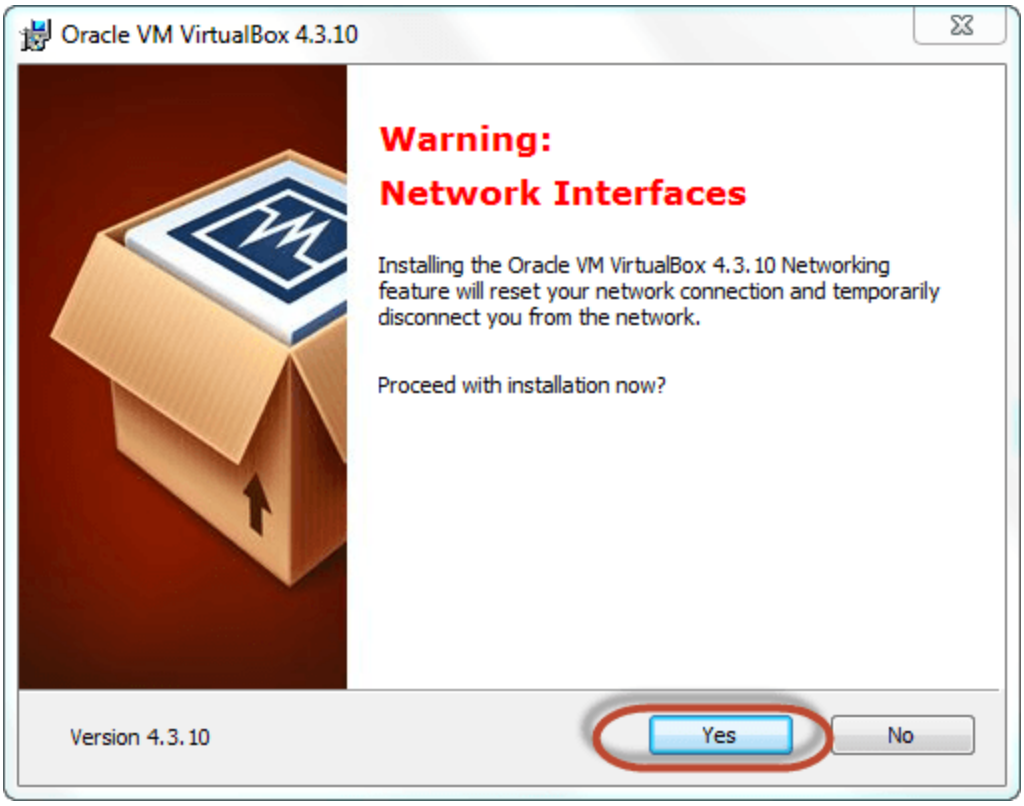
Step-2: Once the download is complete, Open setup file and follow the step and click on next.



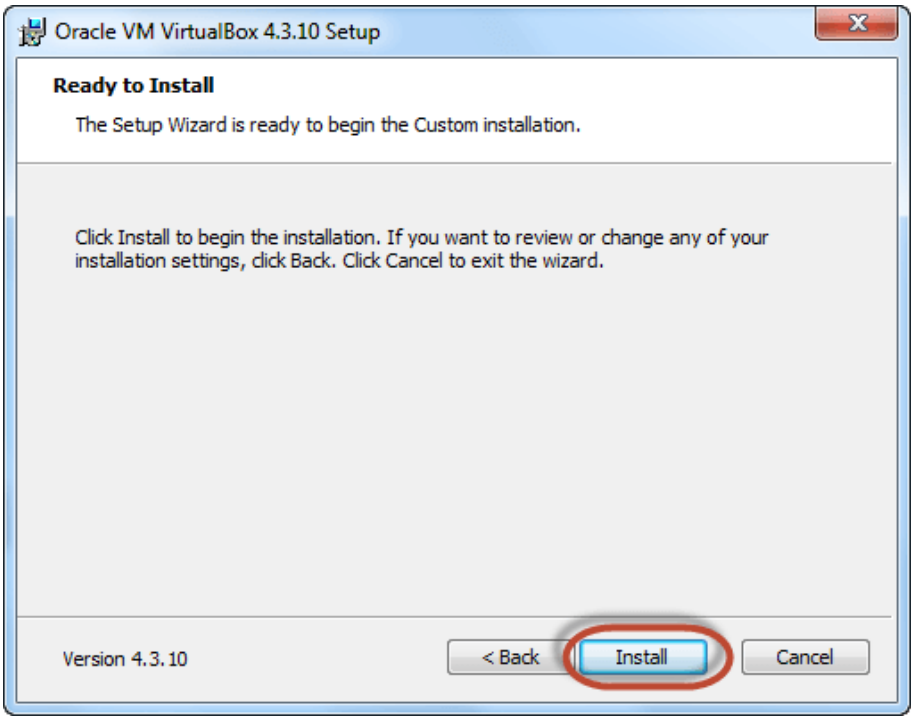
Step-3: Select the directory to install VirtualBox and click on next.



Step-4: Select Desktop icon and click on next, now click on yes

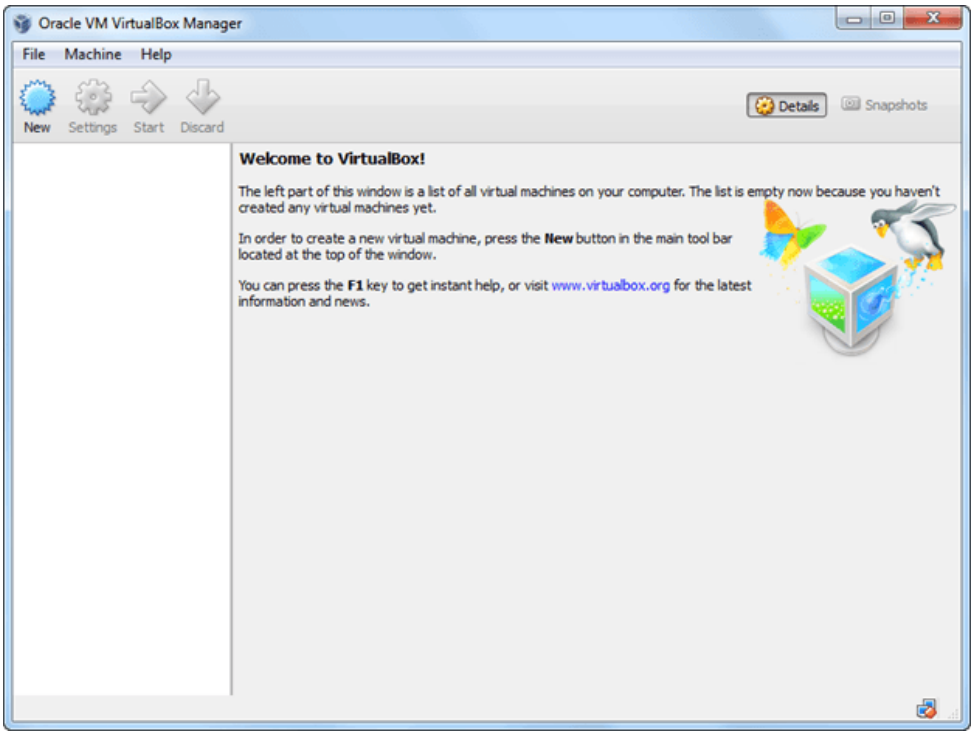


Step-5: Click On install.

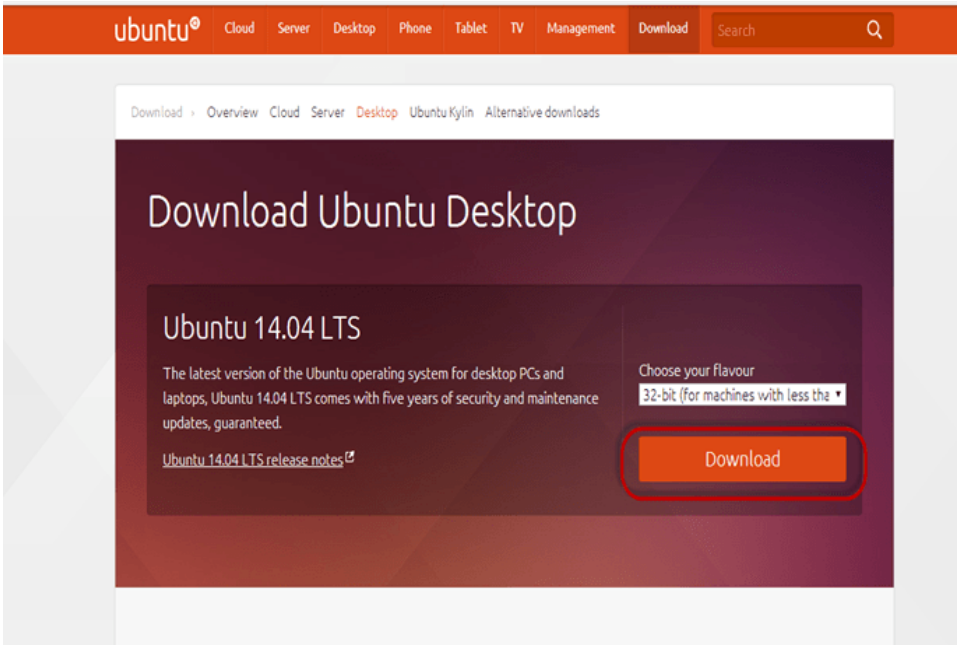


Step-6: Now installation of the virtual box will start. Once complete, click on Finish Button to start Virtual Box.

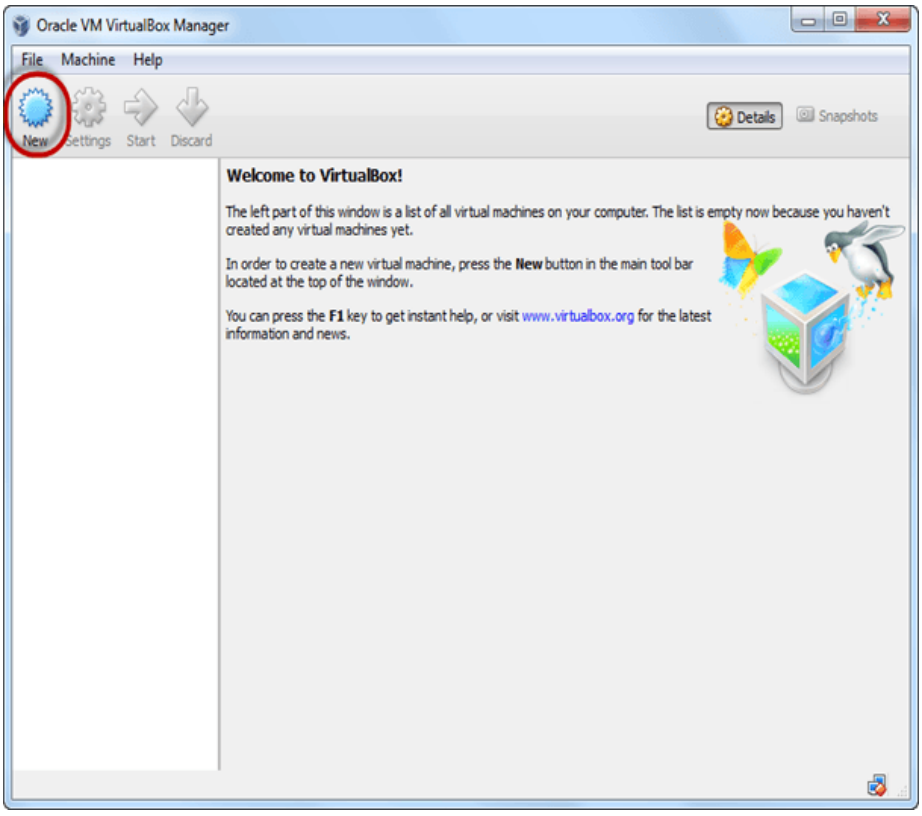
The virtual box dashboard looks like this-



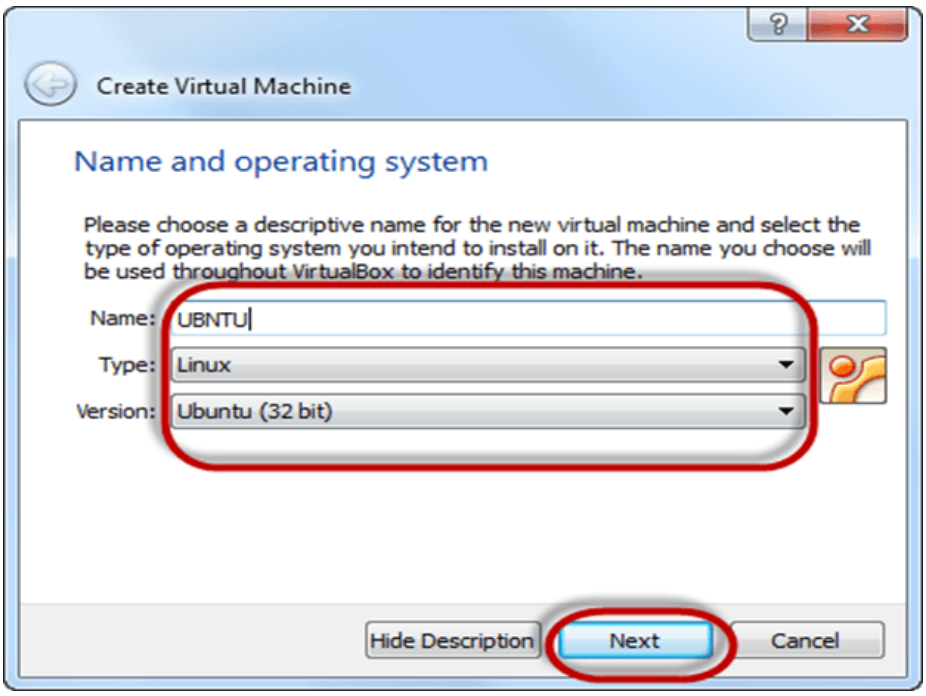
Step-7: Download Ubuntu. You can select 32/64-bit versions as per your choice.



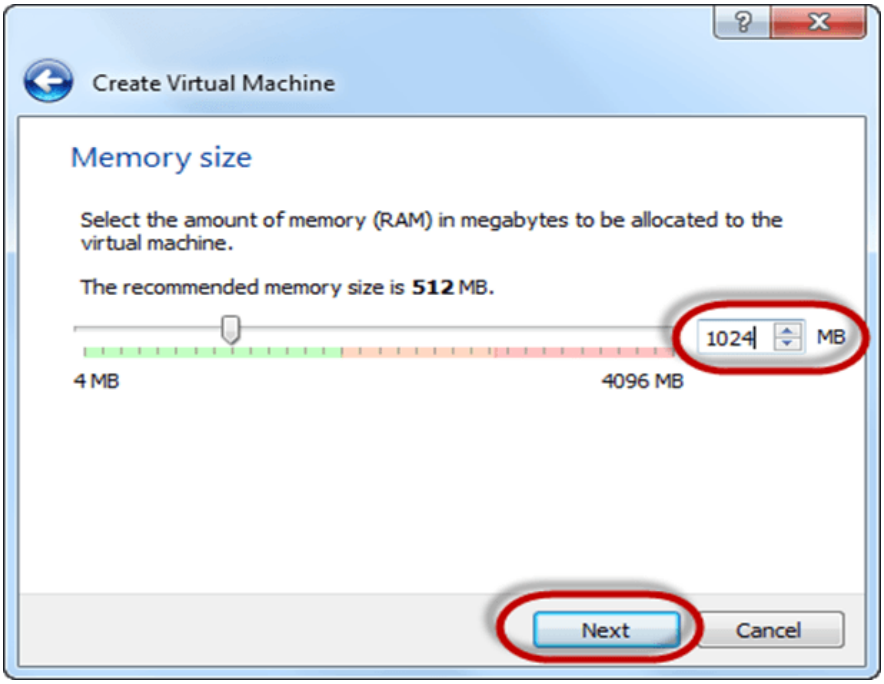
Step-8: Open Virtual box and click on new button



Step-9 : In next window,we have to give the name of our OS which we are installing in virtual box. And select OS like Linux and version as Ubuntu 32 bit. And click on next

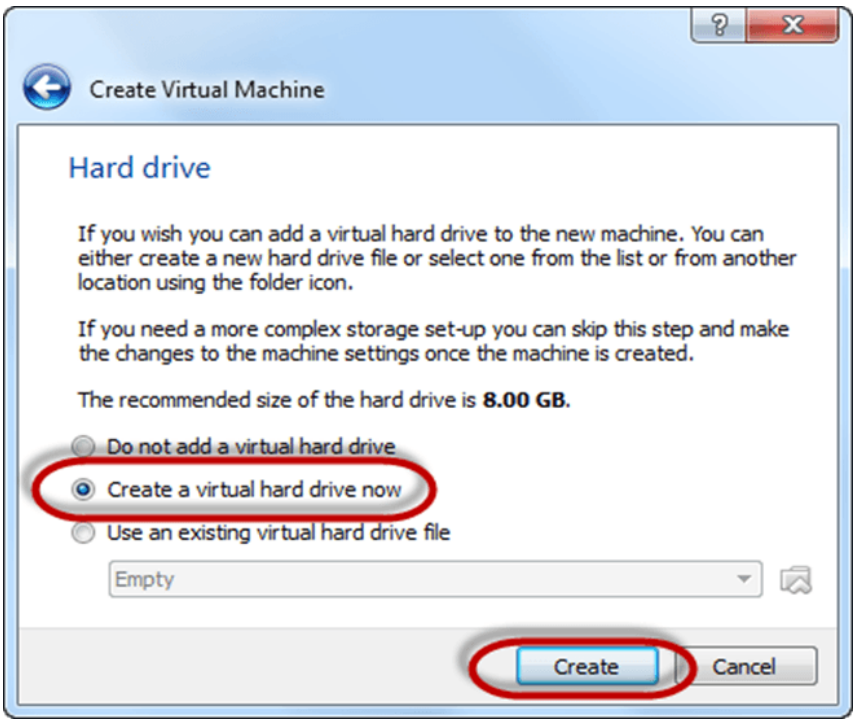


Step-10 : Now have to allocate Ram Size To our Virtual OS. I recommended keeping 1024mb (1 GB) ram to run Ubuntu better. And click on next.

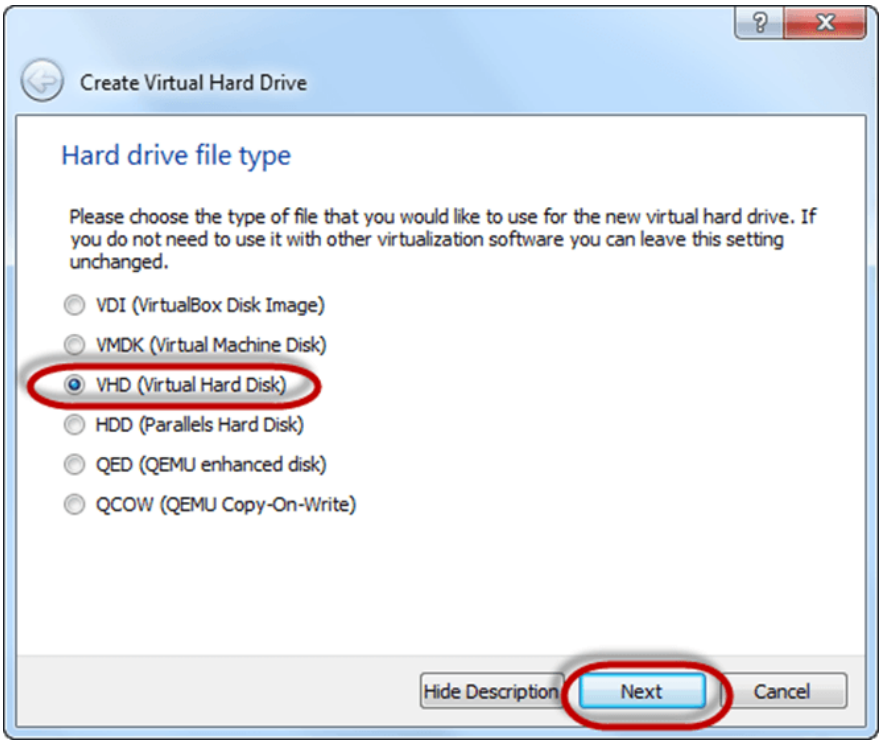


Step-11 : Now To run OS in virtual box we have to create virtual hard disk, click on create a virtual hard drive now and click on create button.

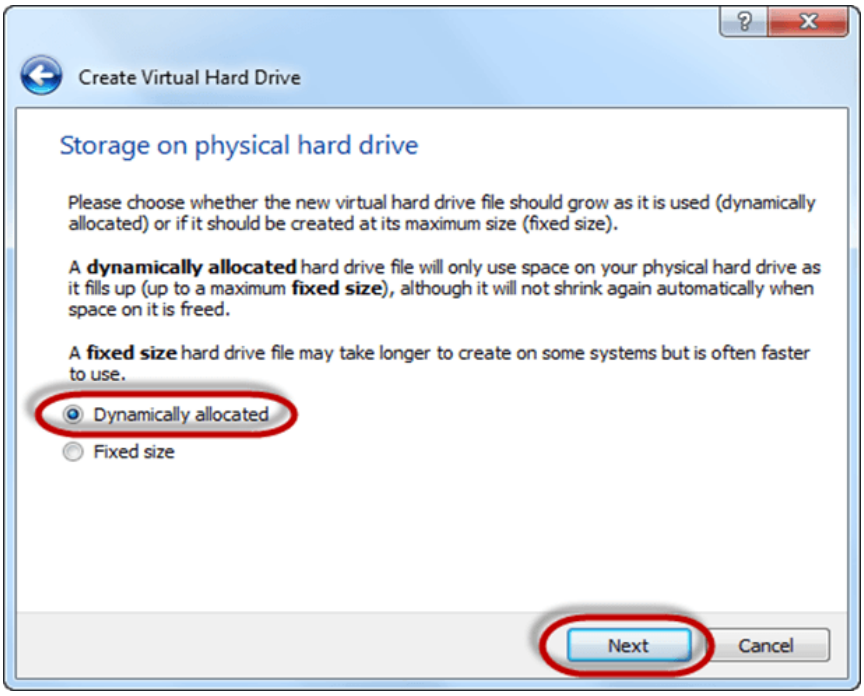
The virtual hard disk is where the OS installation files and data/applications we create/install in this Ubuntu machine will reside



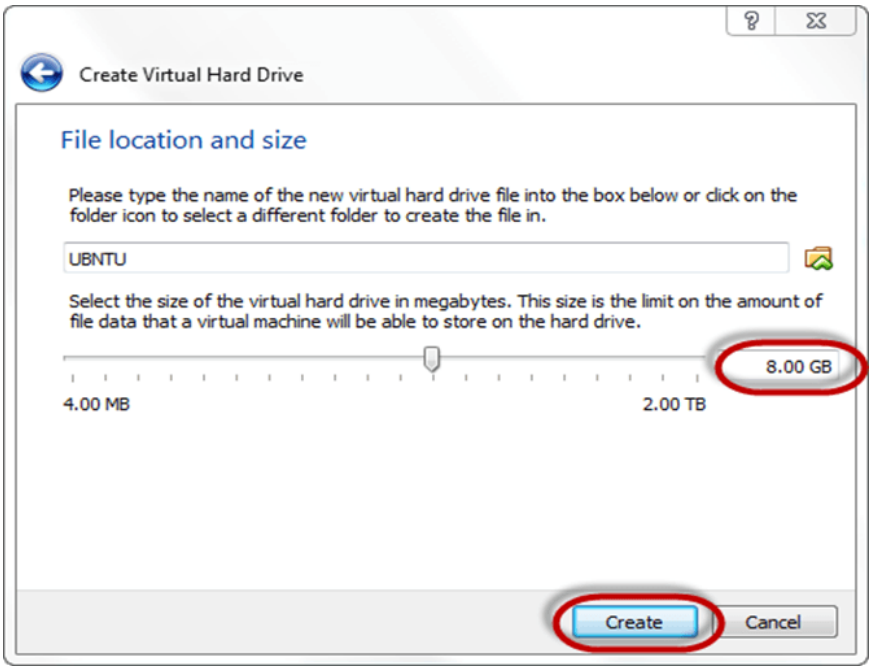
Step-12 : select VHD (virtual hard disk) option and click on next.



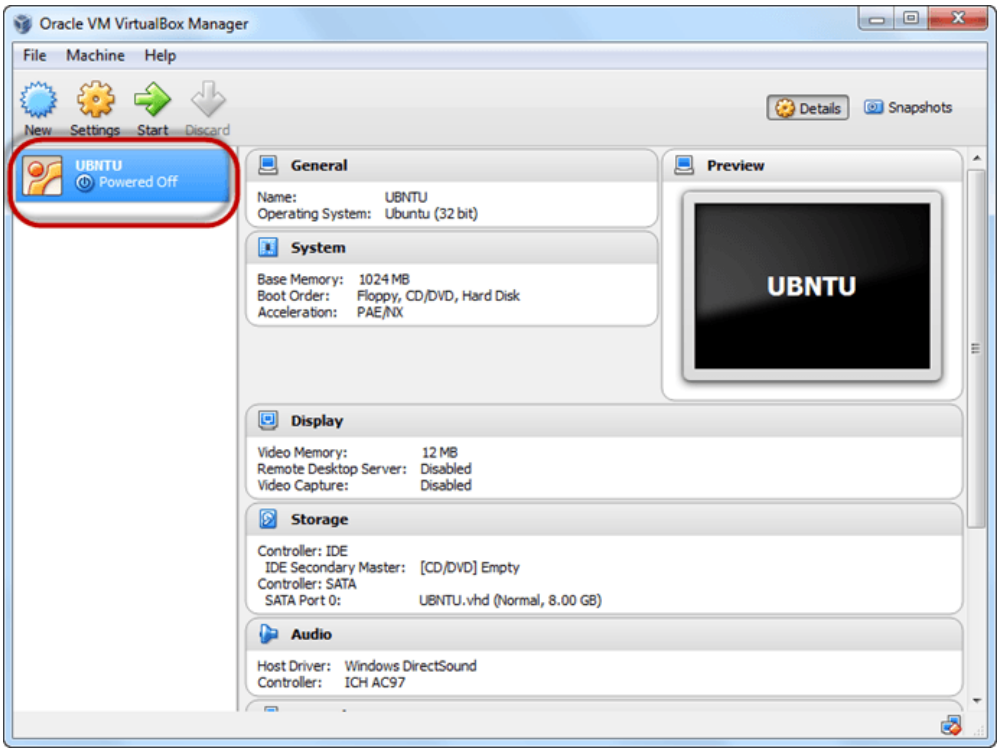
Step-13: Click on dynamic allocated and click on next. This means that the size of the disk will increase dynamically as per requirement.



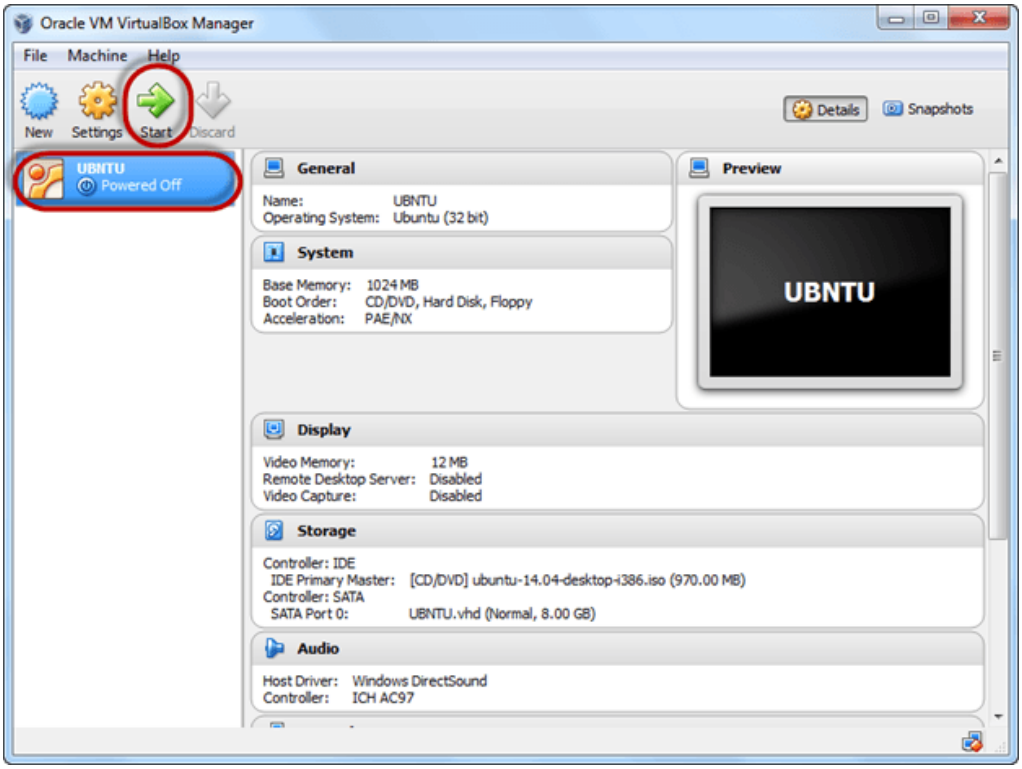
Step-14: Allocate memory virtual hard drive .8GB recommended. Click on create button.



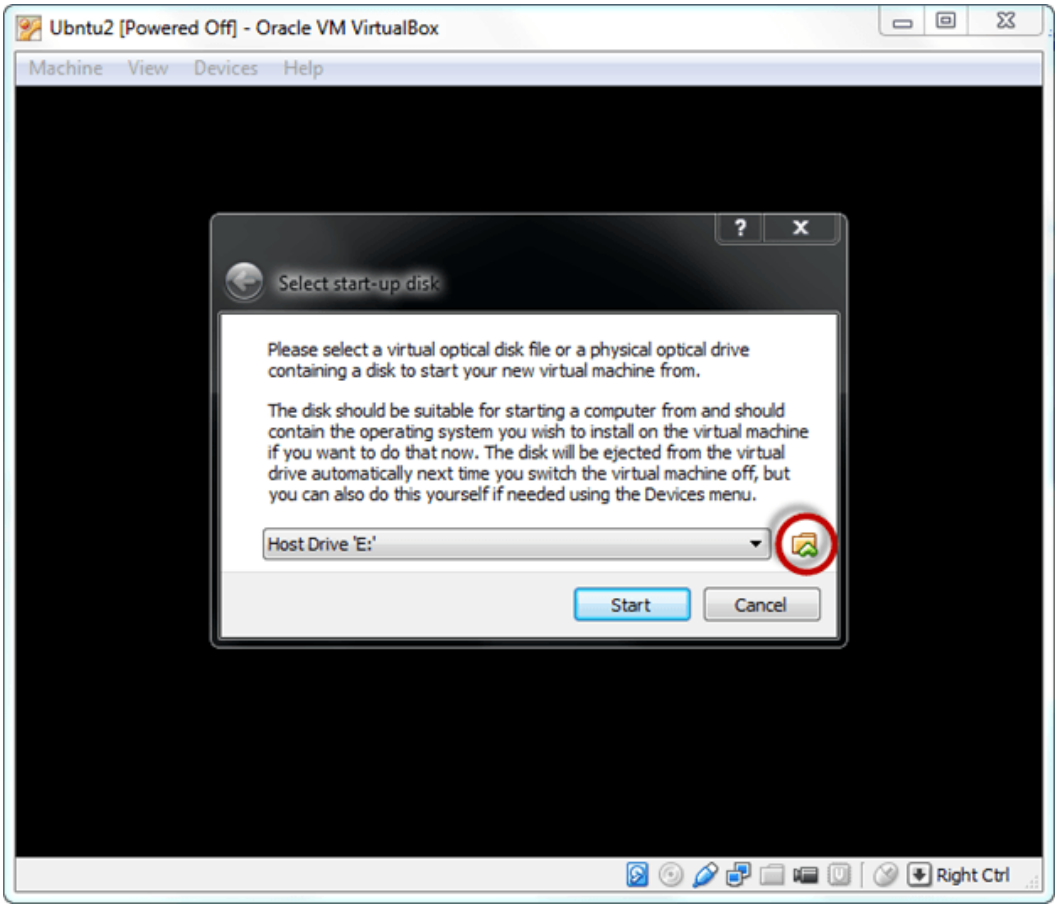
Step-15: Now we can see the machine name in left panel



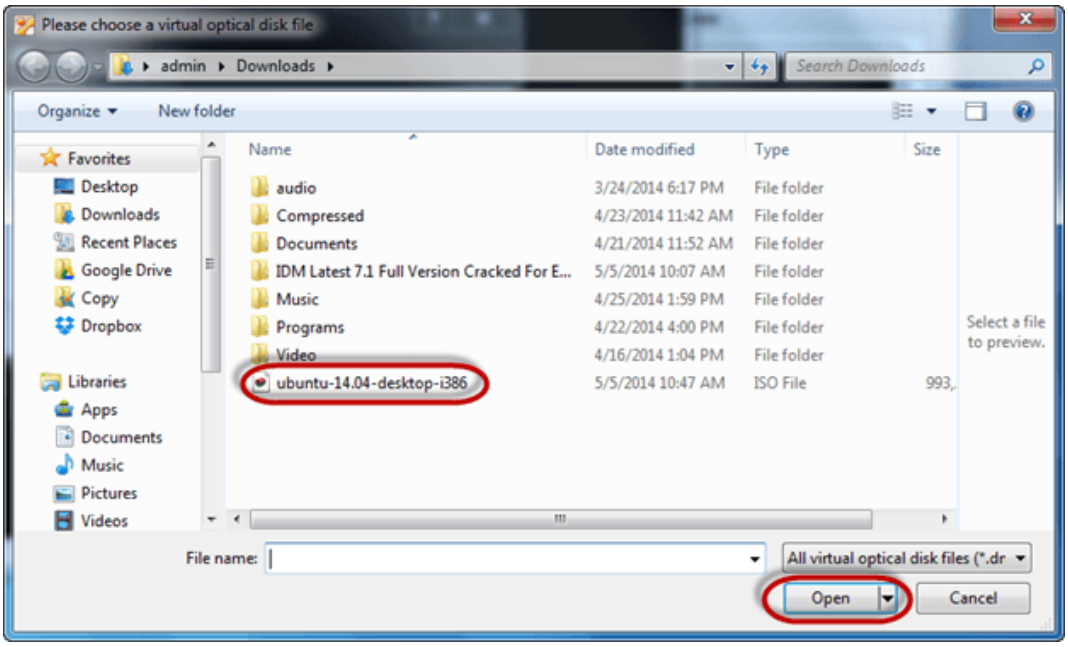
Step-16: Select the Machine and Click on Start



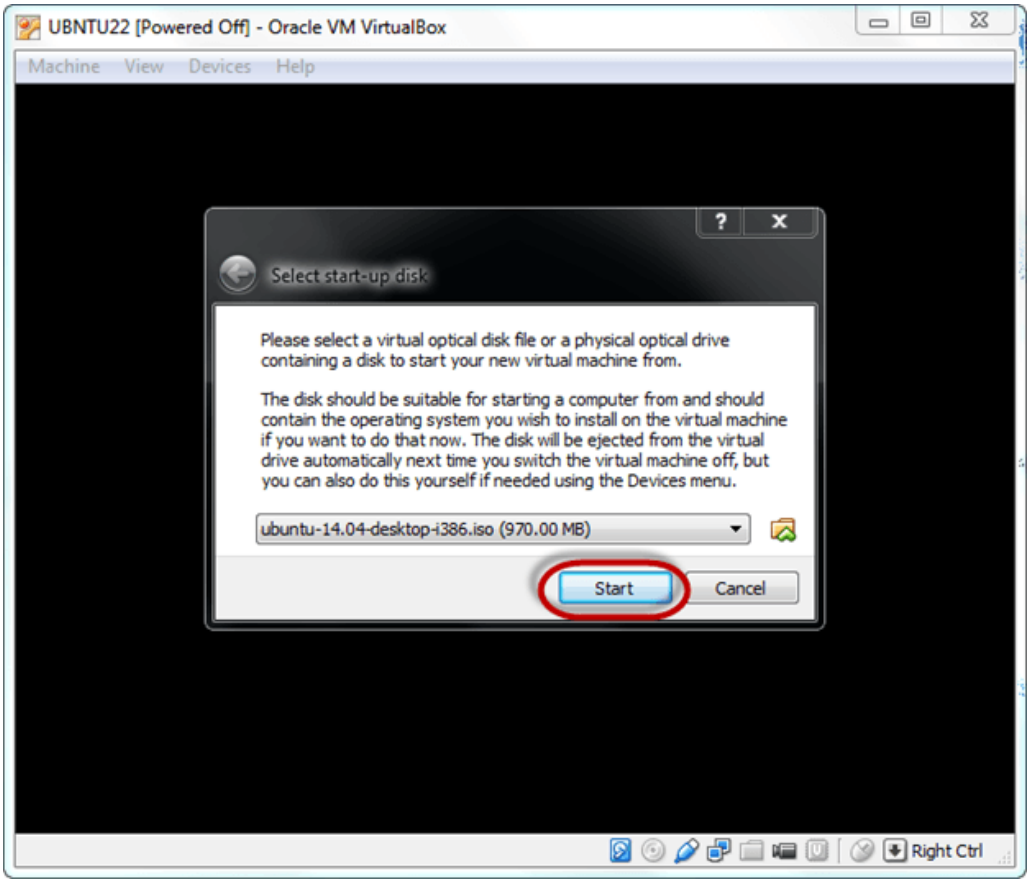
Step-17: Select the Folder Option



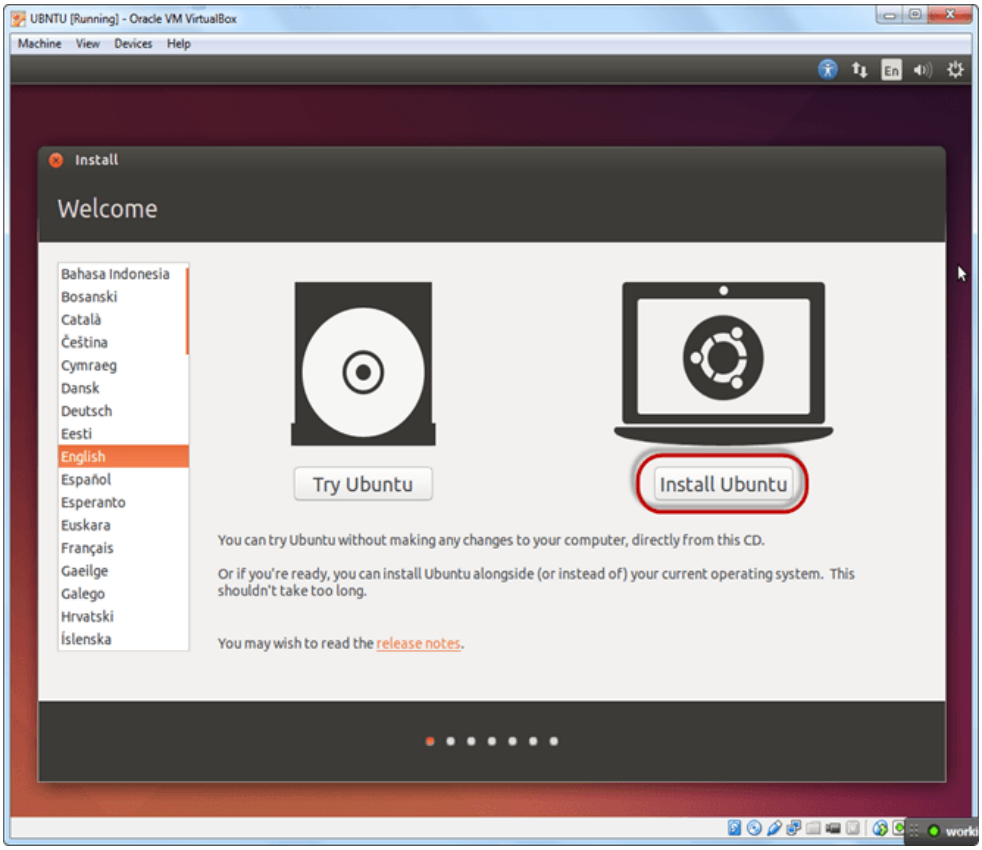
Step-18: Select the Ubuntu iso file



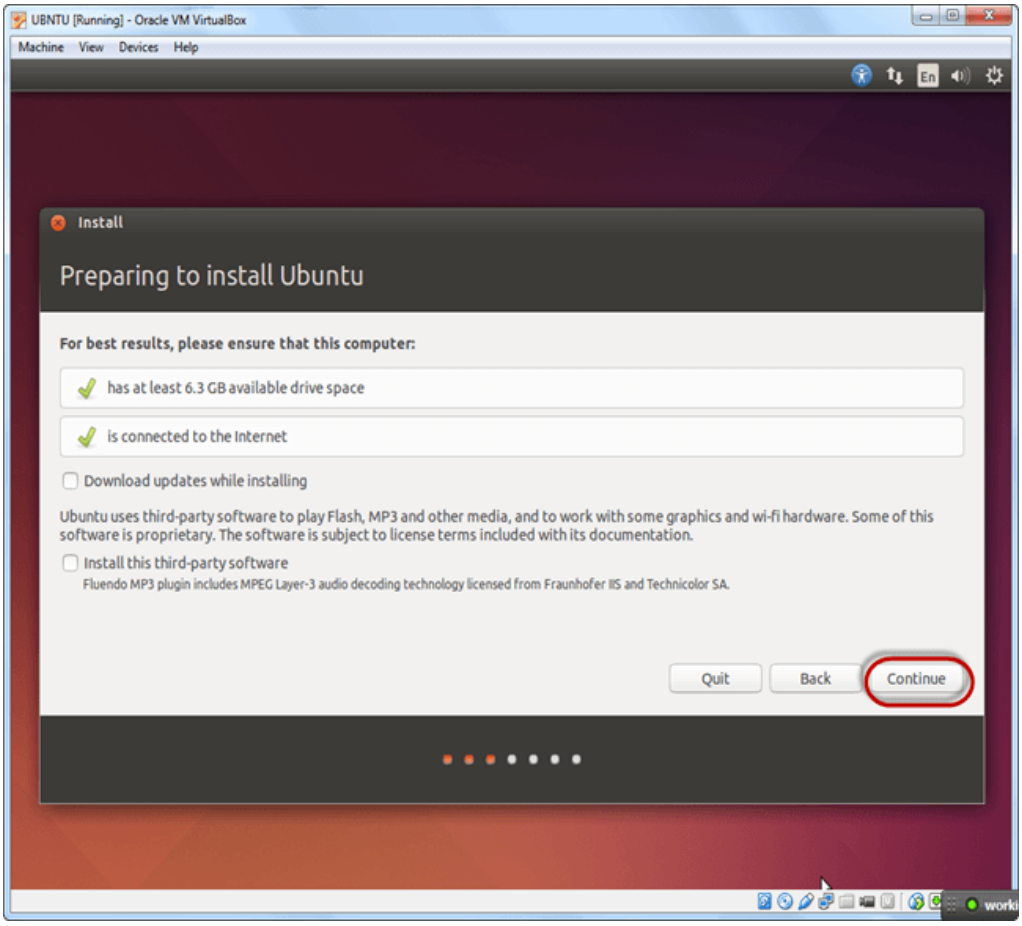
Step-19: Click Start



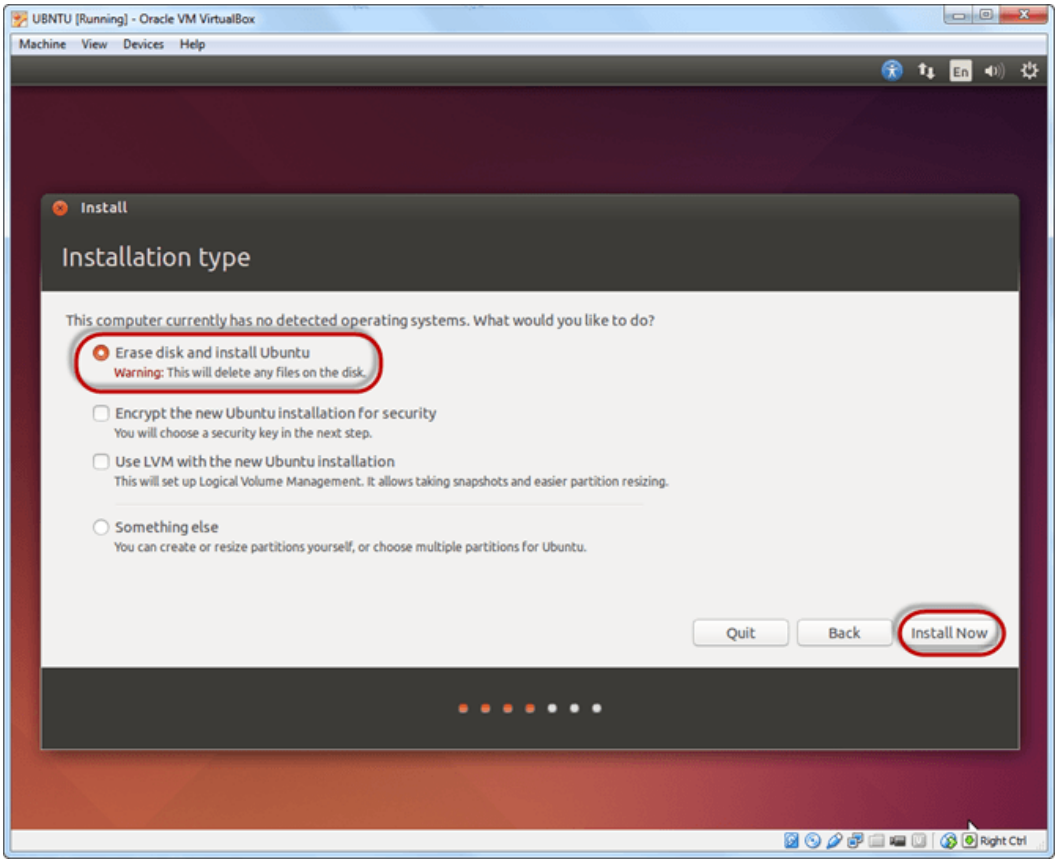
Step-20: We have an option to Run Ubuntu WITHOUT installing. We will install Ubuntu



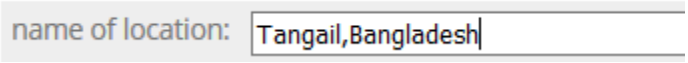
Step-21: Click continue.



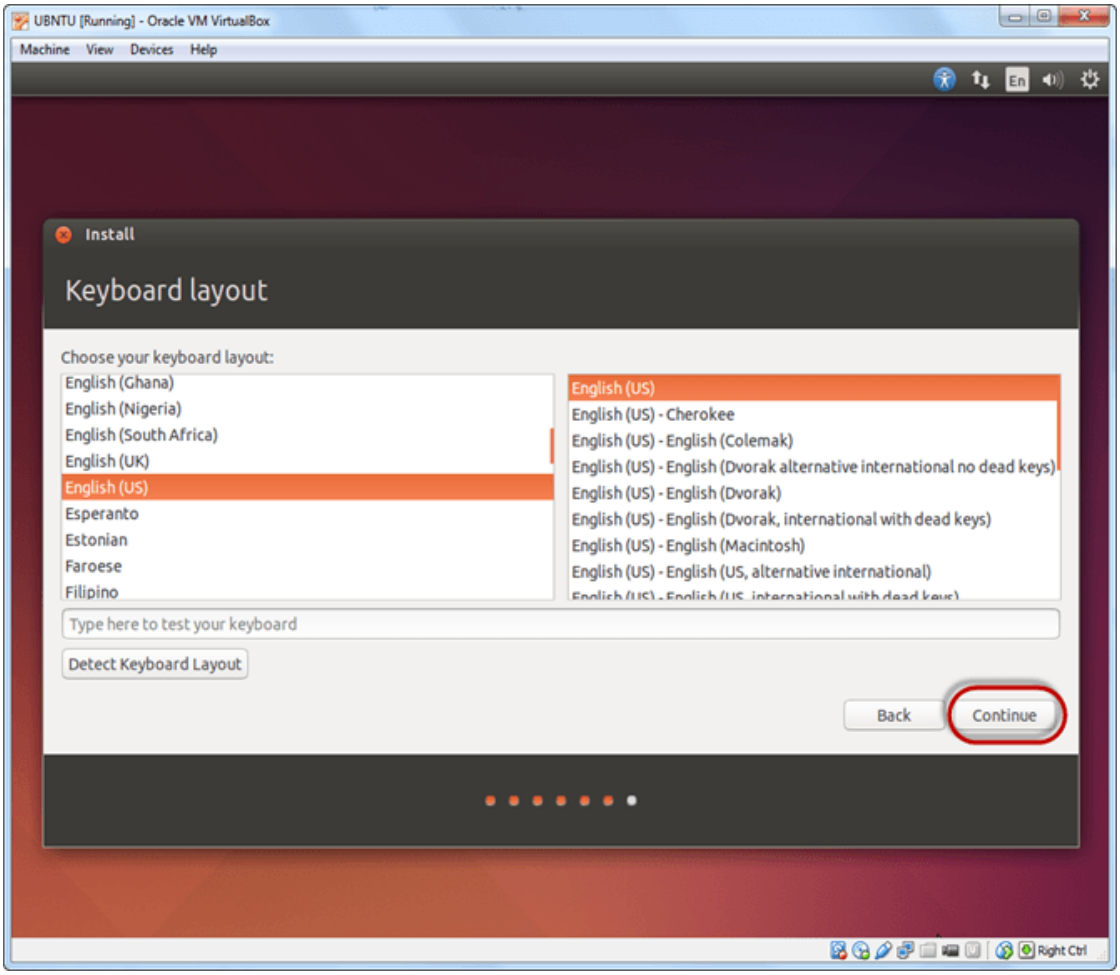
Step-22: Select option to erase the disk and install Ubuntu and click on install now. This option installs Ubuntu into our virtual hard drive which is we made earlier. It will not harm our PC or Windows installation



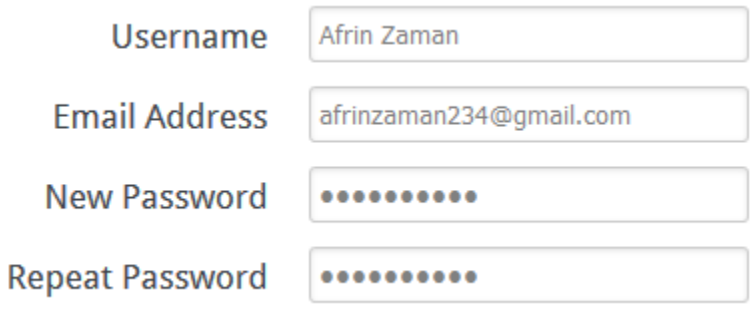
Step-23: Select location for setting up time zone, and click on continue



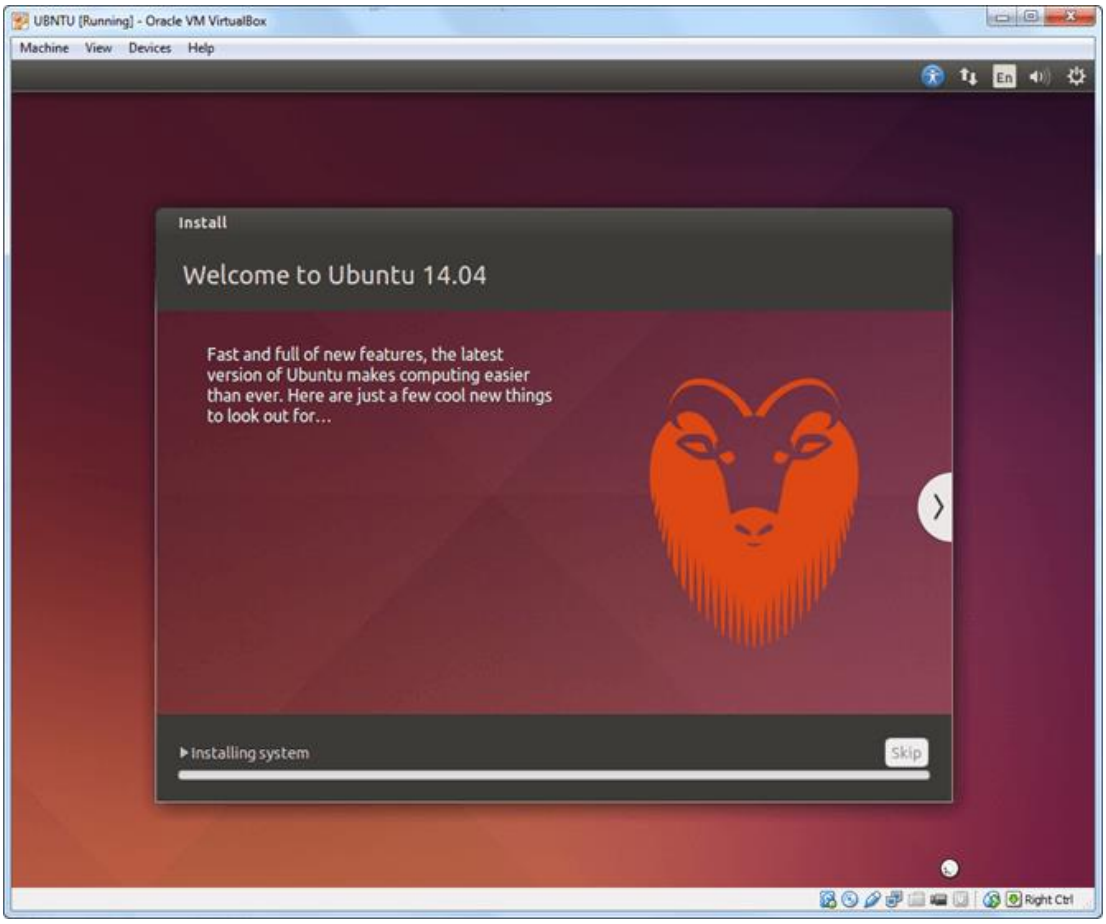
Step-24: Select keyboard layout, by default English (US) is selected but if we want to change then, we can select in the list. And click on continue



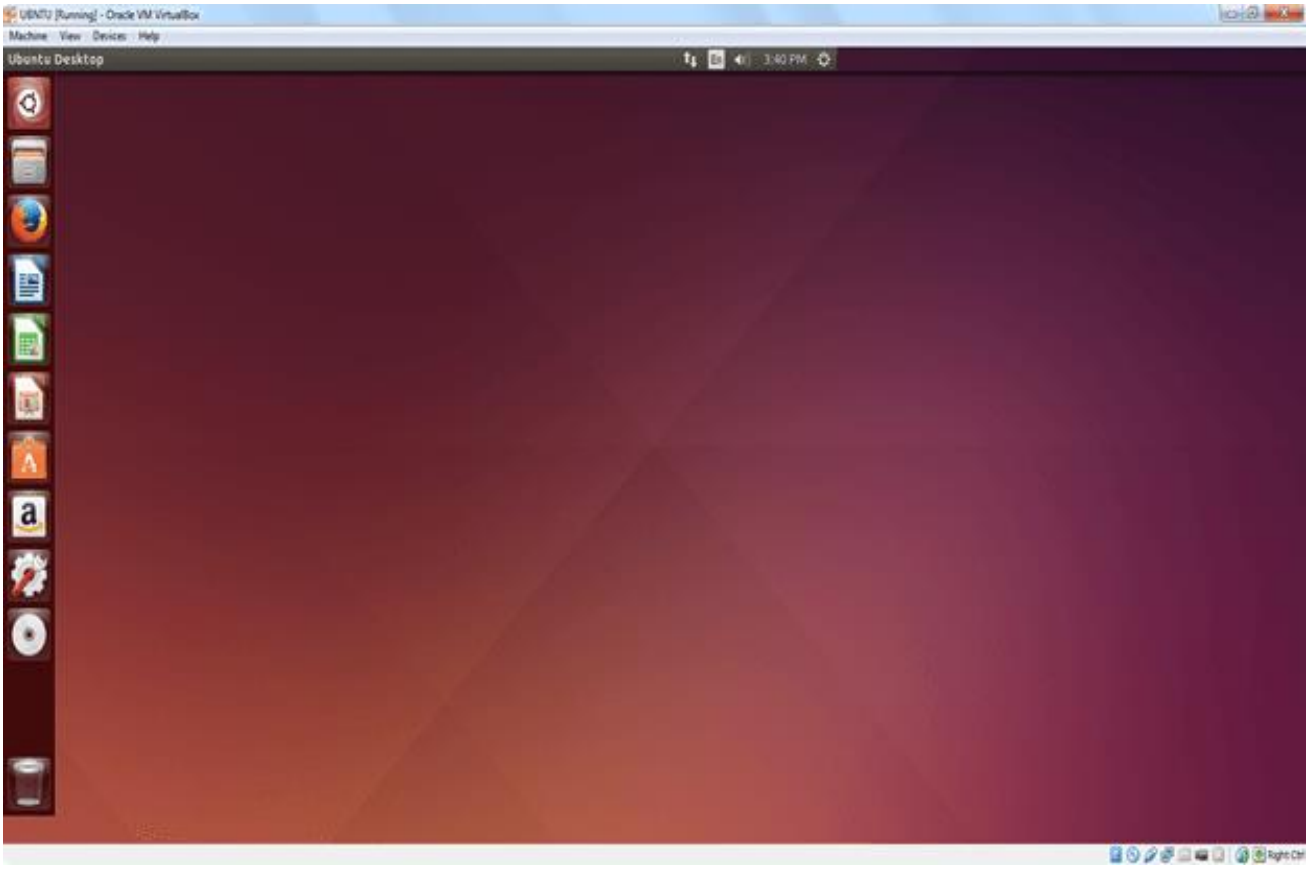
Step-25: Select username and password for Ubuntu admin account. This information has been needed for installing any software package into Ubuntu and also for login to OS. Fill up your details and tick on login automatically to ignore login attempt and click on continue



Step-26: Installation process starts. May take up to 30 minutes. Please wait until installation process completes.



Step-27: After finishing the installation, you will see Ubuntu Desktop.



Discussion :

This lab helps to learn how to install linux. We have executed these steps to install linux. In future we can install linux using these steps.