Tutorial 0

Big Data Storage & Processing (BDSP)

If you have already installed ubuntu machine on Oracle virtual box, you can use this machine, however, it is recommended to install a new machine for this module with the following requirements.

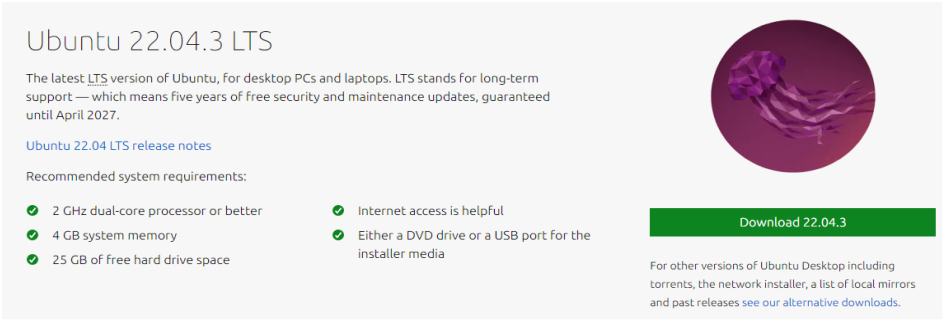
1) Download and install Oracle Virtual box based on your operating system. The executable file for the download is available at the following link as

- https://www.virtualbox.org/wiki/Downloads

After download, Double click on the icon and install with default instructions. If you are not sure about this stsep. The instructions along with screenshot and youtube video are available at the following links

- https://www.sysnettechsolutions.com/en/install-oracle-vm-virtualbox-on-windows-10/
- https://www.youtube.com/watch?v=nwjZWHou8u0

2) Download the stable version of Linux distribution (Ubuntu 22.04.3 LTS) for virtual box from https://ubuntu.com/download/desktop, on your windows operating system.



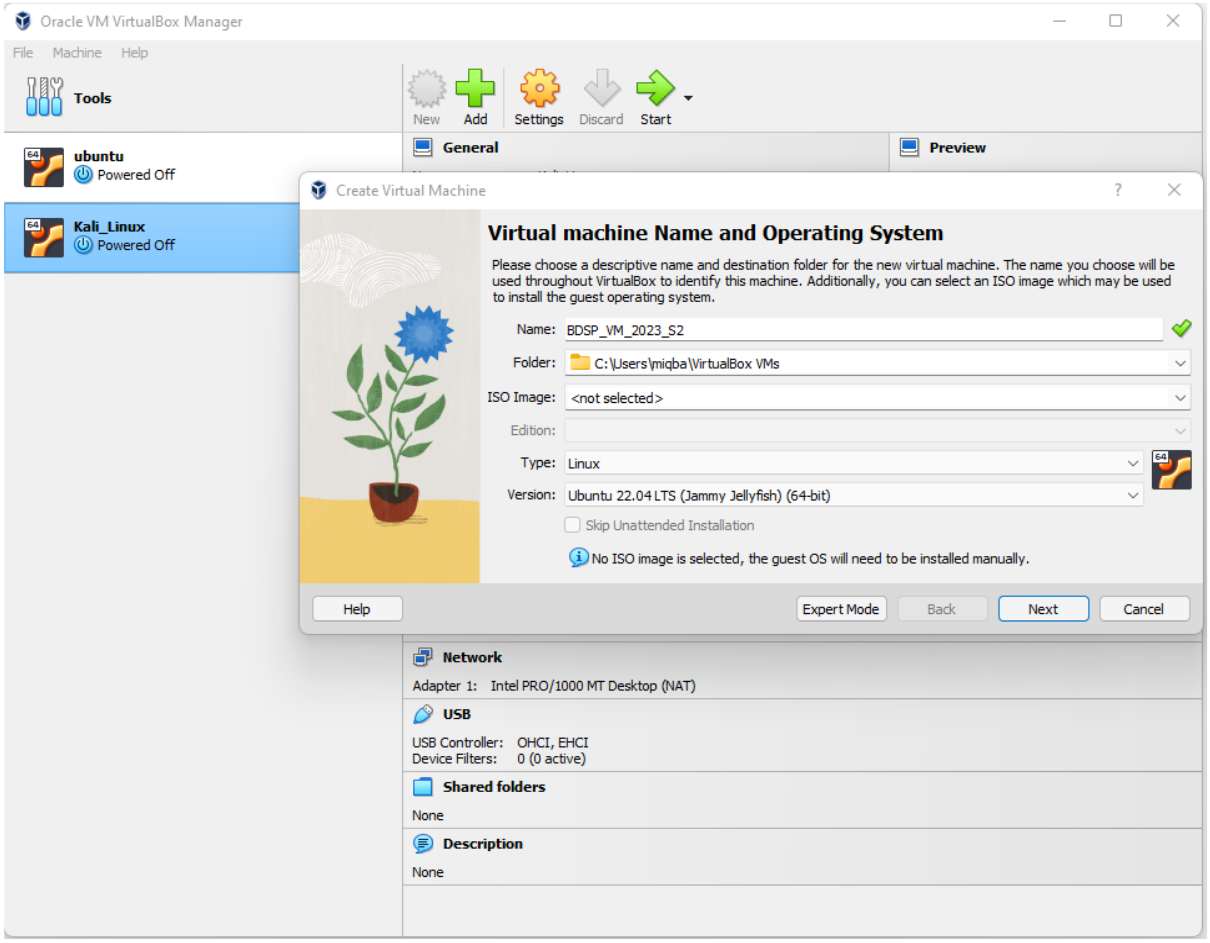
Your download will automatically start, and the file size is approximately 4.9 GB.

2) Create a new virtual machine called BDSP_VM_2024_S2 and

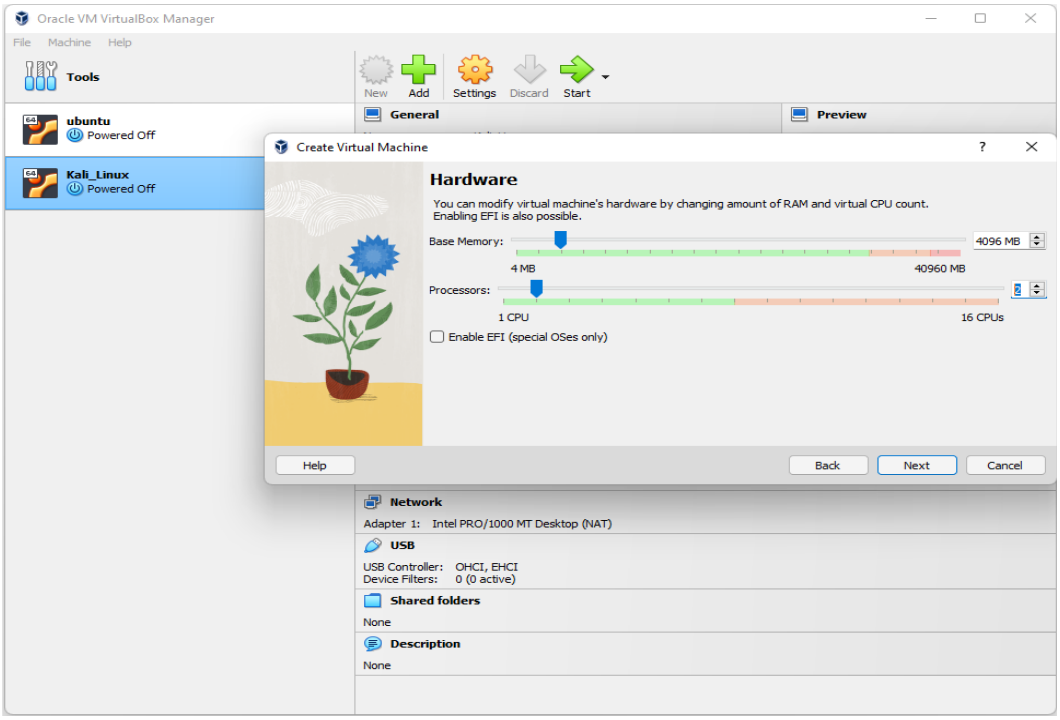
- Allocate at least 100 GB of hard disk space (you can set it to dynamically allocated to take only the space it needs). Make sure that your system have a sufficient space for Oracle Virtual machine.
- At least 4GB RAM, 2 CPU cores and 32 RAM video memory.

3) Follow the instructions to create VM for BDSP, when Oracle virtual box will be ready after installation, follow the steps to install Ubuntu on Oracle Virtual box

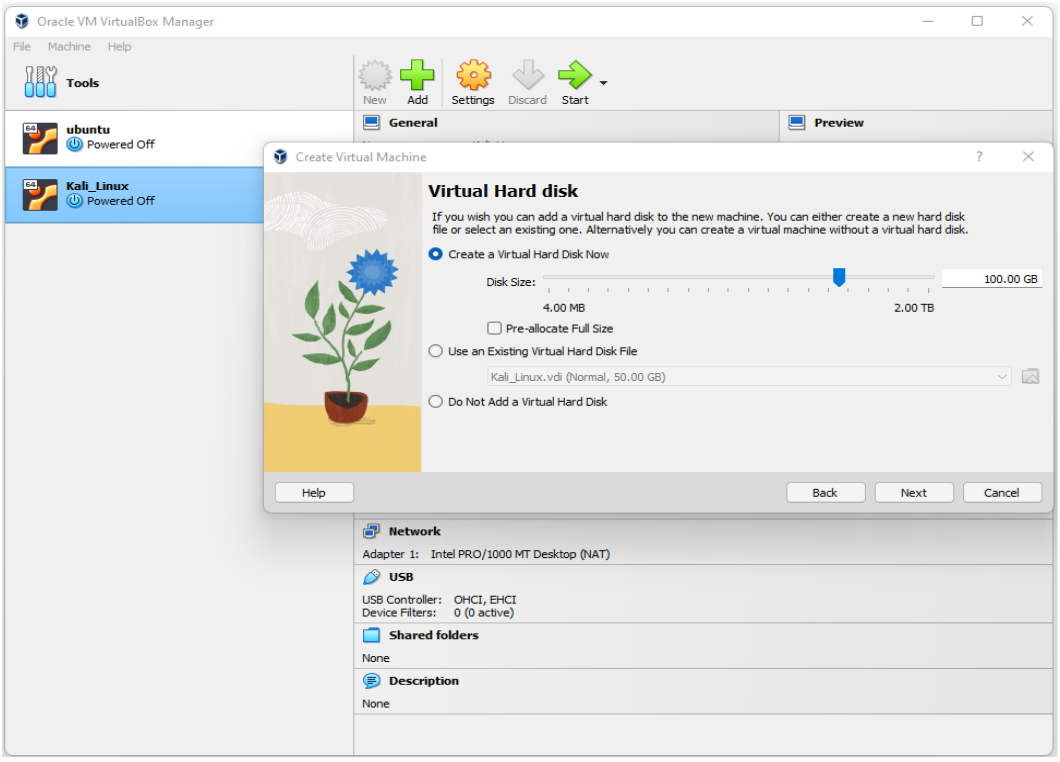
(i) Create a new virtual machine



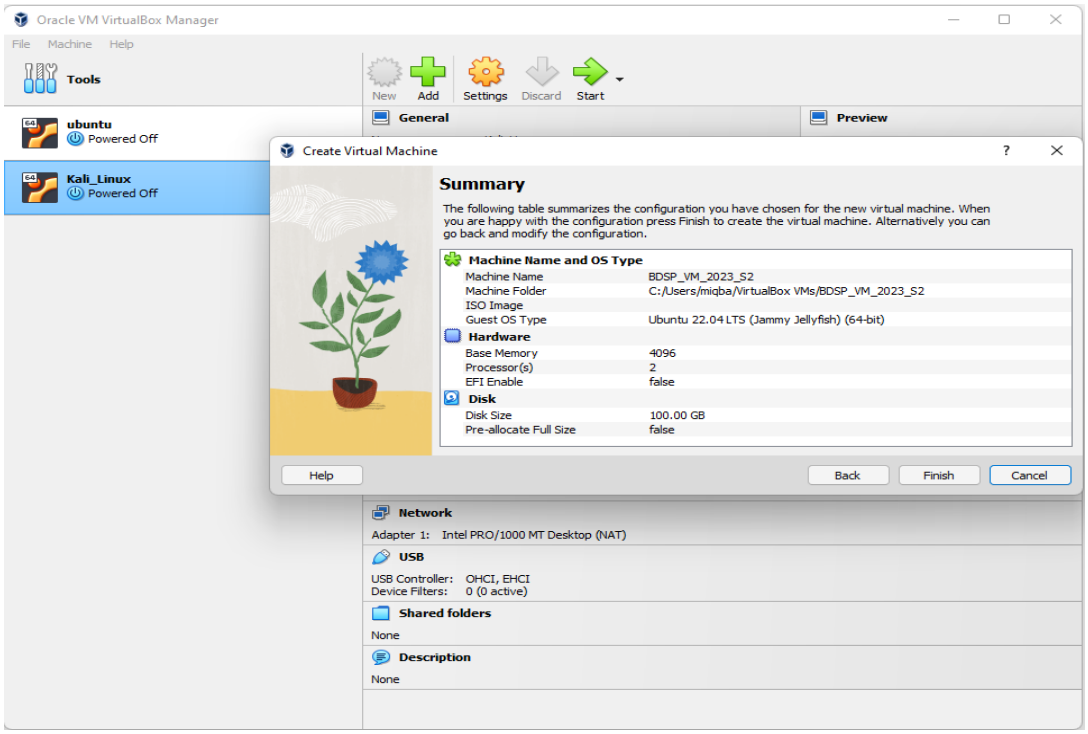
(ii) Set the ram 4 GB for Ubuntu 22.04.3 LTS and 2 Processors.



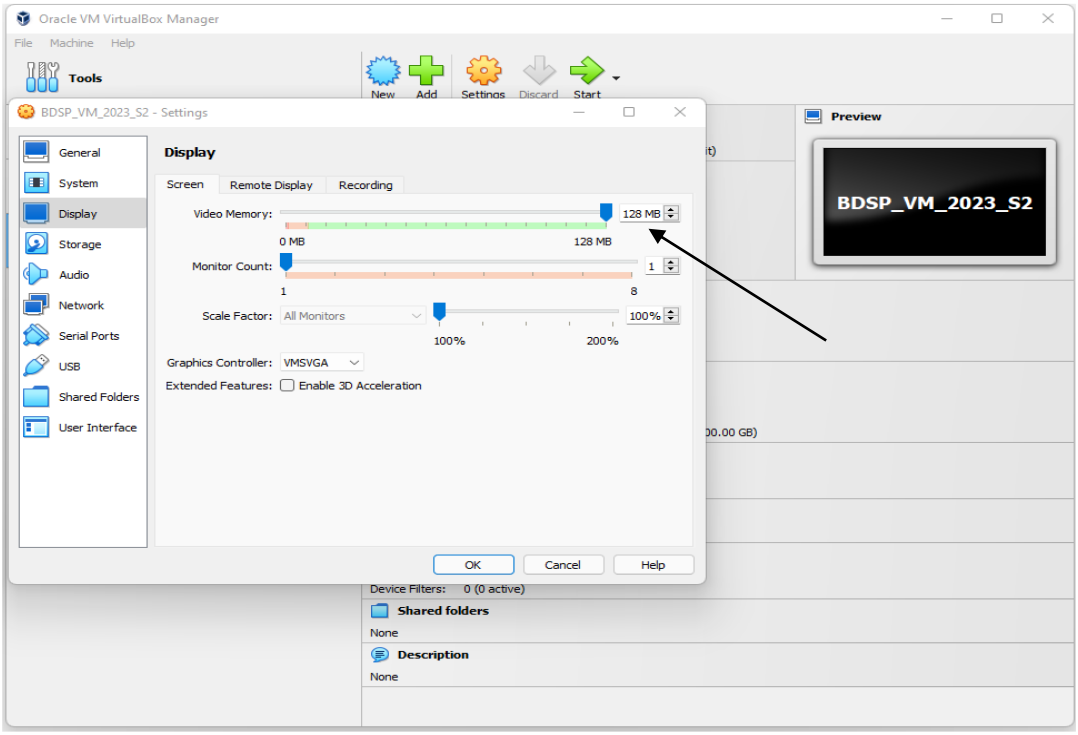
(iii) Allocate 100GB space from your local drive. Make sure your system must have sufficient storage before this action as shown below. Otherwise, you will face errors at later stage during this module.



(iv) Follow the default instructions as Oracle virtual box provided you for the installation of VM.

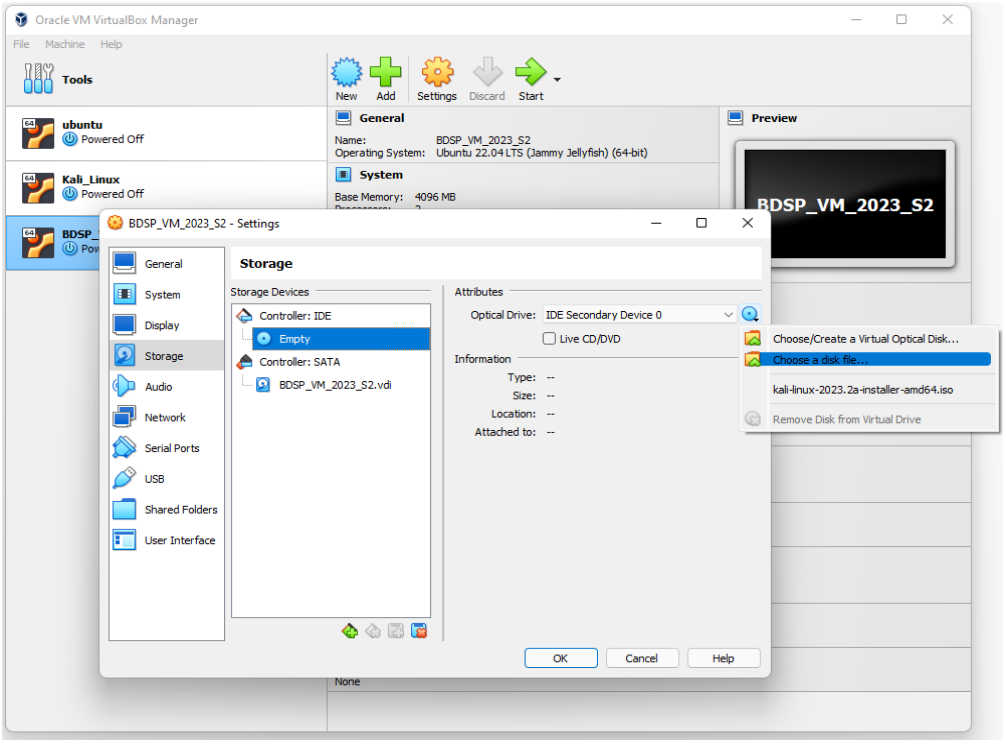


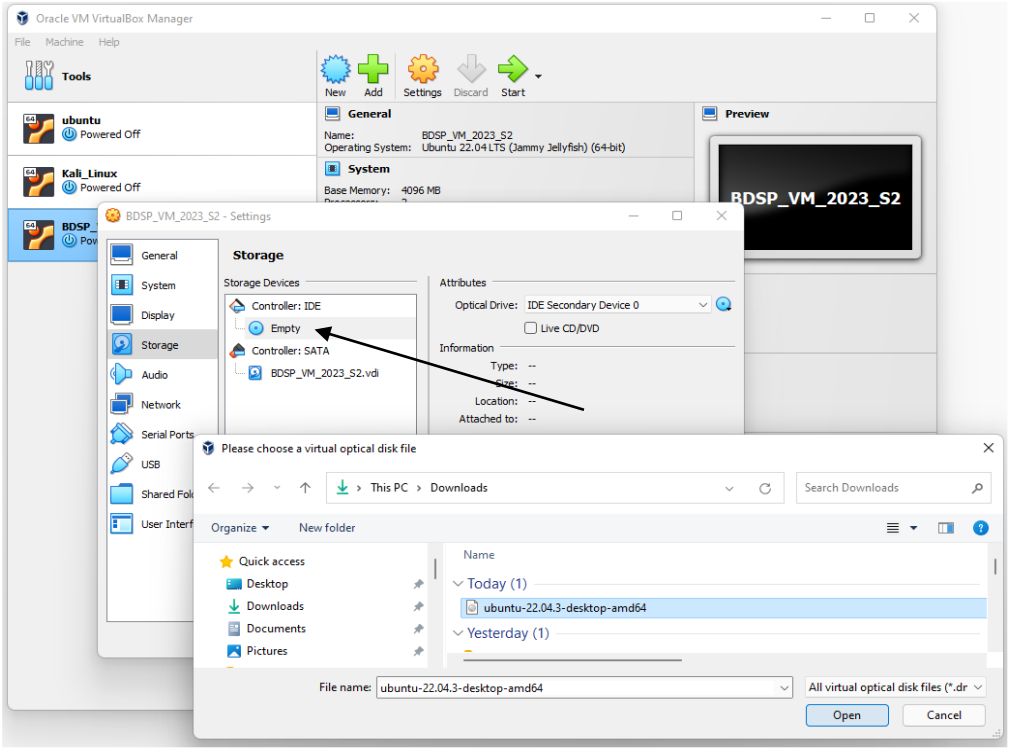
Click on the Finish button to complete this process. Adjust the video memory as shown below if your system allowed you by clicking on the **Settings button**.



(v) The virtual machine is created and now you would need to attach the ubuntu downloaded image (On your windows machine) on this virtual machine.

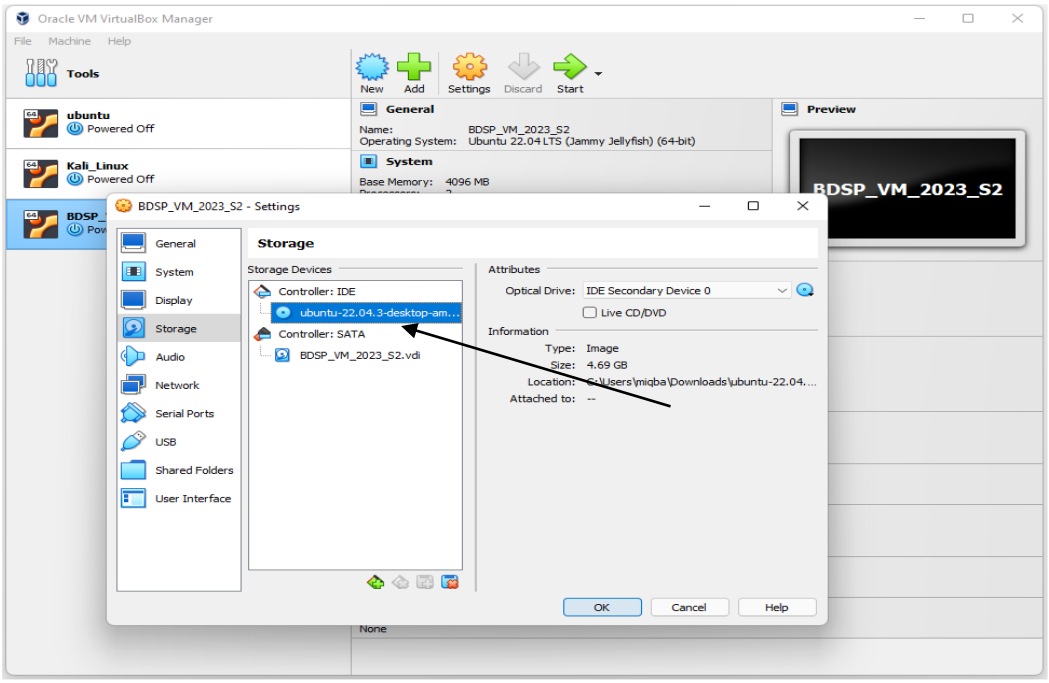
(vi) Attach the Ubuntu disk image file in the next step from your laptop/ desktop folder.



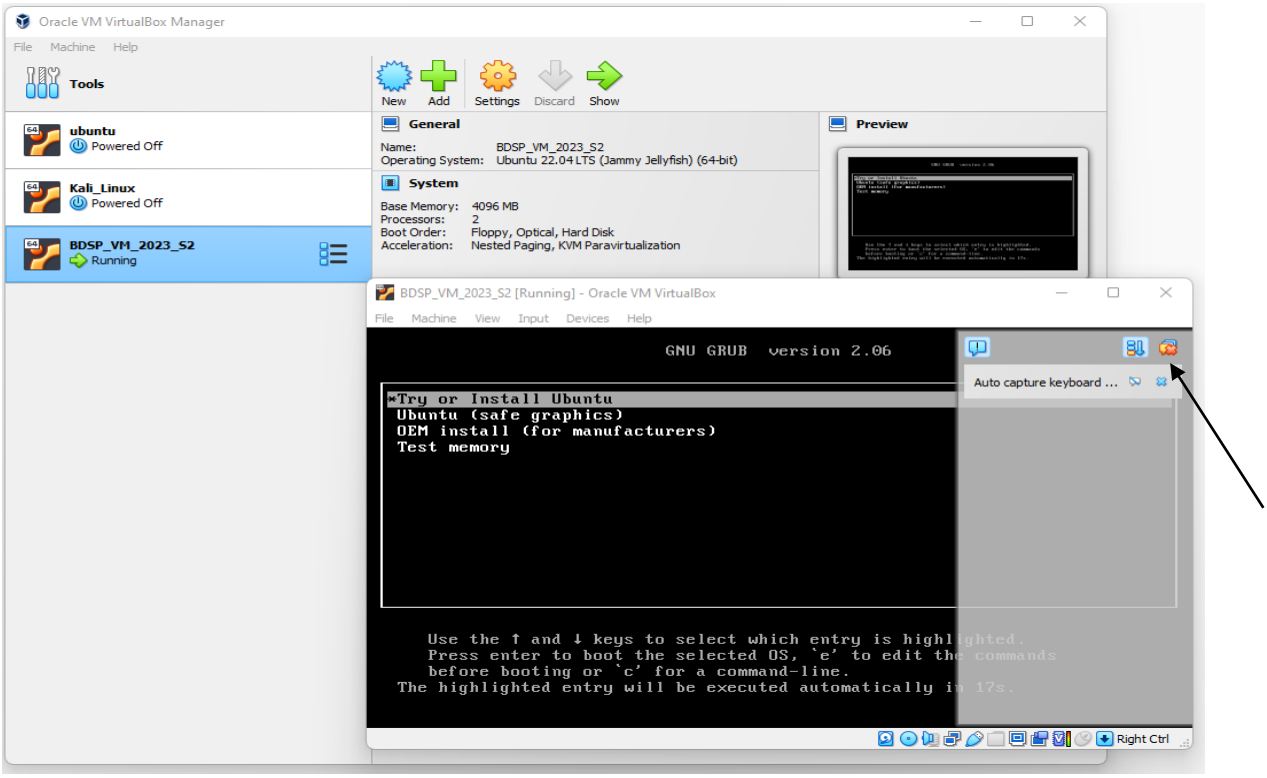


Please check the folder where you have downloaded the **ubuntu-22.04.3-desktop-amd64** image. We used Windows OS Default **Downloads** folder.

Press the open button and you will observe Empty disk icon will be changed to **ubuntu-22.04.3-desktop-amd64** as shown in the next screenshot. Press OK button to complete the process.

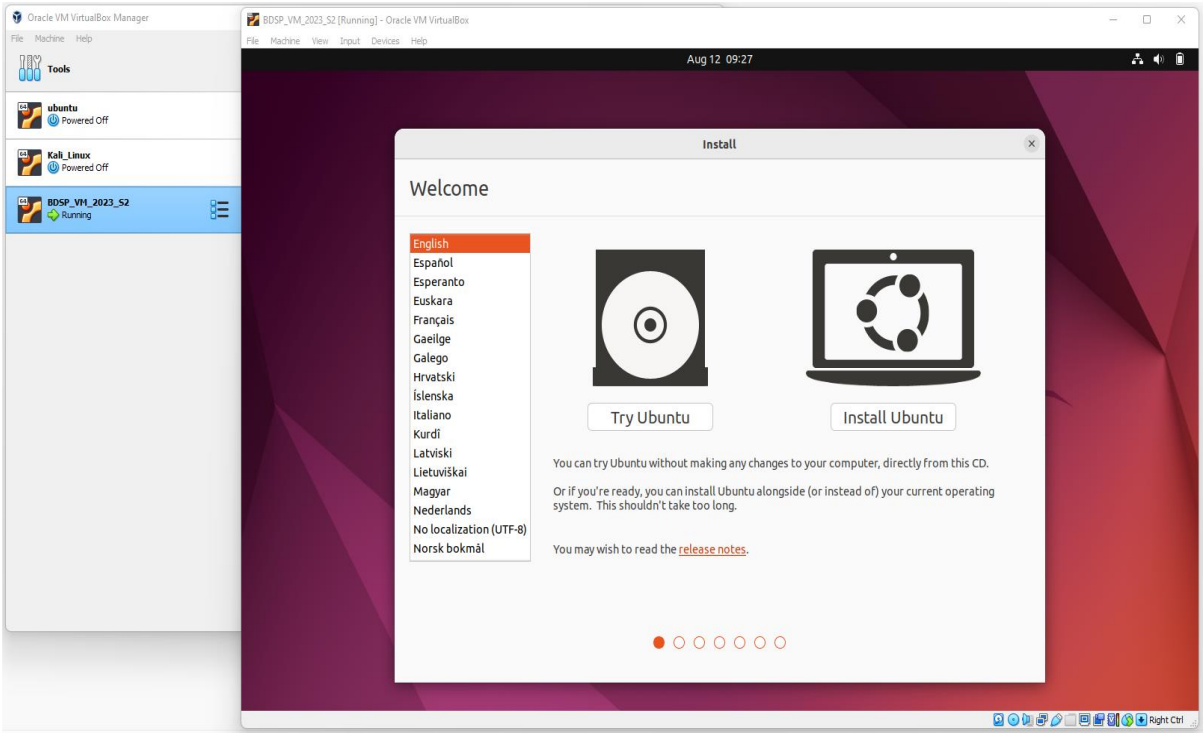


(vii) Start Ubuntu installation process on your newly created VM. The following screenshot will guide you to complete this process or If the below mentioned image does not appear, then click on the virtual machine icon on the Oracle virtual box and press the start button.

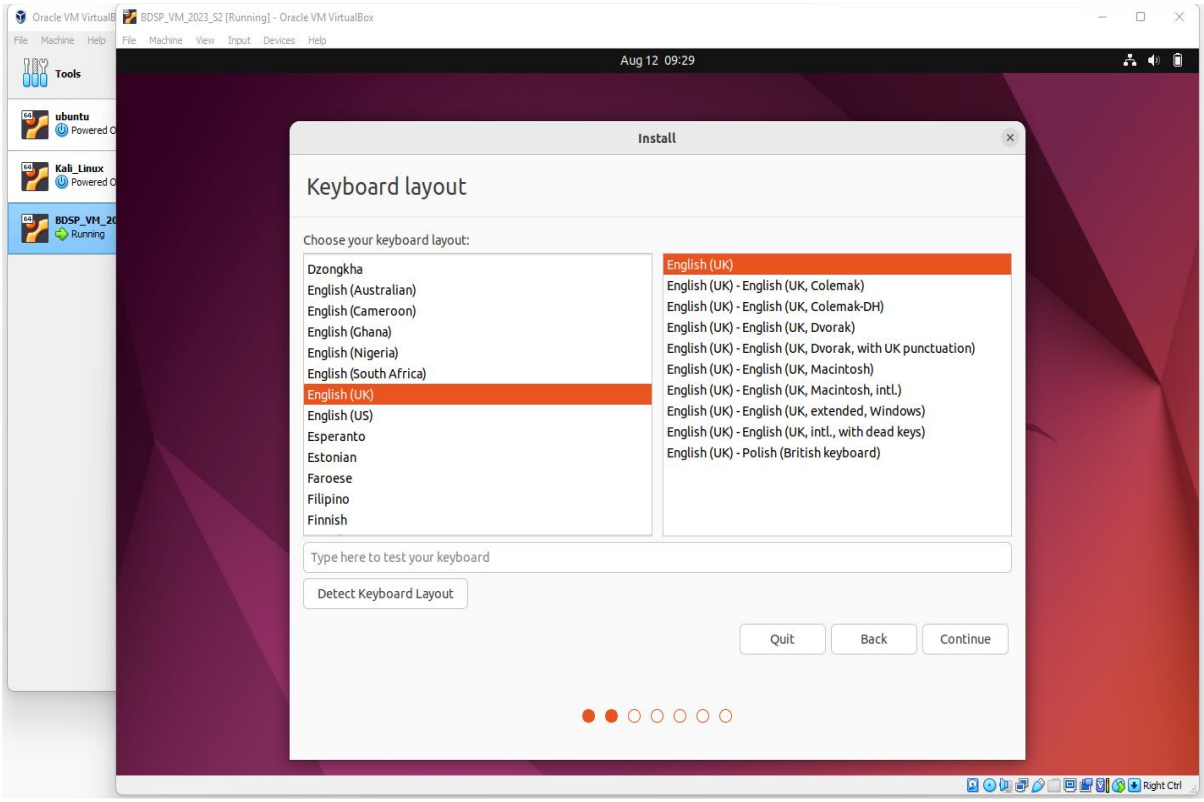


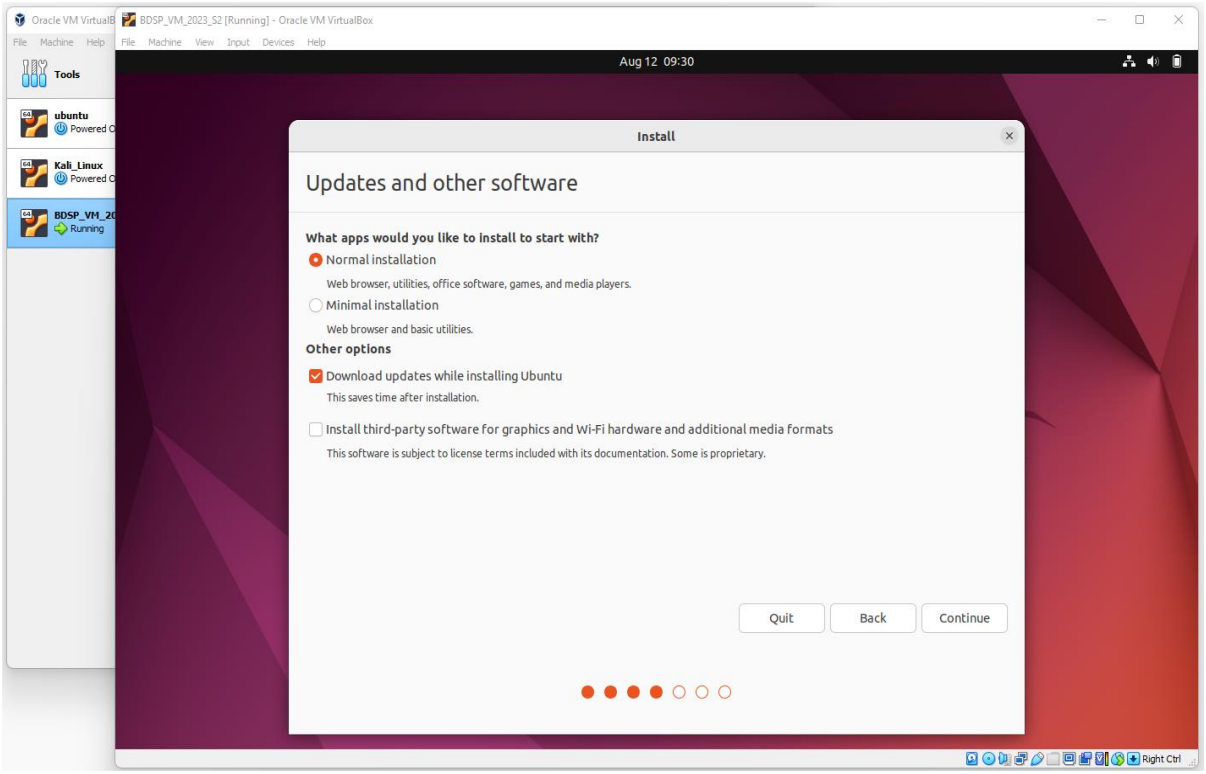
The installation process will start automatically after few seconds or Press Enter key of keyboard to start installation process immediately. Click on Cross button to close the notifications as shown by arrow in the above screenshot.

Click on the Install Ubuntu button.

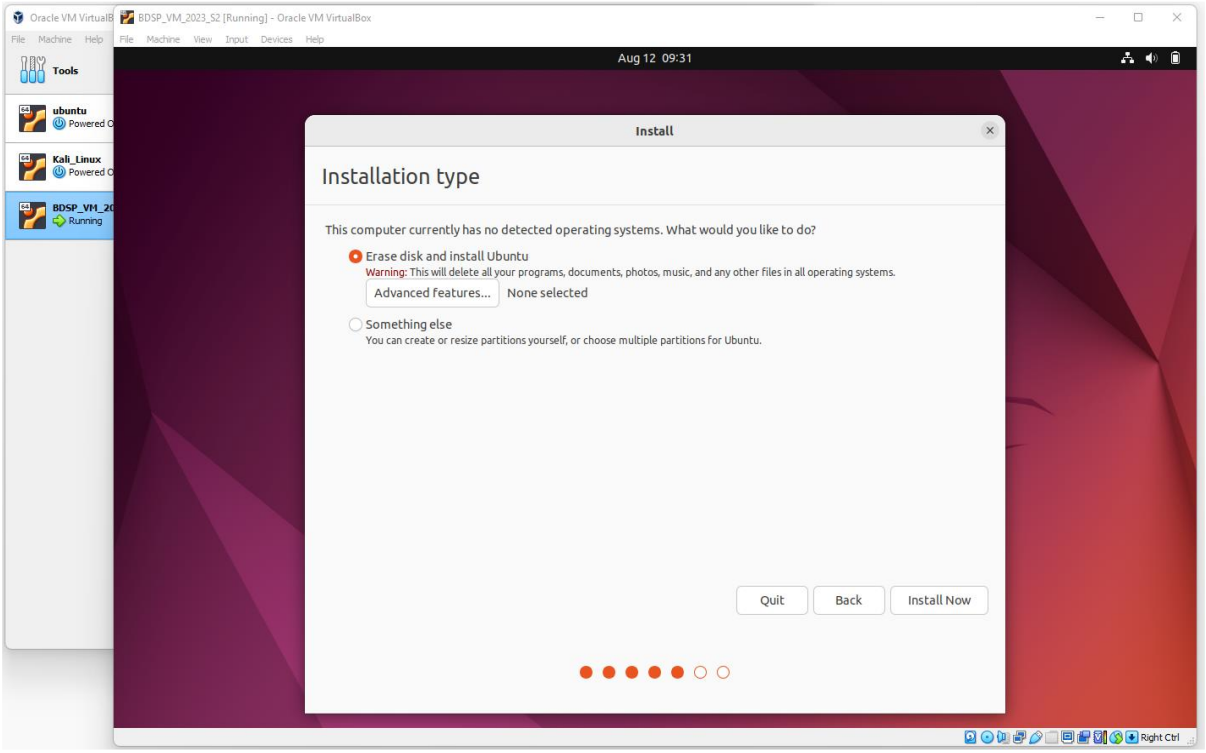


Choose the language option of your choice and then press the **continue** button

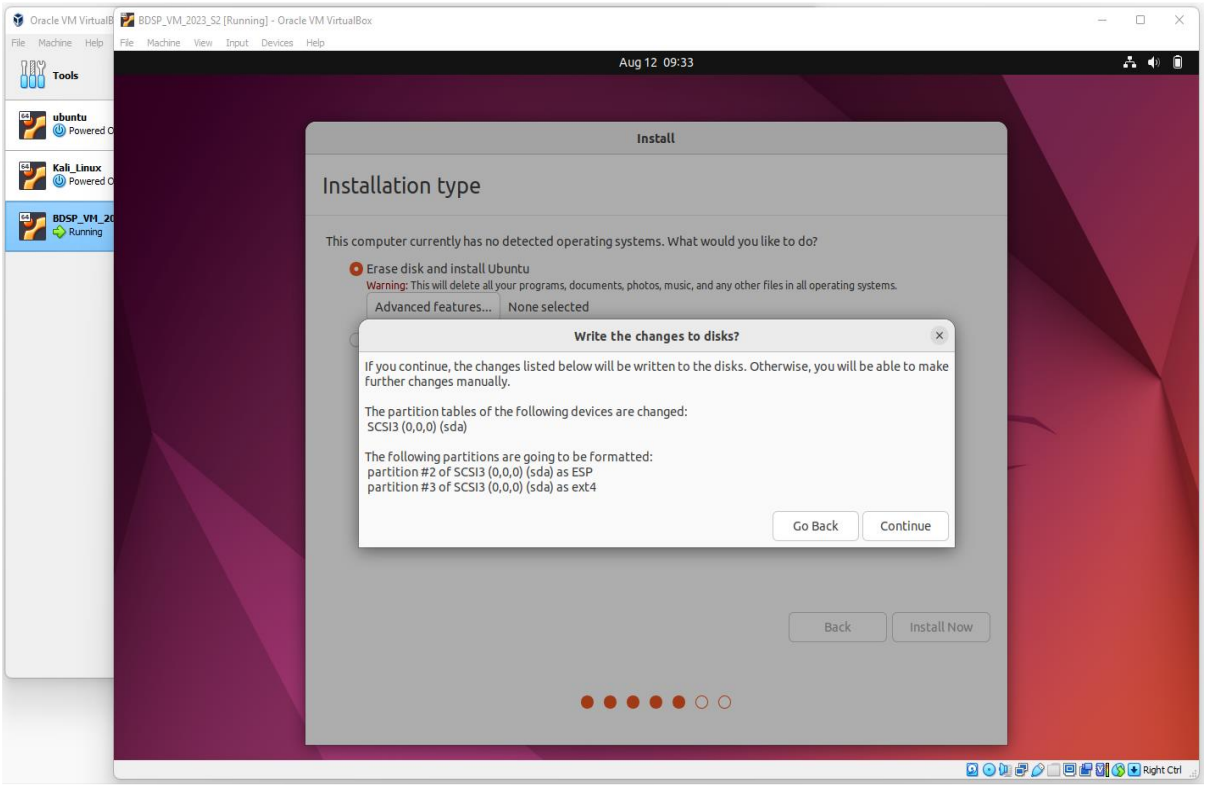




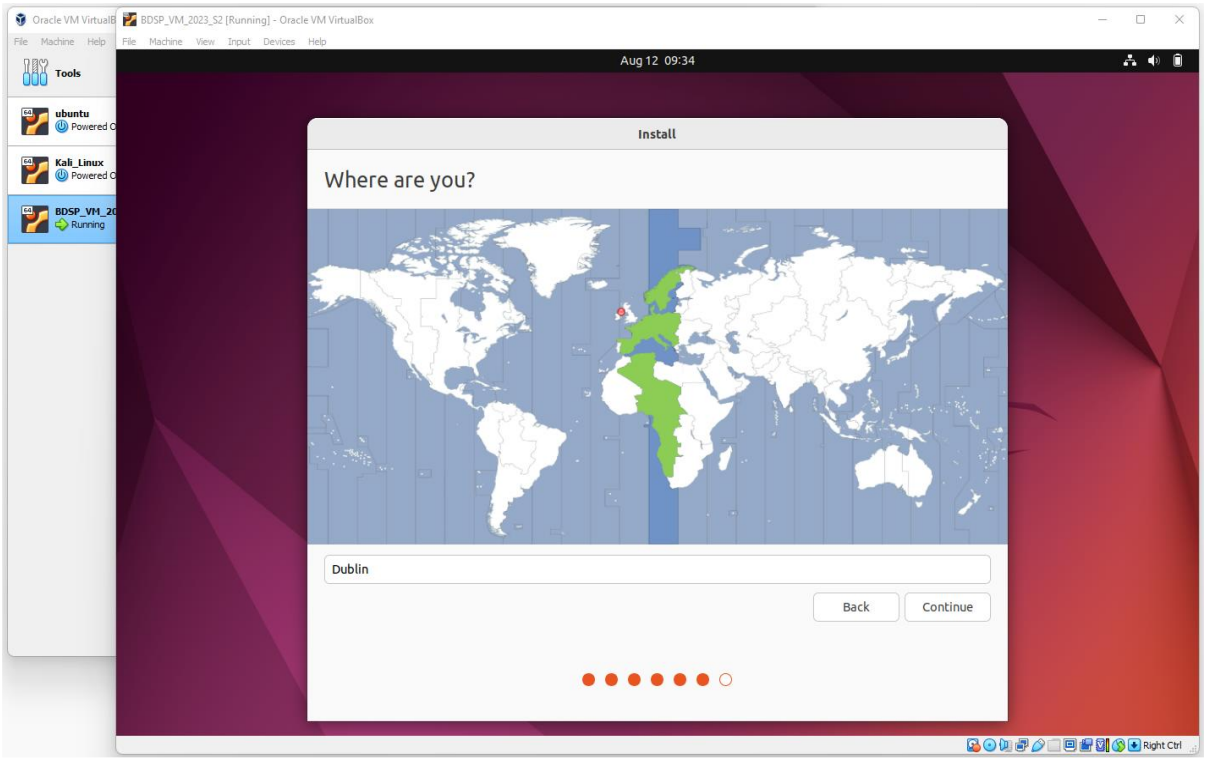
Press the **Continue** button (**Note:** Erase disk and install Ubuntu means that you have allocated 100 GB space for virtual machine)



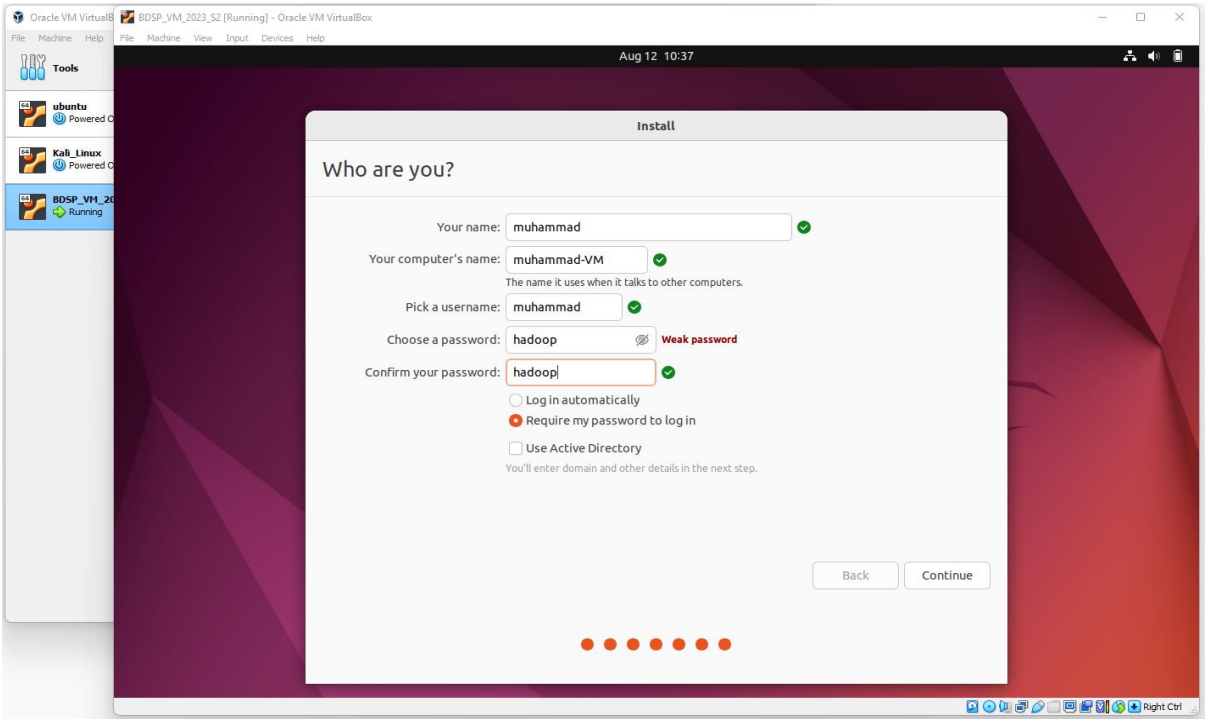
Press the **Install Now** button.



Press the **Continue** button

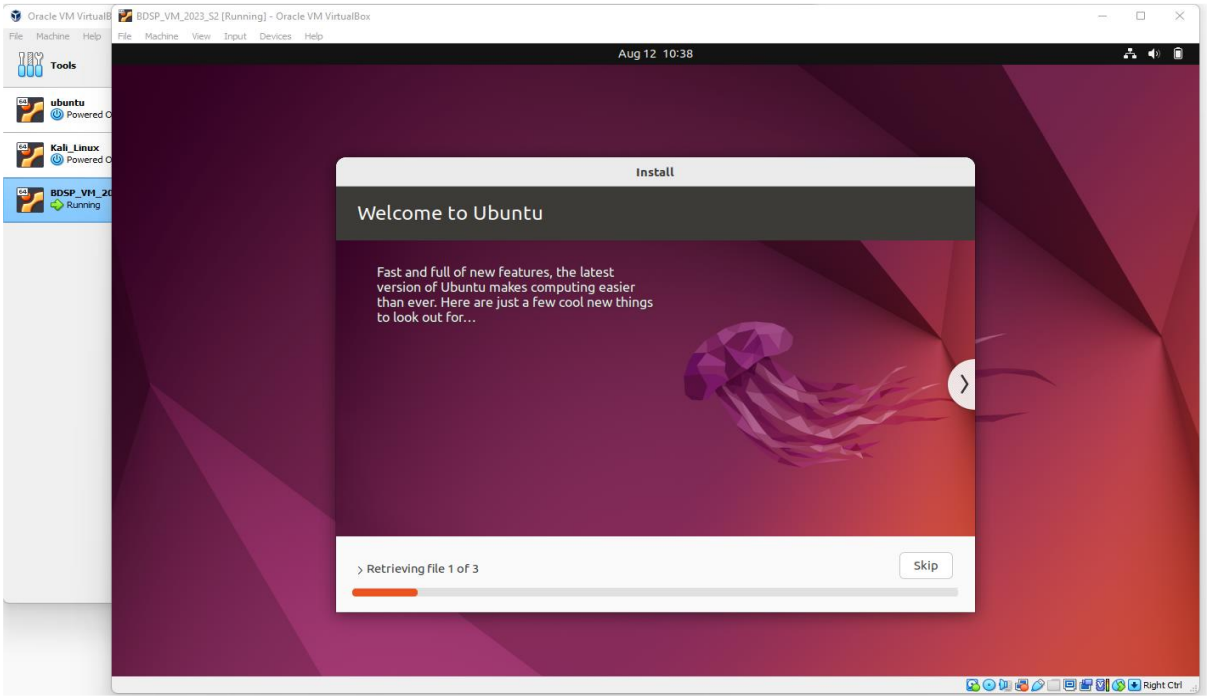


Use your own user name and password as shown in the next screenshot



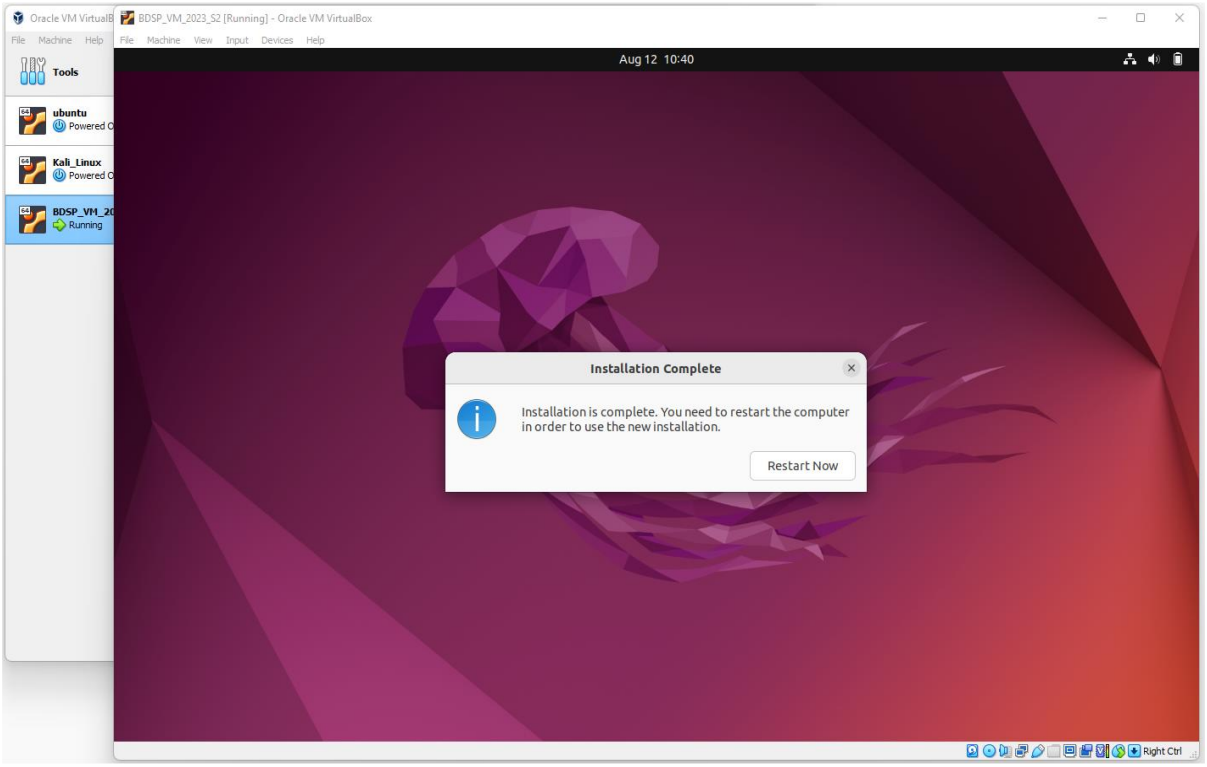
We set the password as **hadoop** and you can choose yourself. Please use small password as you will need to use several times during installation of different technologies in this module.

Press the **Continue** button

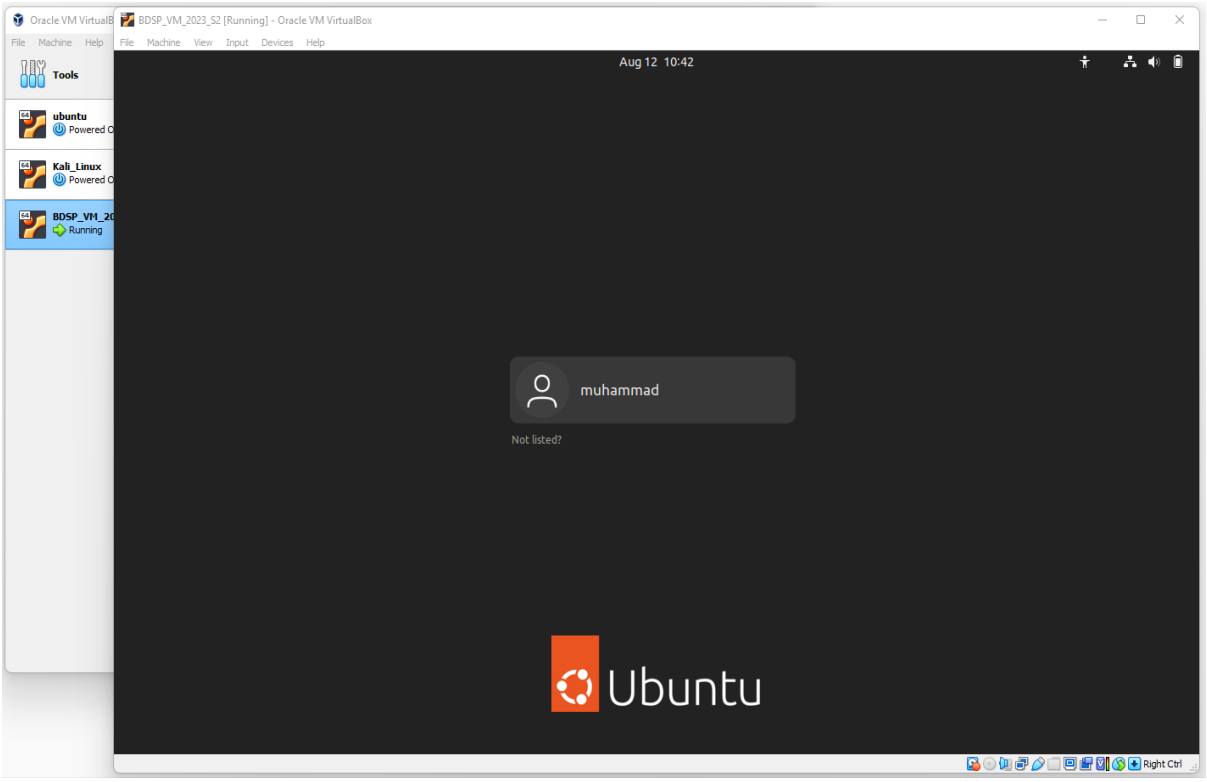


It takes few minutes to complete the installation of Ubuntu operating system depending on the Systems speed.

(viii) The installation process is started now and wait until the installation finish. You will get a message to restart your system as mentioned below.

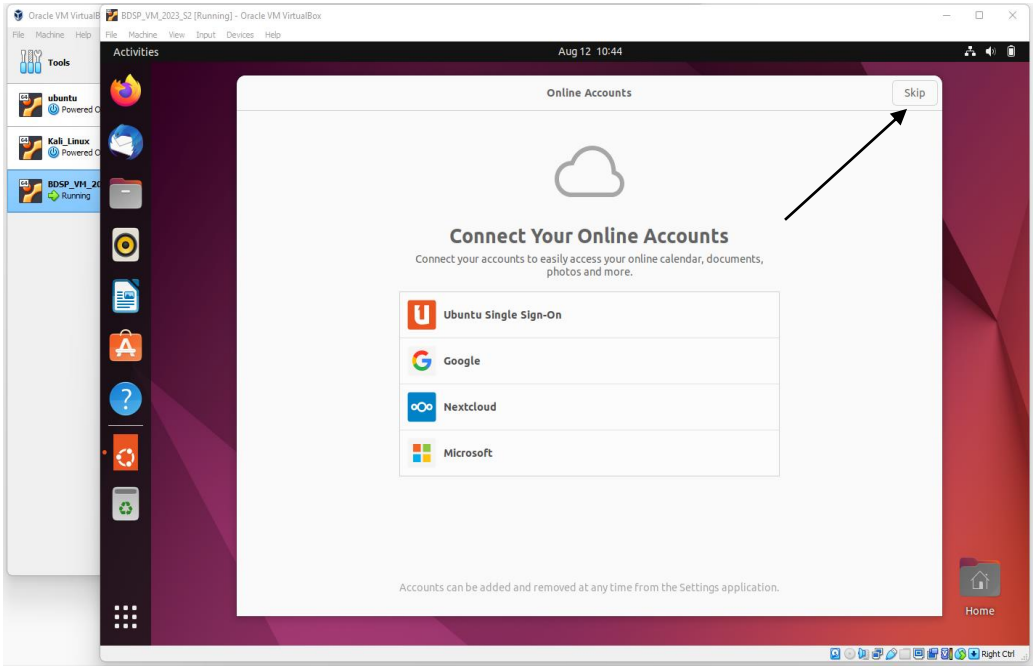


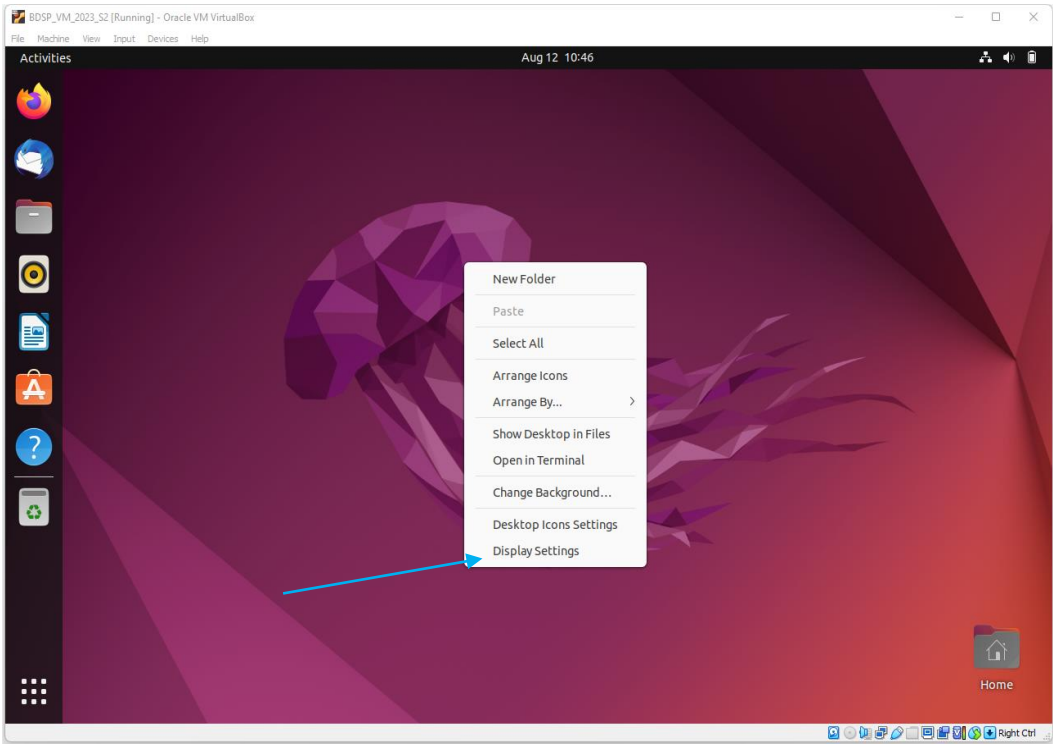
Press the **Restart Now** button. And press the Enter key using your keyboard.

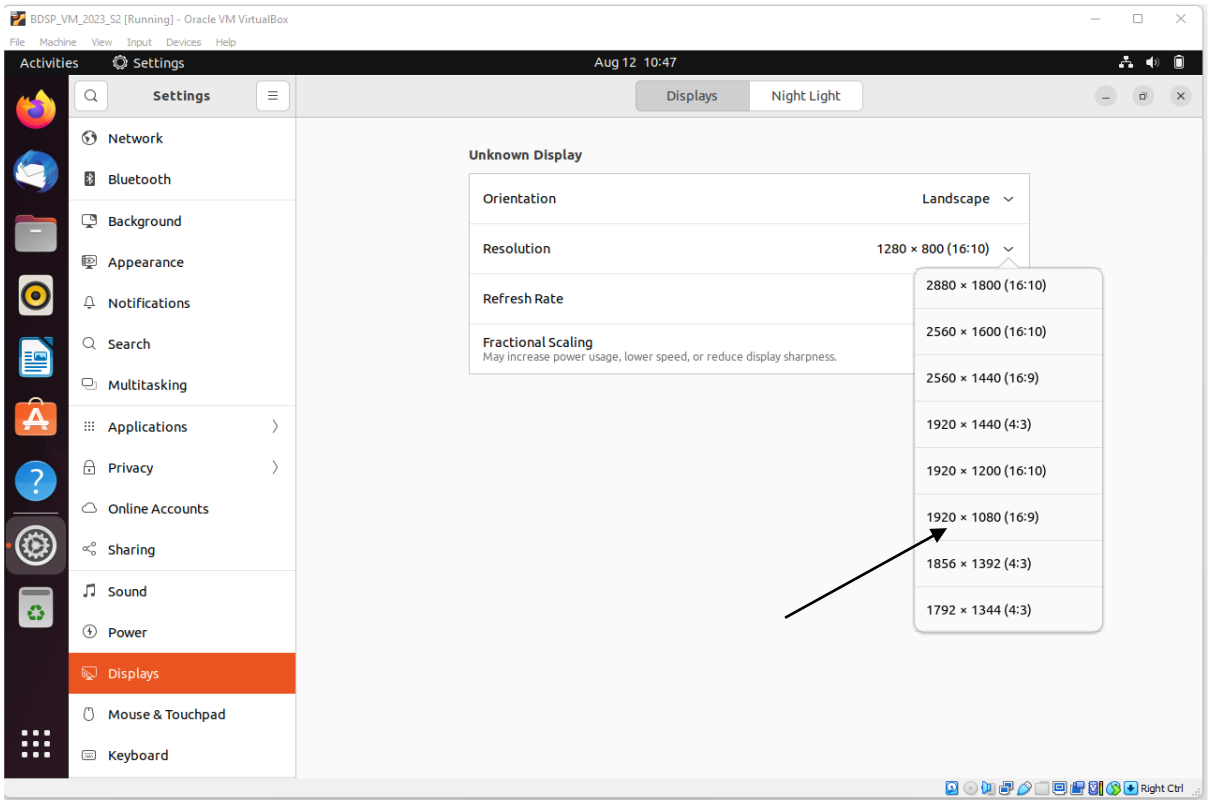


Click on the username and provide the password.

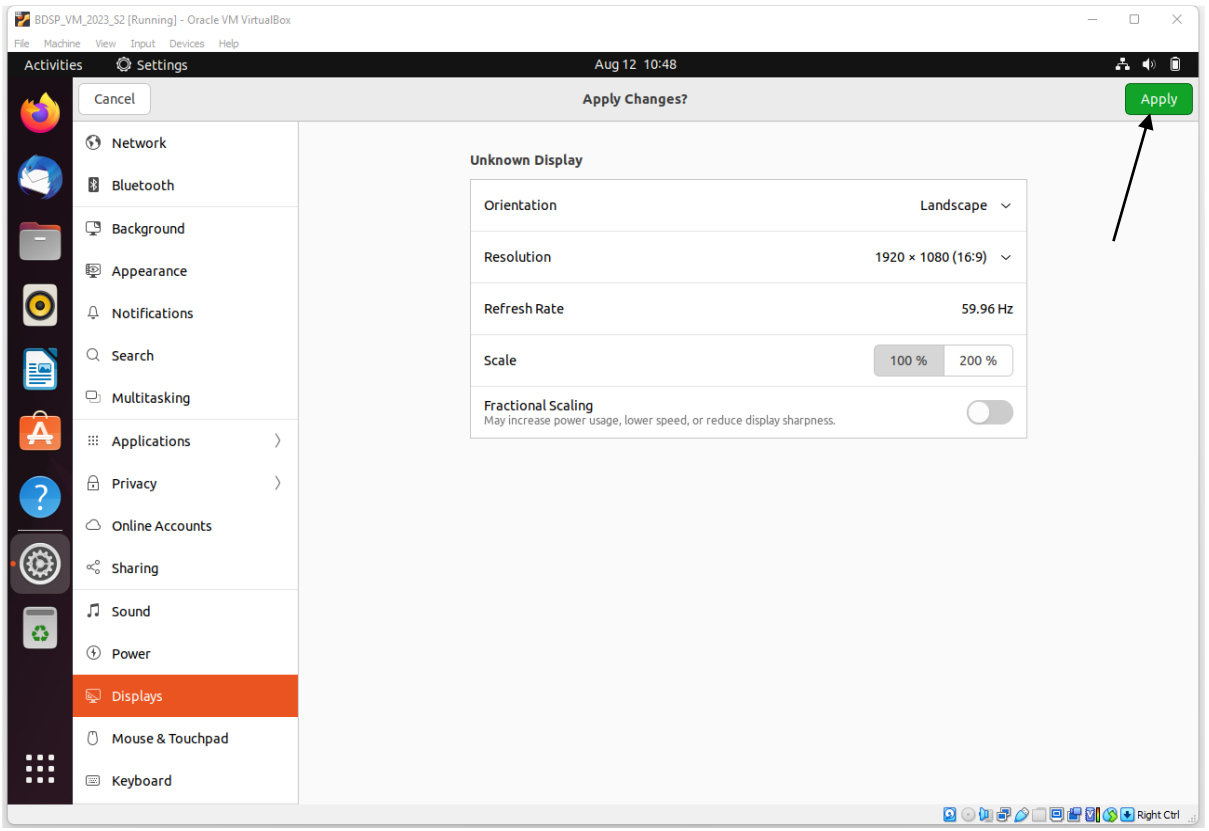
(ix) Press the skip button and then set the screen resolution to fix the screen size as mentioned below

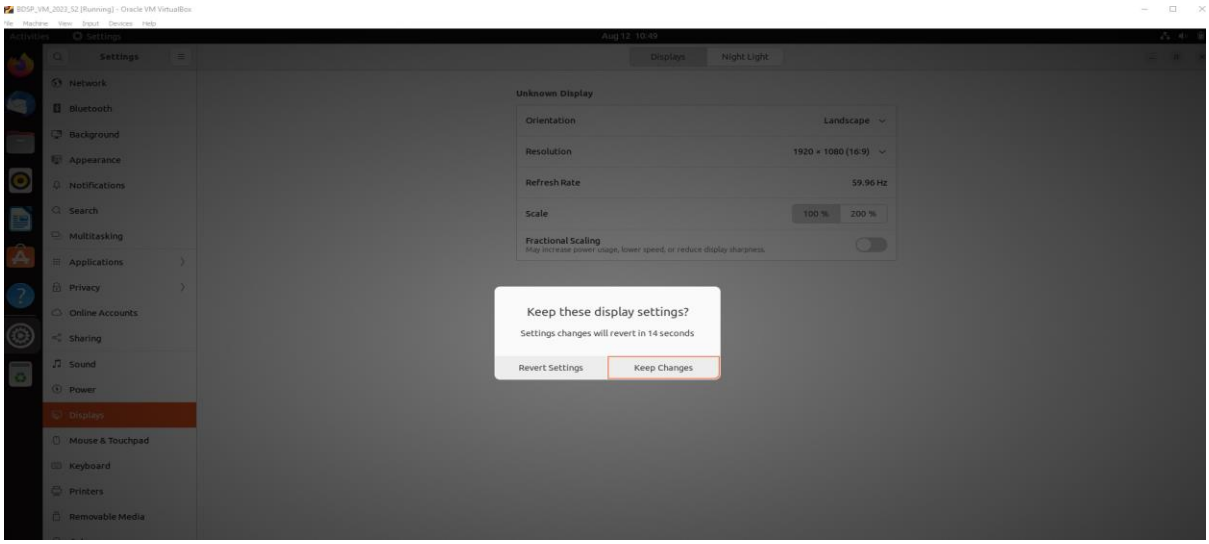






x) Click on the Apply button and then click on keep changes. If the below mentioned screen resolution is suitable to your laptop/ desktop, you can select based on your systems requirements.





The installation and set of VM is now ready for the module of Big Data and Storage Processing.

xi) you can start your VM for further work for Tutorial 1 exercise/ shell scripting.

Note: If you could not complete this exercise due to some reasons, please contact with your lecturer for further assistance in the next class.