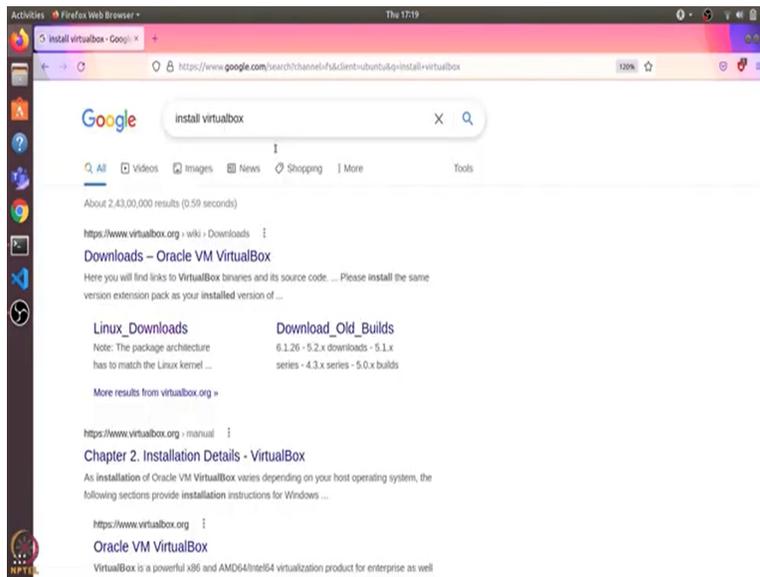


Design and Engineering of Computer Systems
Professor Mythili Vutukuru
Computer Science and Engineering
Indian Institute of Technology, Bombay
Lecture 21 - Tutorial
Virtualbox Installation

Hi everyone, in this video we will see how to install VirtualBox in Ubuntu 18. And we will also install Ubuntu 20 OS image on the VirtualBox.

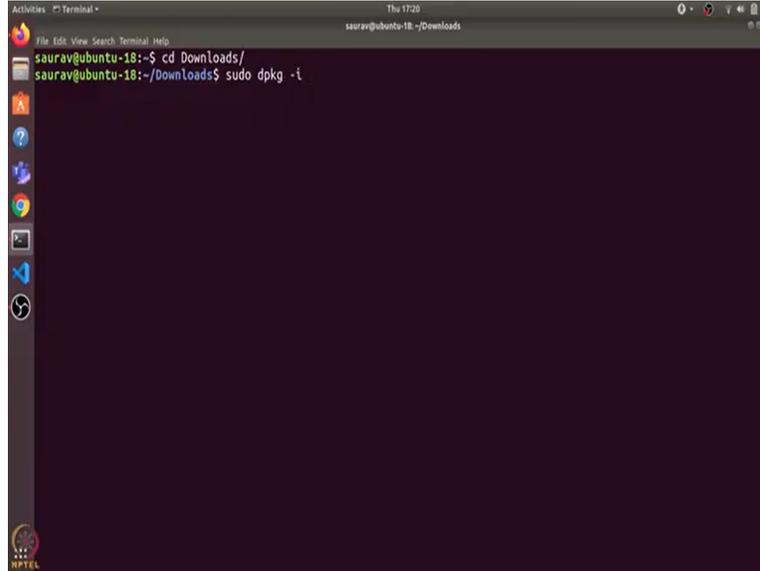
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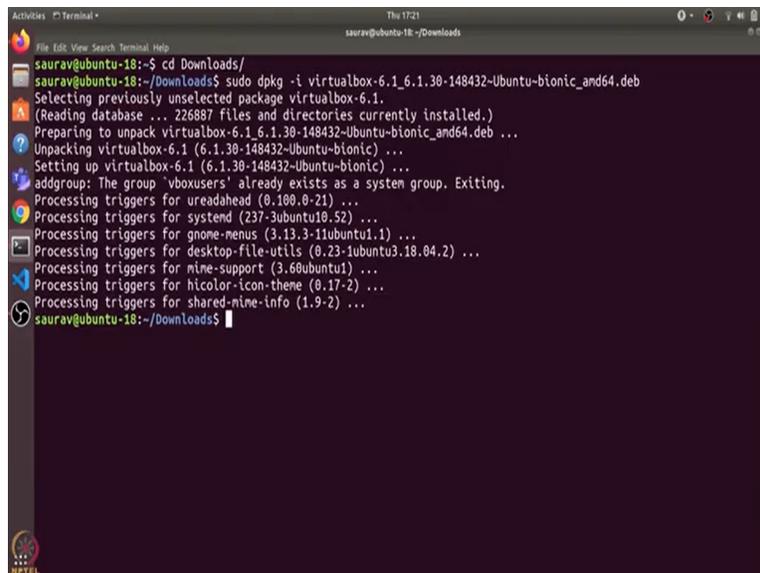


So let us first open a browser and type in install VirtualBox so I will open this VirtualBox.org link. So it shows me different platforms because I am running Ubuntu 18 so I will select LINUX distributions and then Ubuntu 18. So from here it allows me to save this deb file and I will save it in the downloads folder. So the download has completed.

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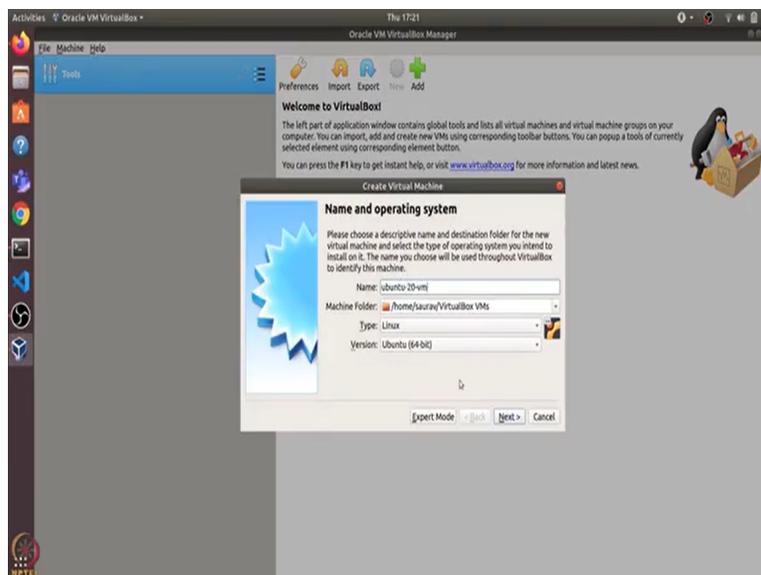
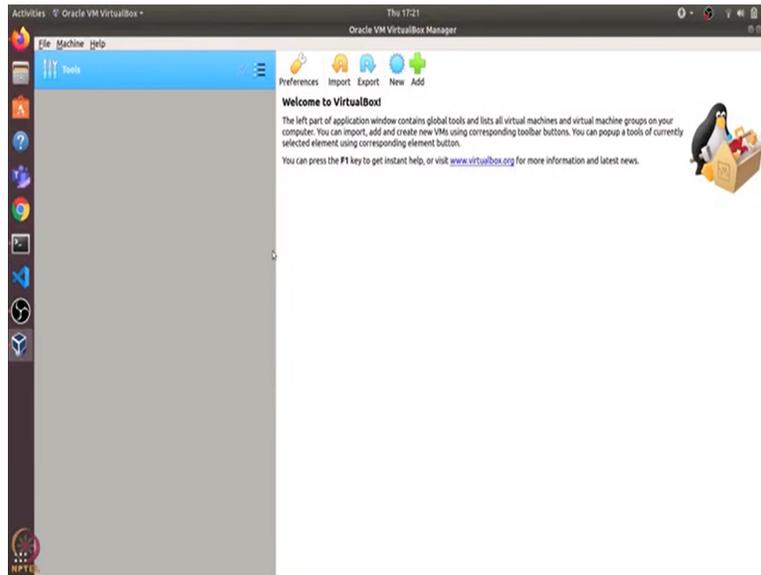
```
Activities Terminal • Thu 17:20
saurav@ubuntu-18:~/Downloads
saurav@ubuntu-18:~/Downloads$ cd Downloads/
saurav@ubuntu-18:~/Downloads$ sudo dpkg -i
```

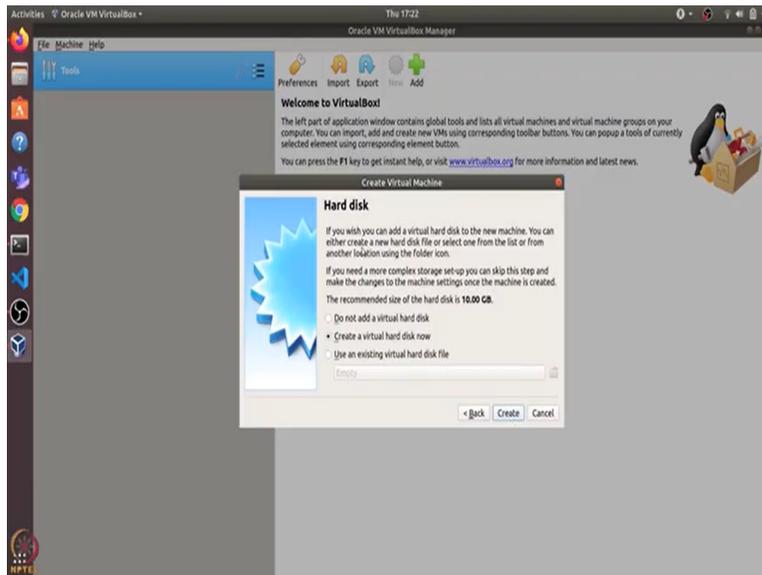
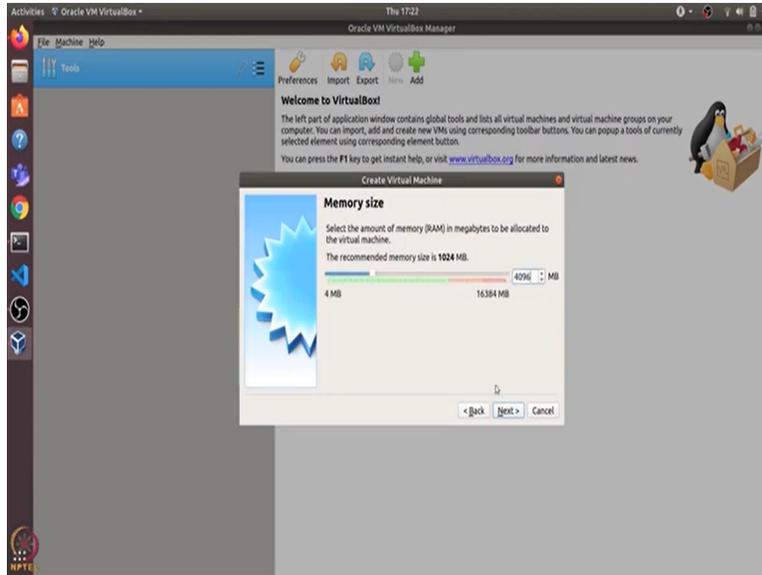


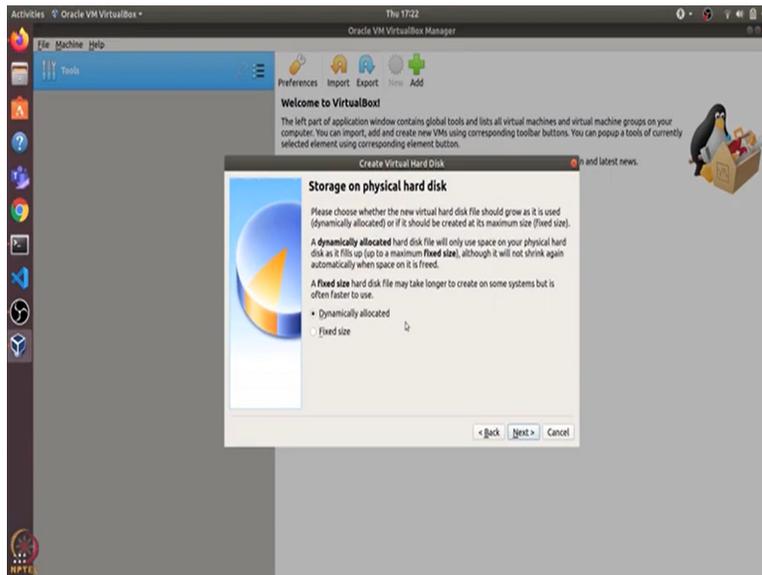
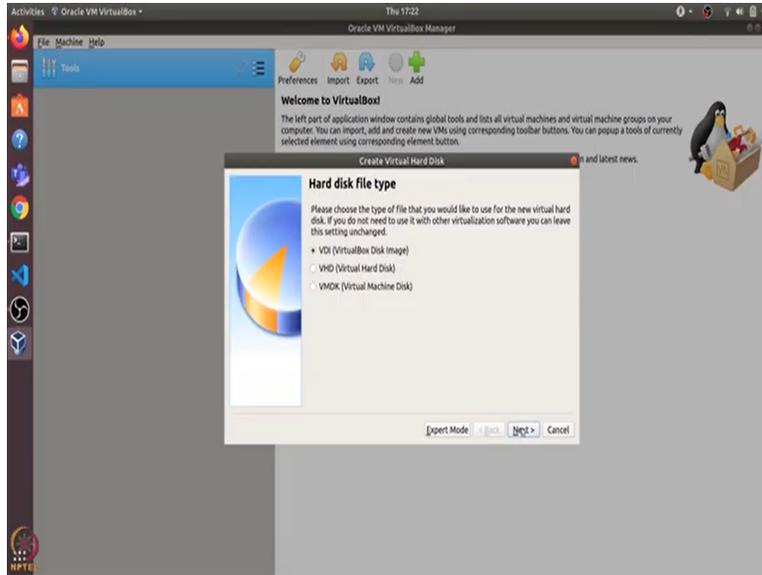
```
Activities Terminal • Thu 17:21
saurav@ubuntu-18:~/Downloads
saurav@ubuntu-18:~/Downloads$ cd Downloads/
saurav@ubuntu-18:~/Downloads$ sudo dpkg -i virtualbox-6.1_6.1.30-148432-Ubuntu-bionic_and64.deb
Selecting previously unselected package virtualbox-6.1.
(Reading database ... 226887 files and directories currently installed.)
Preparing to unpack virtualbox-6.1_6.1.30-148432-Ubuntu-bionic_and64.deb ...
Unpacking virtualbox-6.1 (6.1.30-148432-Ubuntu-bionic) ...
Setting up virtualbox-6.1 (6.1.30-148432-Ubuntu-bionic) ...
addgroup: The group 'vboxusers' already exists as a system group. Exiting.
Processing triggers for ureadahead (0.100.0-21) ...
Processing triggers for systemd (237-3ubuntu10.52) ...
Processing triggers for gnome-menus (3.13.3-11ubuntu1.1) ...
Processing triggers for desktop-file-utils (0.23-1ubuntu3.18.04.2) ...
Processing triggers for mime-support (3.60ubuntu1) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
Processing triggers for shared-mime-info (1.9-2) ...
saurav@ubuntu-18:~/Downloads$
```

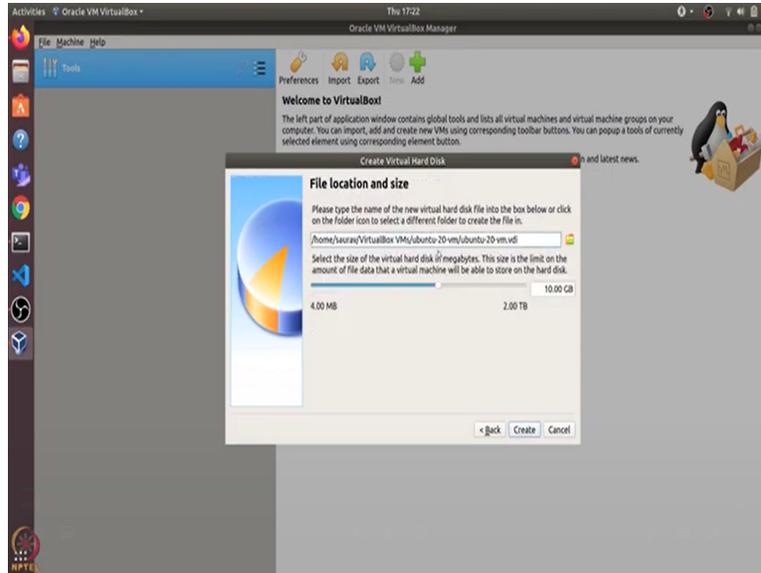
Let us open a terminal and go to the downloads folder. Now I will use the sudo dpkg minus i and then the file name command to install from this deb file. So it has started the installation let us wait for the installation to finish. So now it has installed VirtualBox, let us run it using the VirtualBox command.

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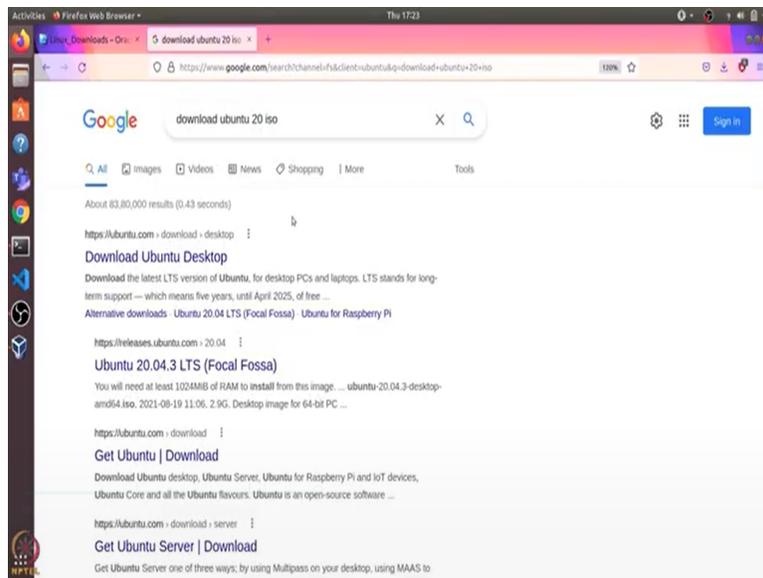
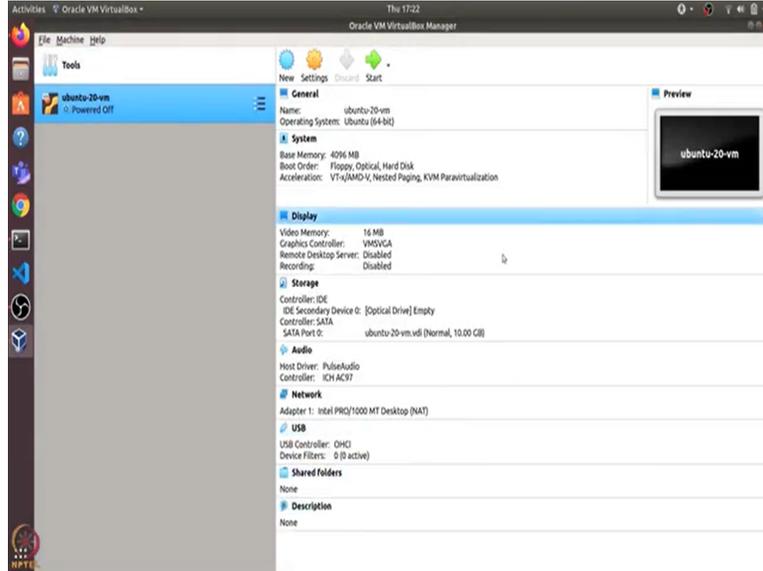


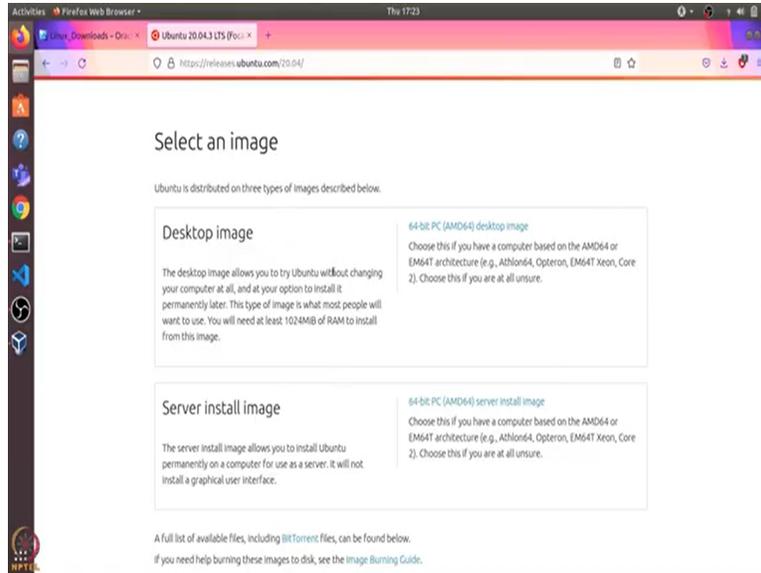


So you can see it opened this oracle vm VirtualBox manager. Let us create a new vm using this new button. I will name it Ubuntu 20 vm and the type will be LINUX, version is 64 bit. Let us press next, now I will set the RAM size to be 4 GB, and click on next so here it is asking about the hard disk. So we need a virtual hard disk to run with the virtual machine because I do not have any existing virtual hard disk, I will create a new virtual hard disk.

Let us click on create I will keep the hard disk type as VirtualBox disk image. And then there are two types of hard disk, one is dynamically allocated and another is fixed size. So what does it mean by dynamically allocated? It means that the initial virtual hard disk size would be smaller than 10 GB. And as and when we store more data into this virtual hard drive its size will increase. So I will keep it as dynamically allocated and click on next. I will set the size as 10 GB only and click on create.

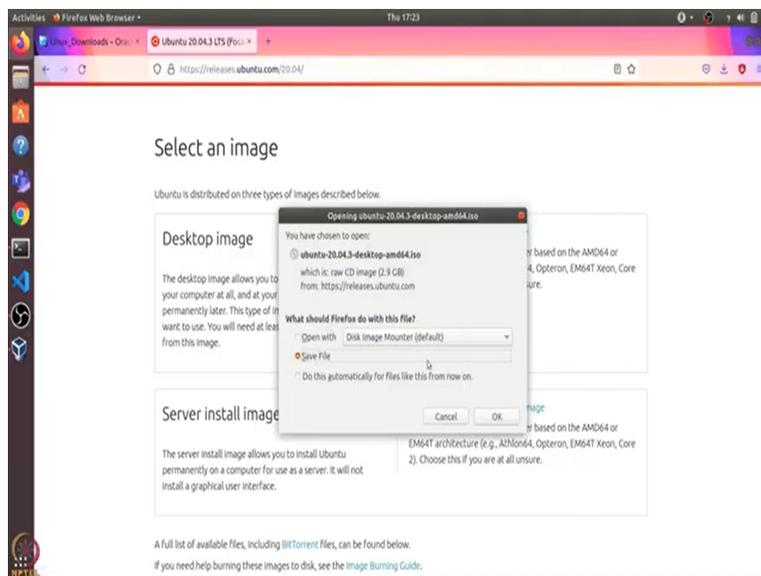
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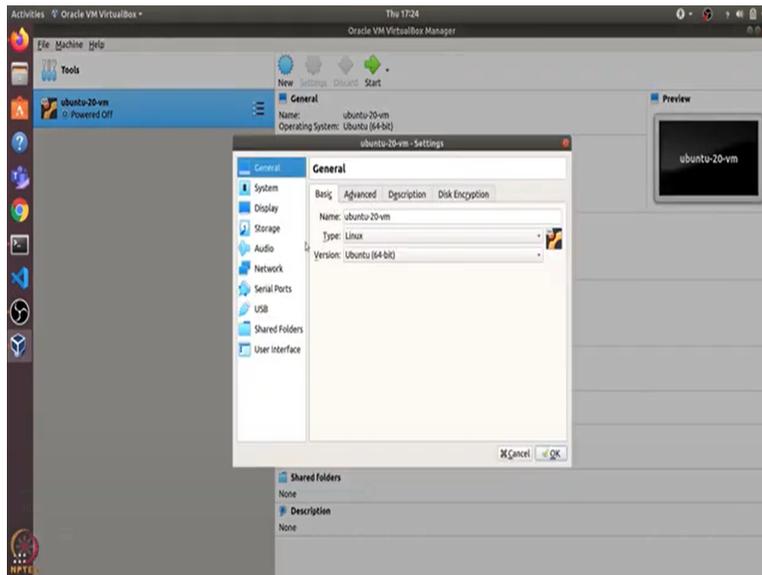
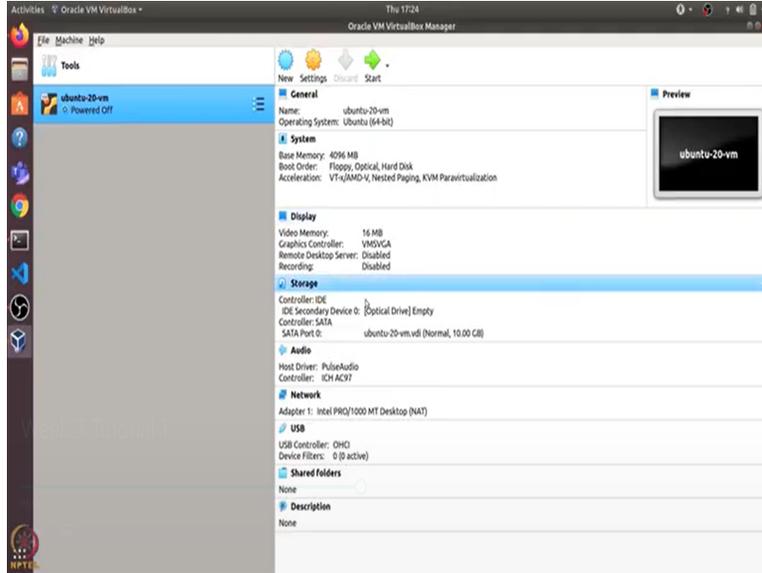


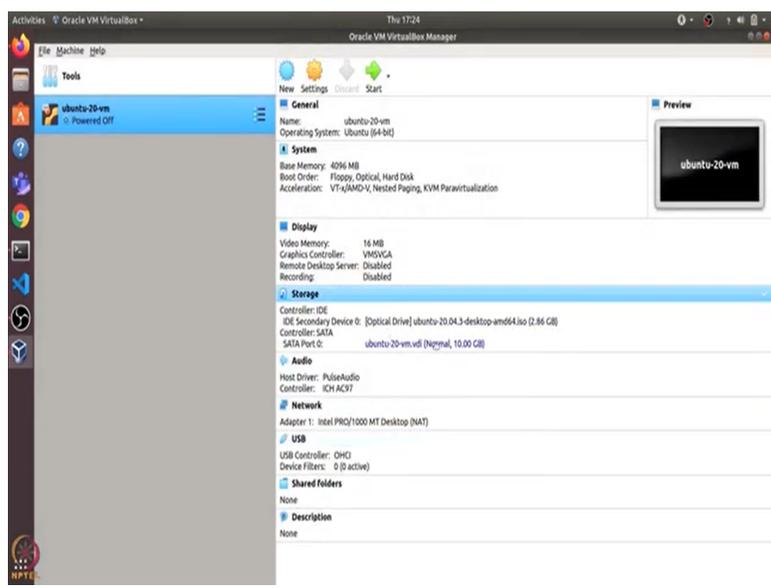
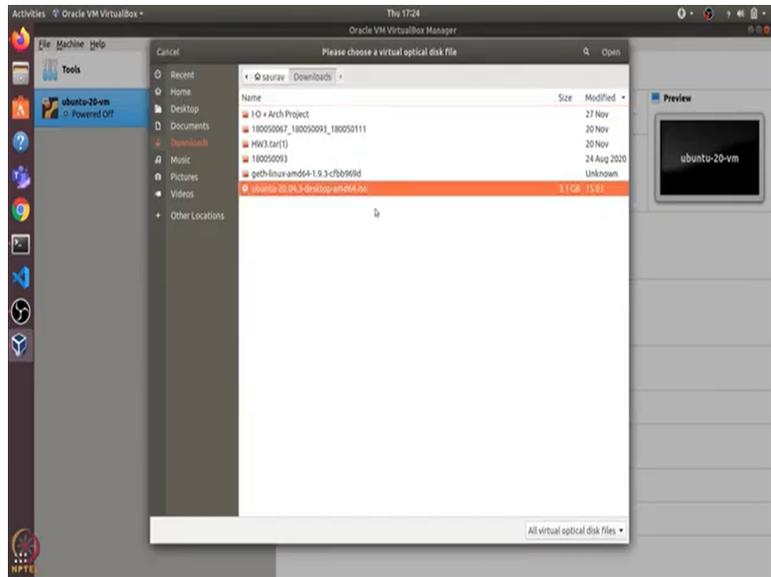


So this has created a new virtual machine with 4 GB as the RAM memory and other properties which we can see here. Now we need to install the Ubuntu operating system on this virtual machine. So before that let us download the Ubuntu ISO image, so that we can install it in this virtual machine. So, I will open the browser and type in download Ubuntu 20 ISO. So you can download this Ubuntu 20 ISO using this [releases.ubuntu.com](https://releases.ubuntu.com/20.04/) link. Let us open this, so there are two type of image one is desktop another server let us install the desktop image.

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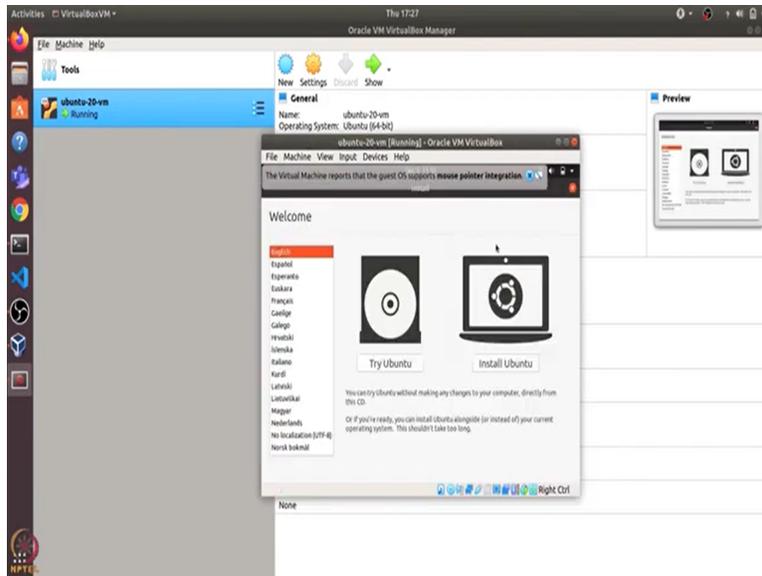
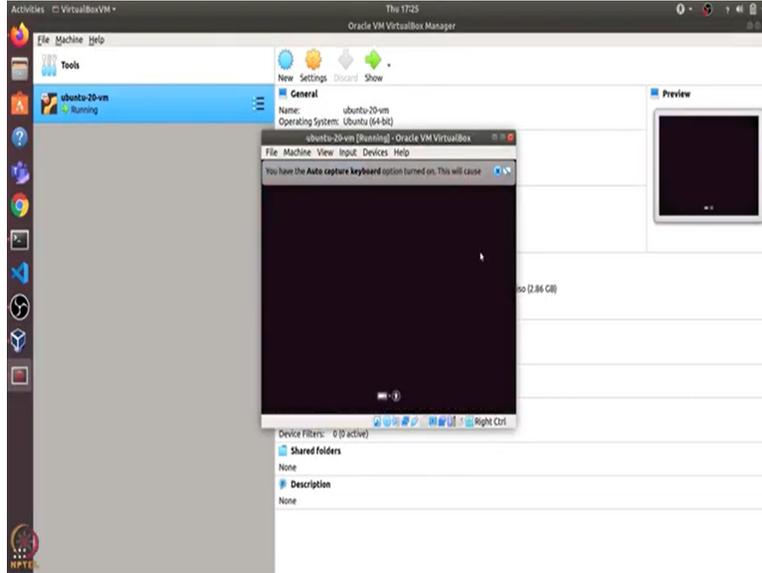


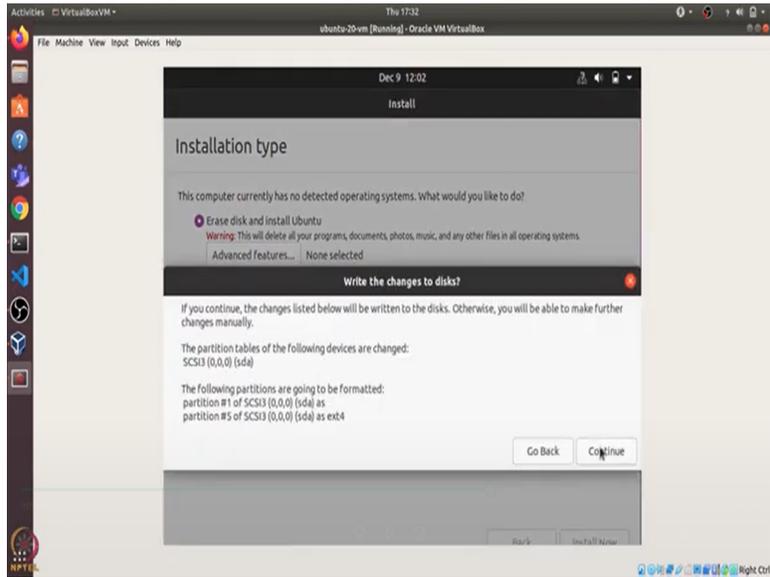
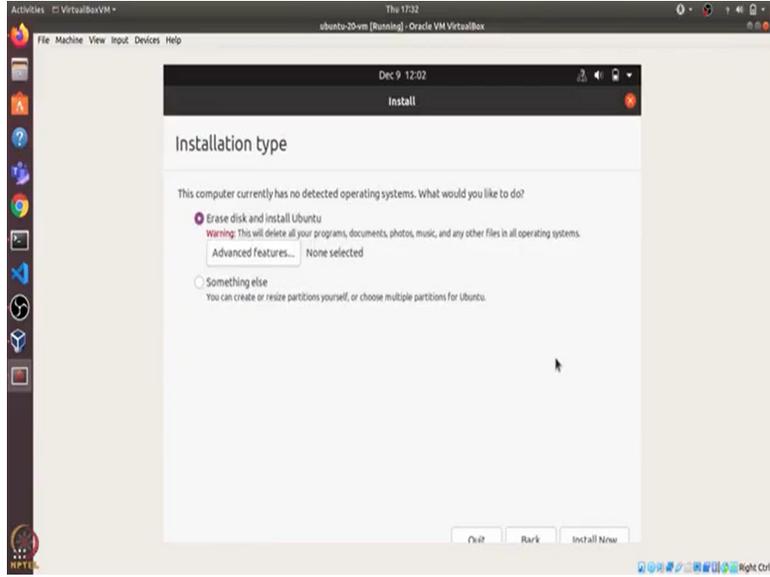


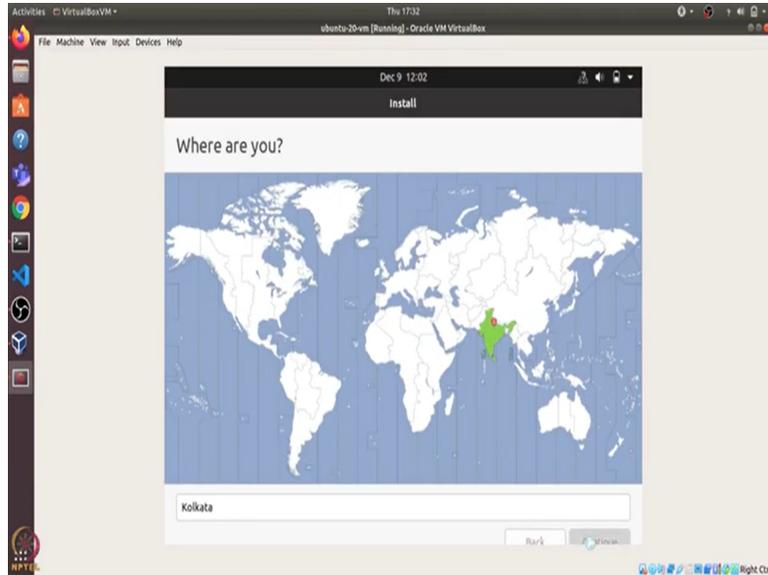
And here it will allow us to save this file because it is a large 3 GB file I have already downloaded it. So I will click on cancel but you can click on ok to save this file. So let us now open the VirtualBox and because I want to run this virtual machine using that ISO file I will click on settings. Then I will go to storage and here it is showing that optical drive is empty.

I will click on this small icon and then choose a disk file, here I will choose the image ISO file and click on open and then select ok. So, now here we can see that it has this ISO image file in the optical drive and now we can start the vm.

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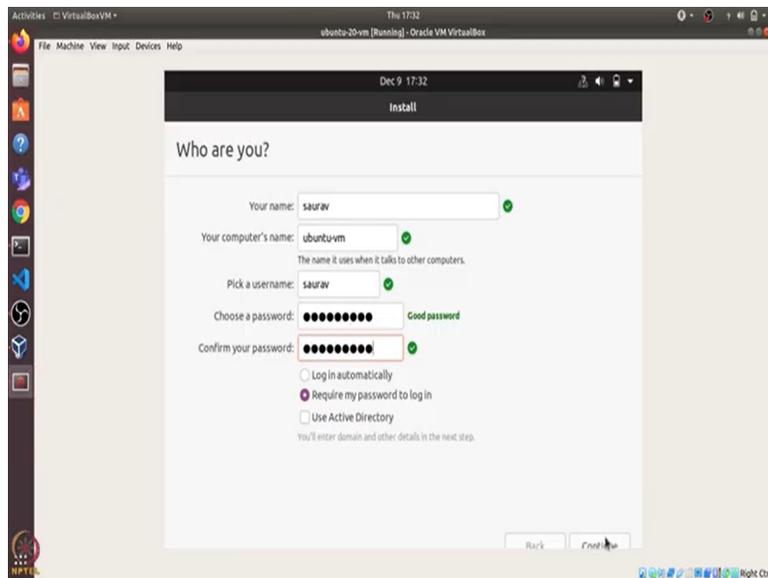


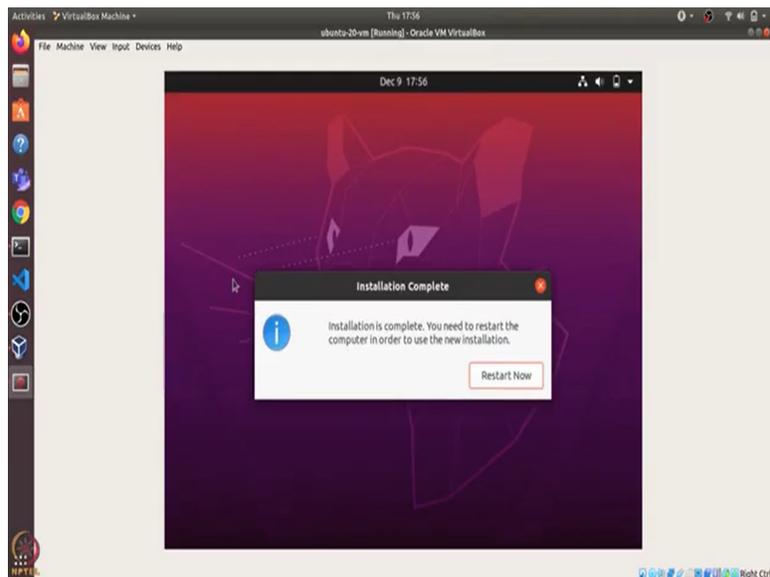
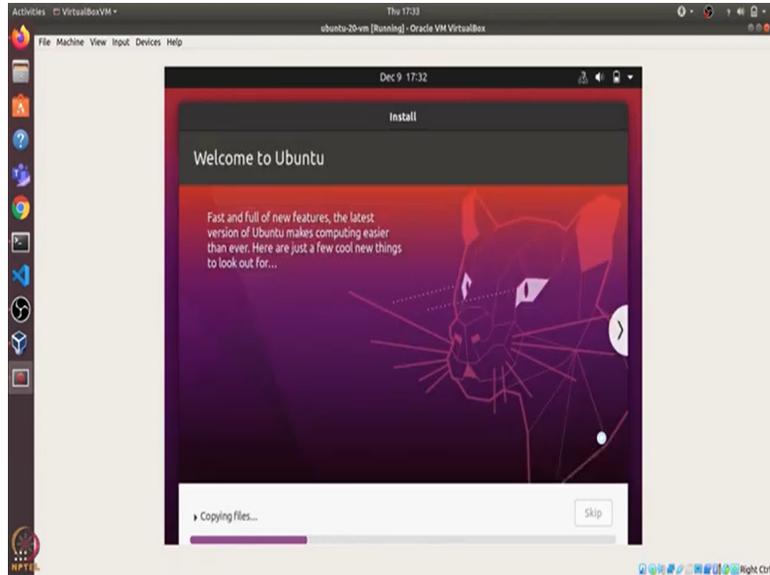




So I will just keep it normal installation and click on continue so it says that well it is the disk and install Ubuntu. So we can just select install now and press this continue button. So here we can select the region, so I will choose this India and click on continue.

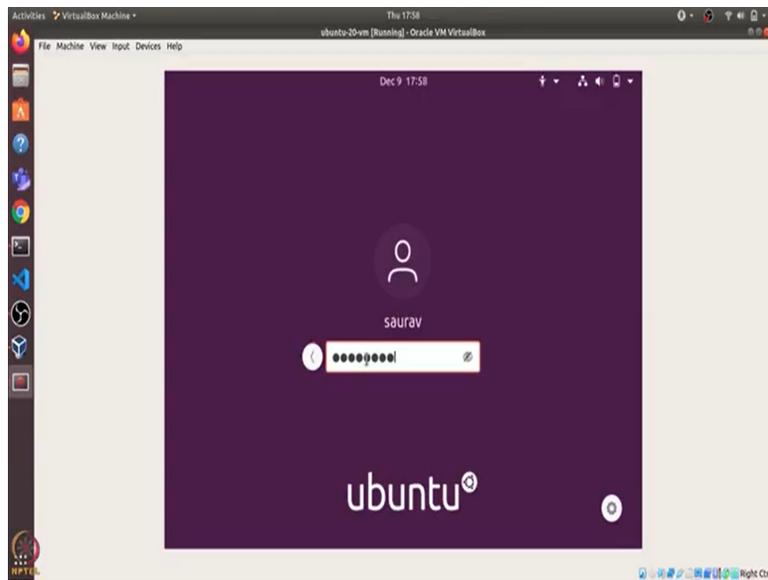
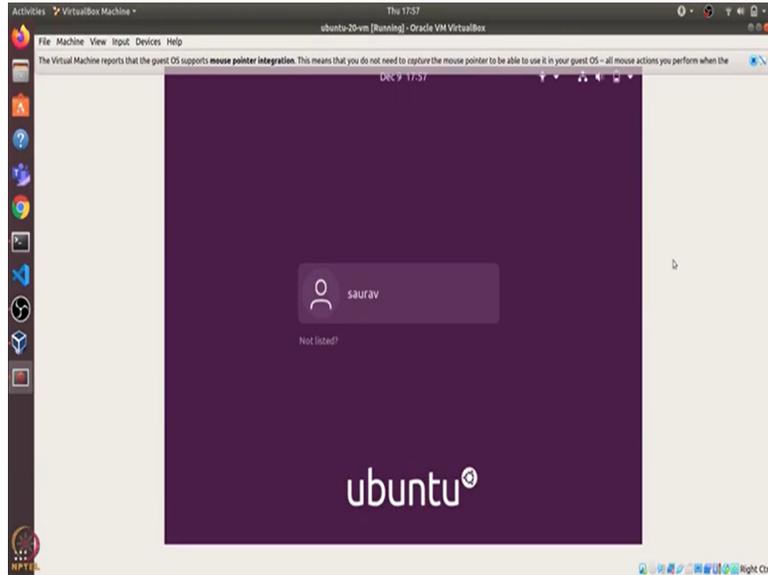
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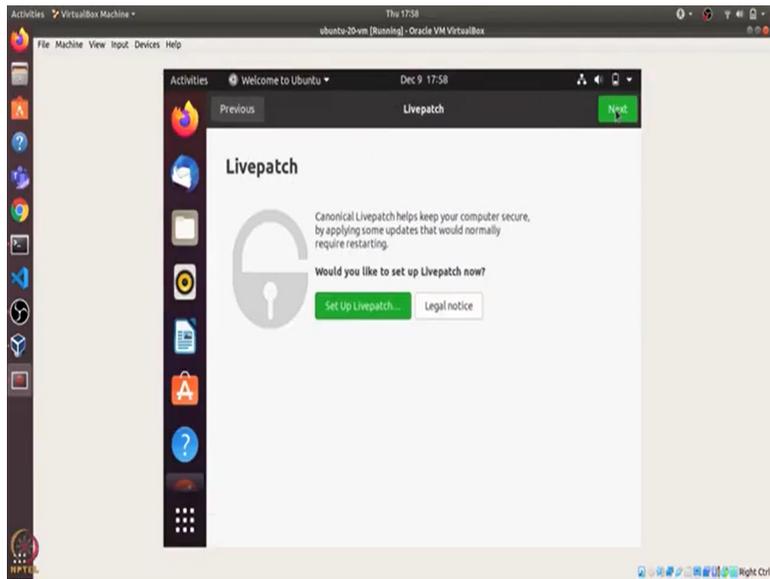
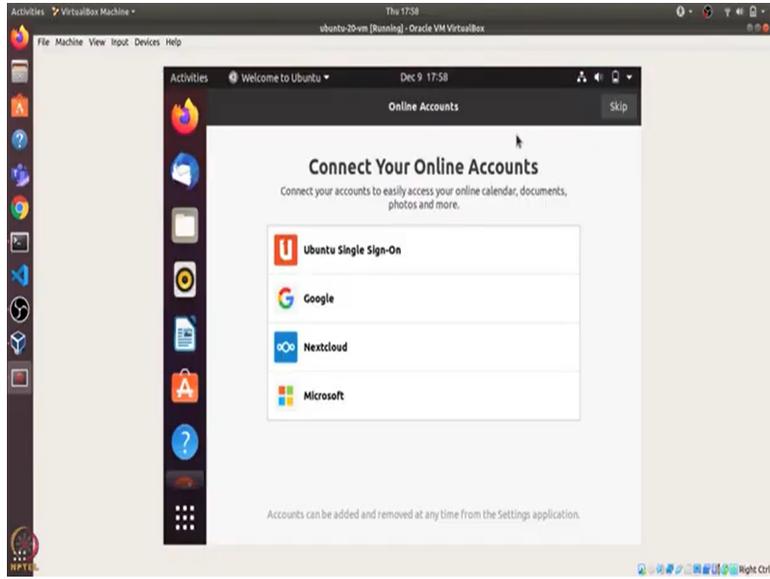


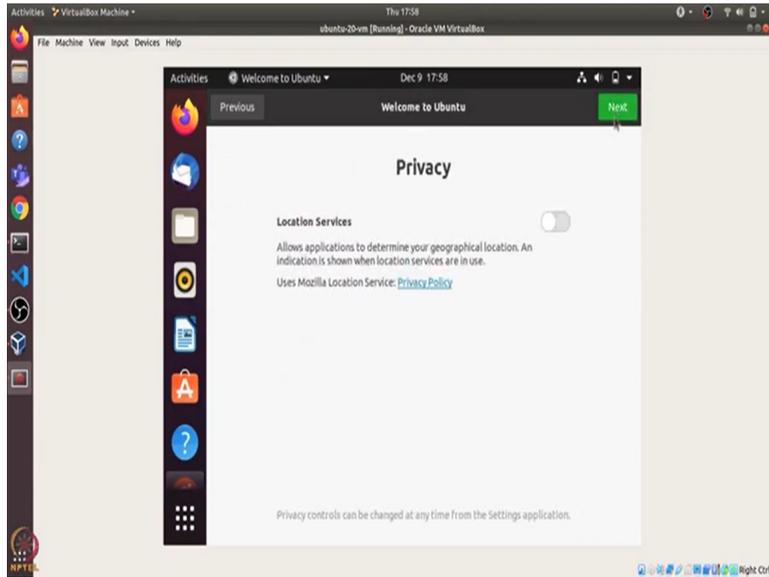
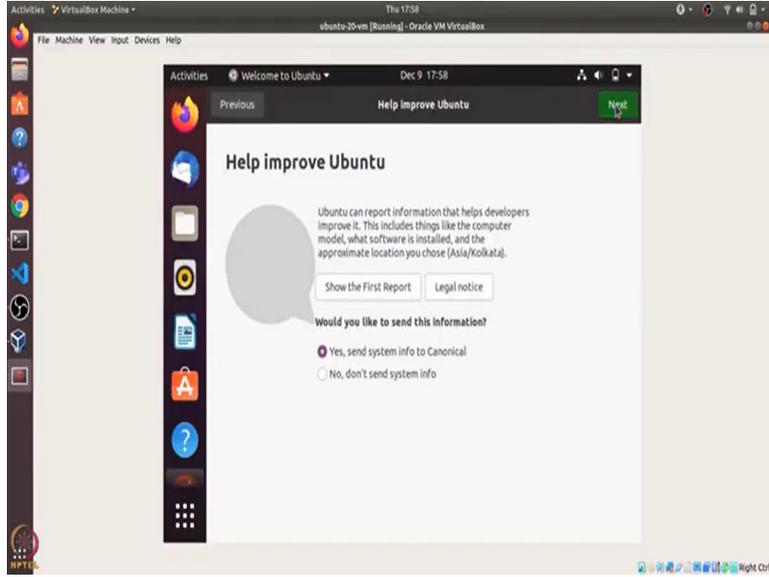


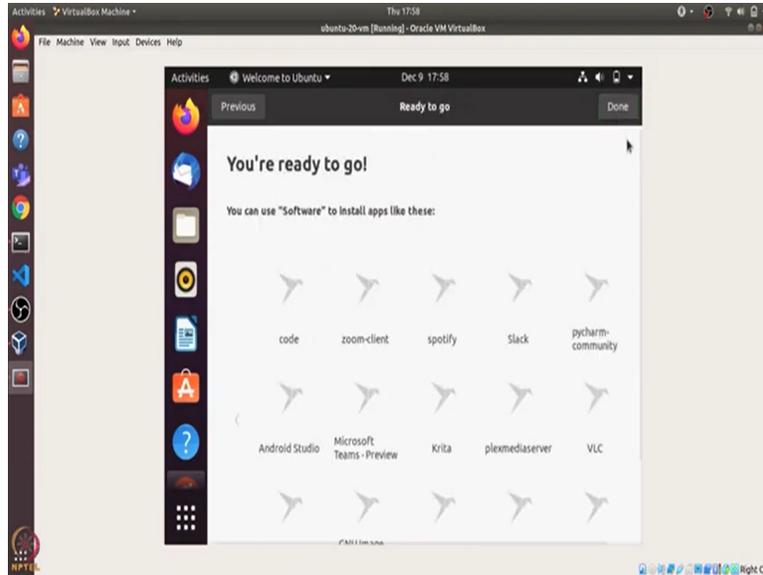
Now we can configure the username and password for our Ubuntu operating system. I will just add the name as Saurav and here I will write Ubuntu vm. Then username I will just keep it as Saurav and I will also add a password and then I can continue. So this will start the installation and it might take a long time so let us wait for it to finish, so now the installation has completed. Let us click on restart now.

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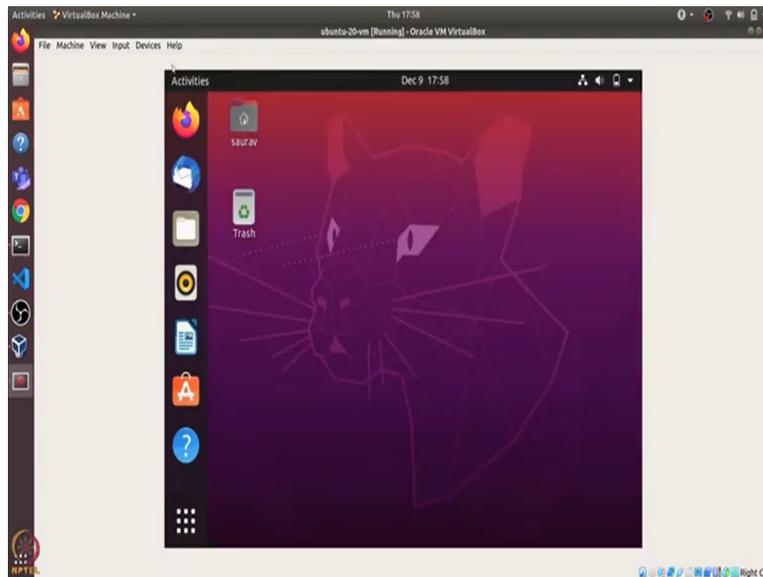


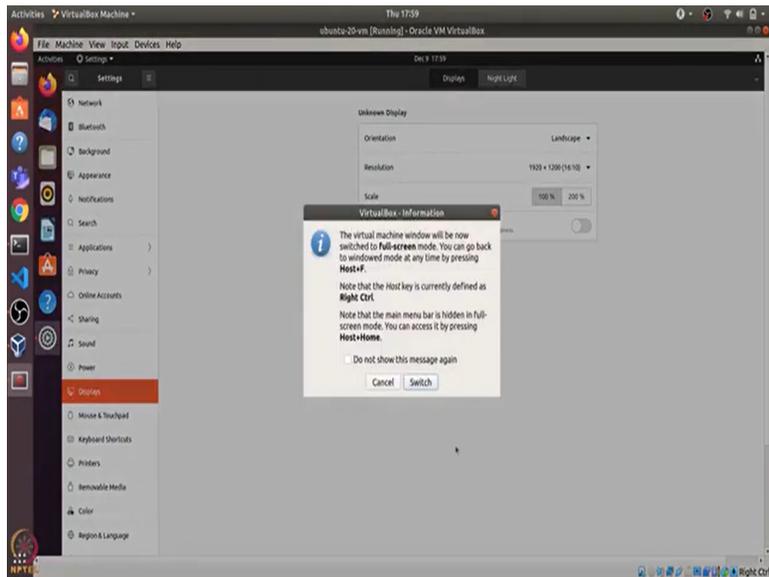
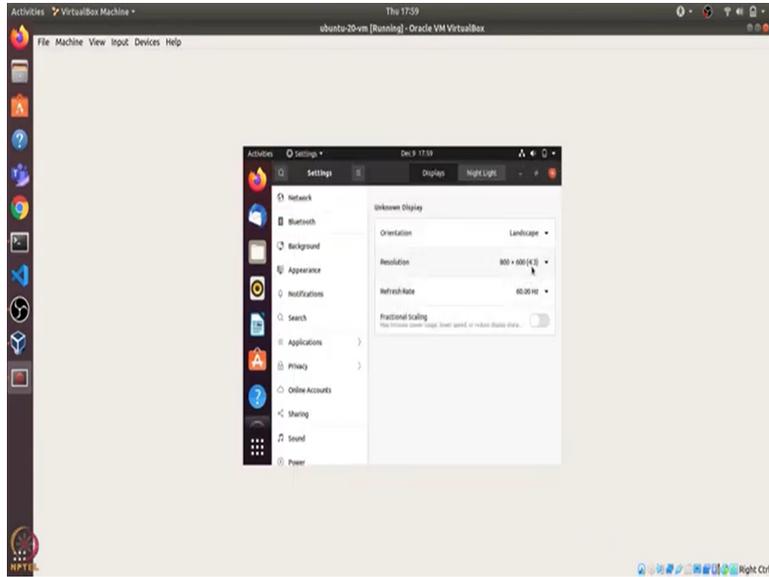


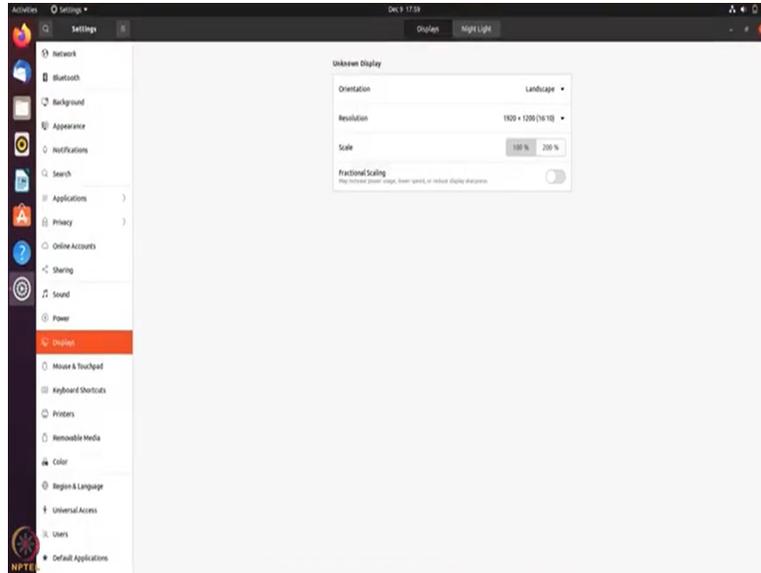


So the virtual machine has restarted I will select my username and enter the password. I will just skip all of these as of now and click on next and next and then done.

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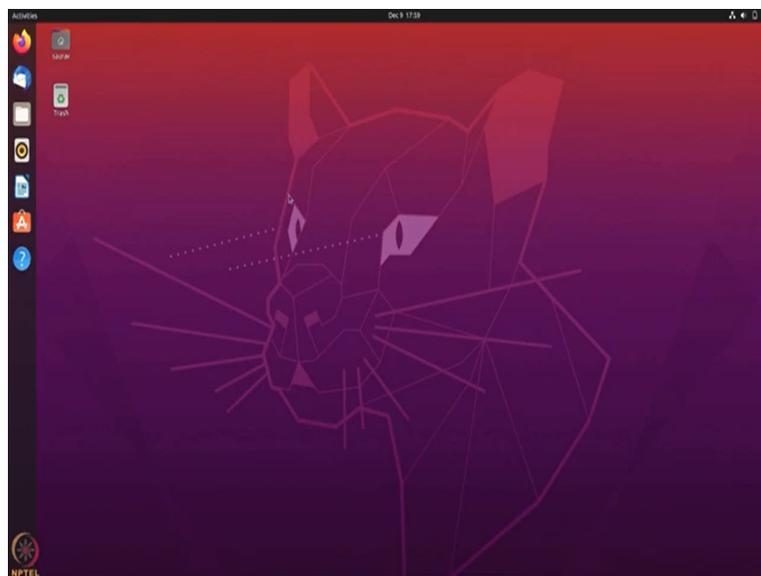


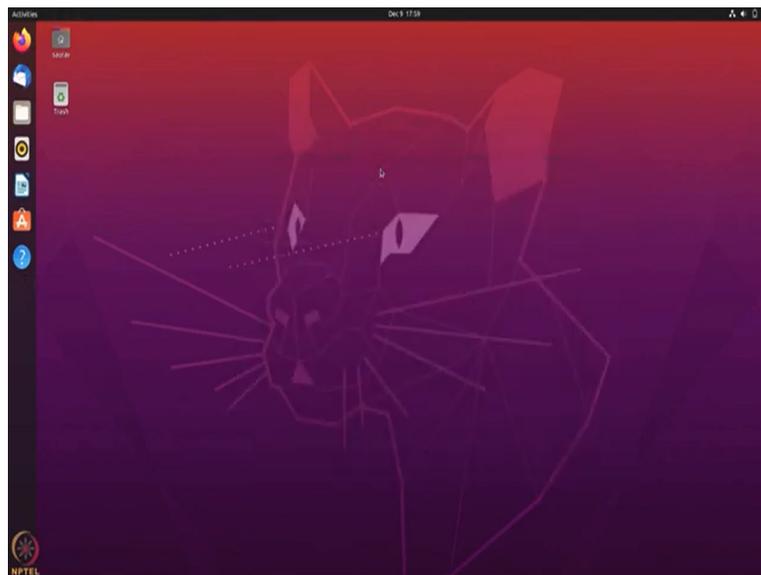
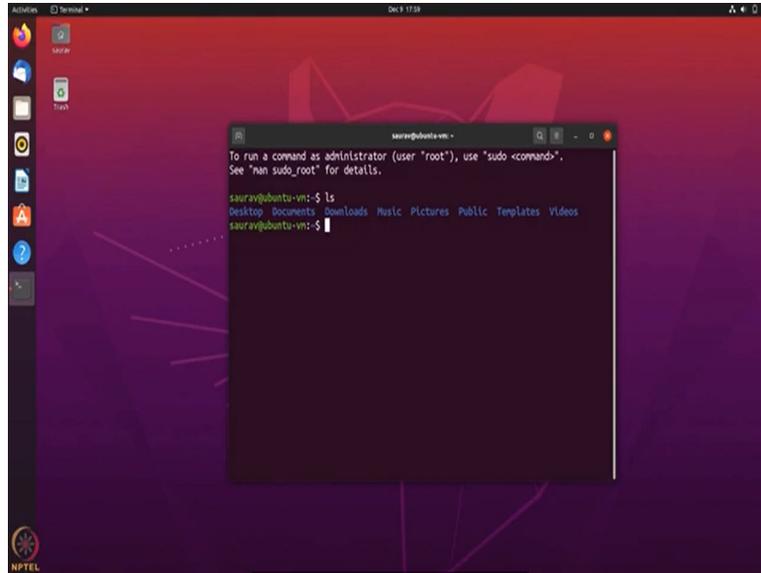




So this starts our Ubuntu operating system in the virtual machine. The first thing that we will do is reset the resolution. So I will scale it back to 100 and change the display settings to match the resolution of virtual machine to be the same as the host machine, which is 1920 times 1200 and apply these changes. So we can go to full screen using control plus f, so I will switch to the full screen mode. So this is the Ubuntu virtual machine and as you can see it is just like running Ubuntu on a physical machine.

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Let us open the terminal so we can open the terminal using control plus alt plus t. Let us increase the font size a bit, so we can run various Ubuntu commands and we can use exit to exit the terminal. So, that is it for this video. Thanks and have a nice day.