Tutorial 0

Big Data Storage & Processing (BDSP)

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

1) Download and install Oracle Virtual box latest version based on your operating system (CCT College recommended Windows 10/ 11). The executable file for the VM download is available at the following link as

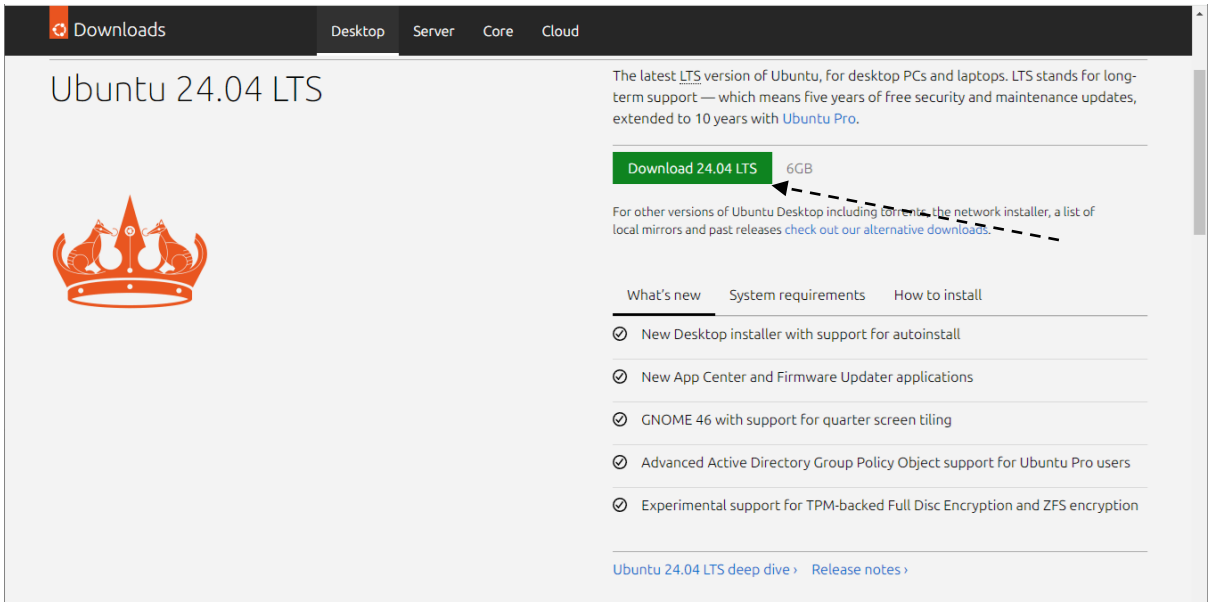
- https://www.virtualbox.org/wiki/Downloads

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 24.04 LTS) for virtual box from https://ubuntu.com/download/desktop, on your windows operating system.



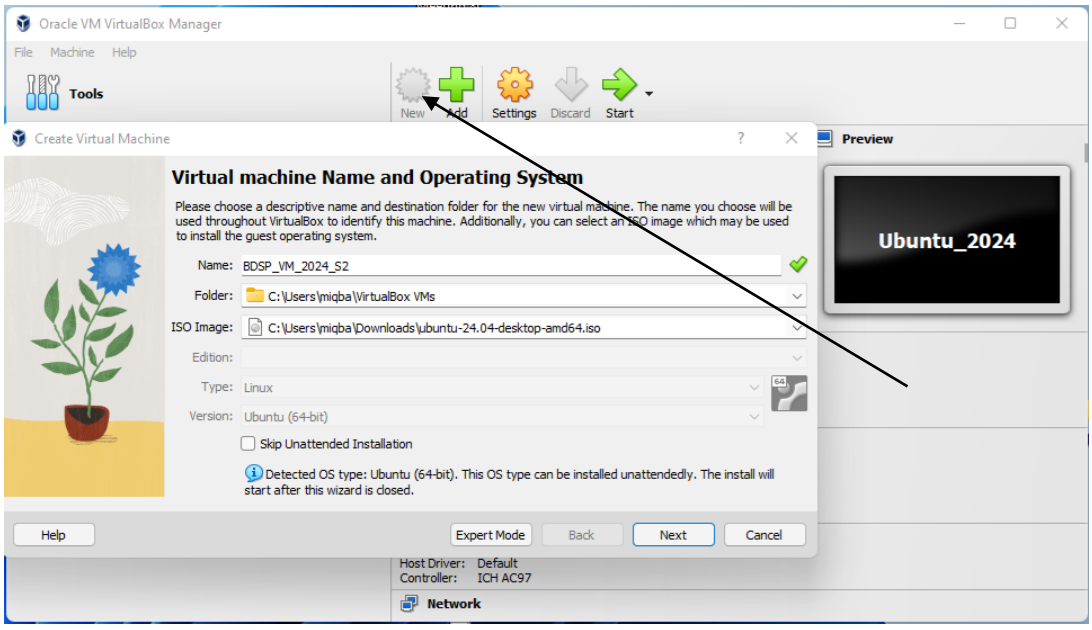
Your download will automatically start after one click and it takes some time depending on your internet speed, and the file size is approximately 6 GB.

2) Create a new virtual machine called BDSP_VM_2024_S2 and

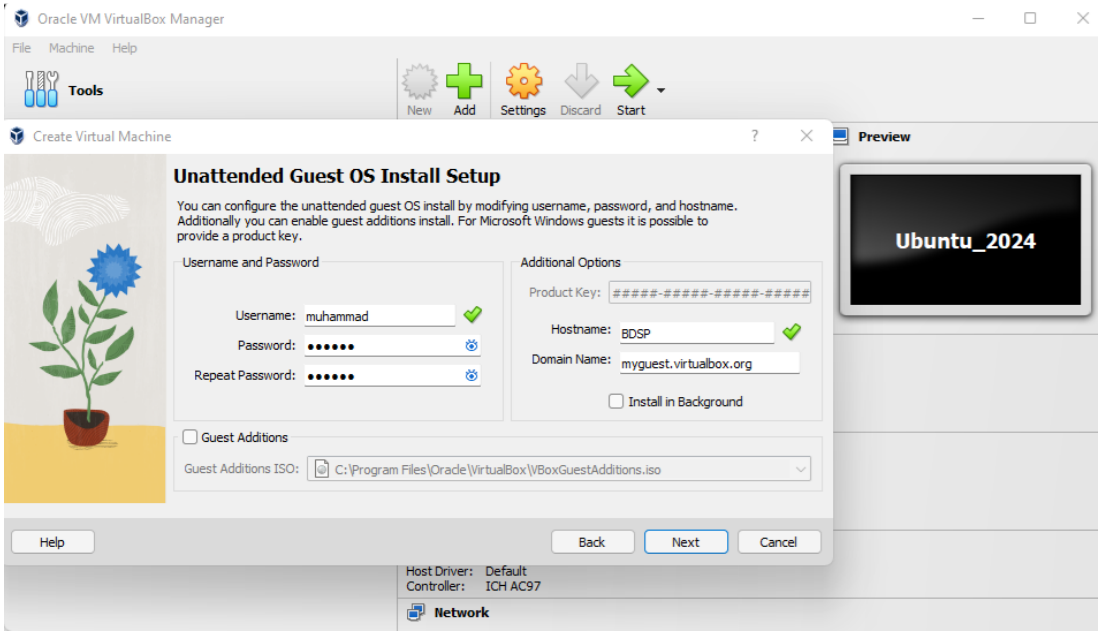
- Allocate at least 100 GB of hard disk space. Make sure that your system must have a sufficient space for Ubuntu operating system.
- At least 4GB RAM, 2 CPU cores and 32 RAM video memory.

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

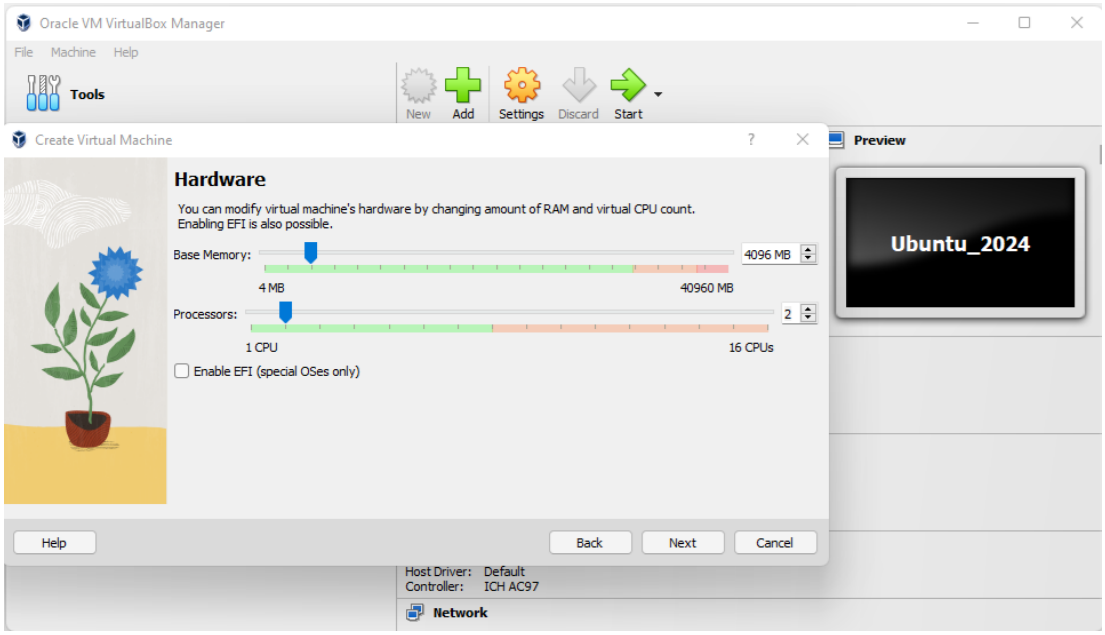
(i) To create a new virtual machine, click the "New" button and new window will pop up as shown below in the screenshot. Enter a machine name of your choice (we used "BDSP_VM_2024_S2") and select the ISO image of Ubuntu 24.04 (6 GB) as you downloaded in the previous step.



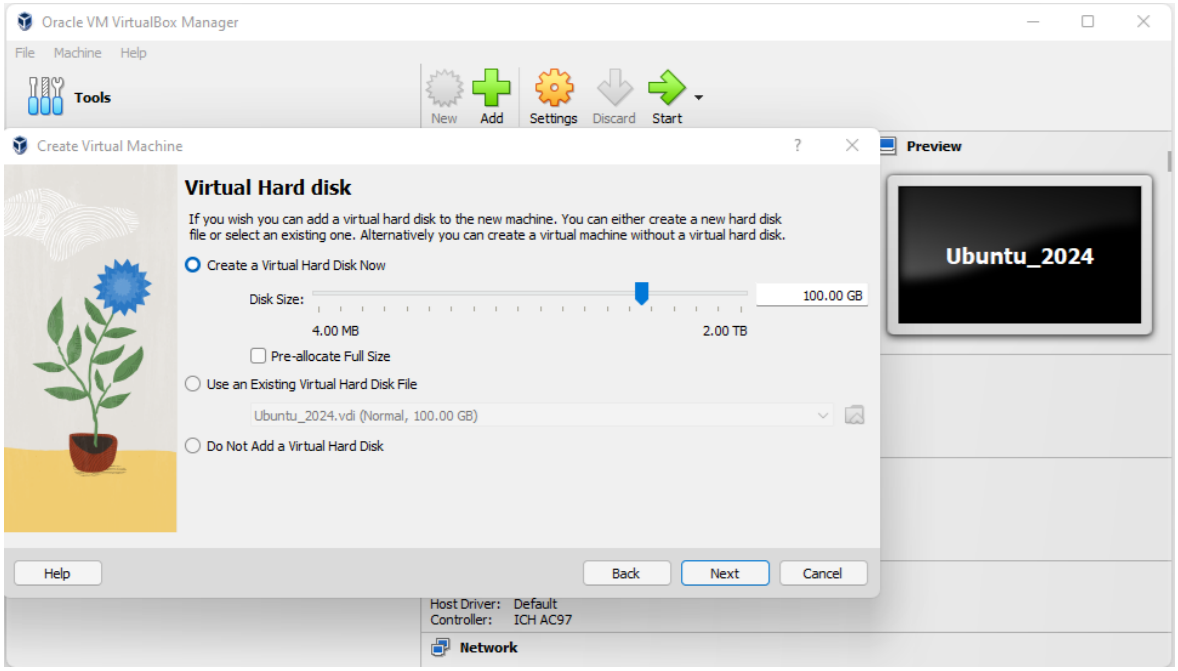
(ii) Provide simple **username** and **password** of your choice and update the hostname in case of any errors.



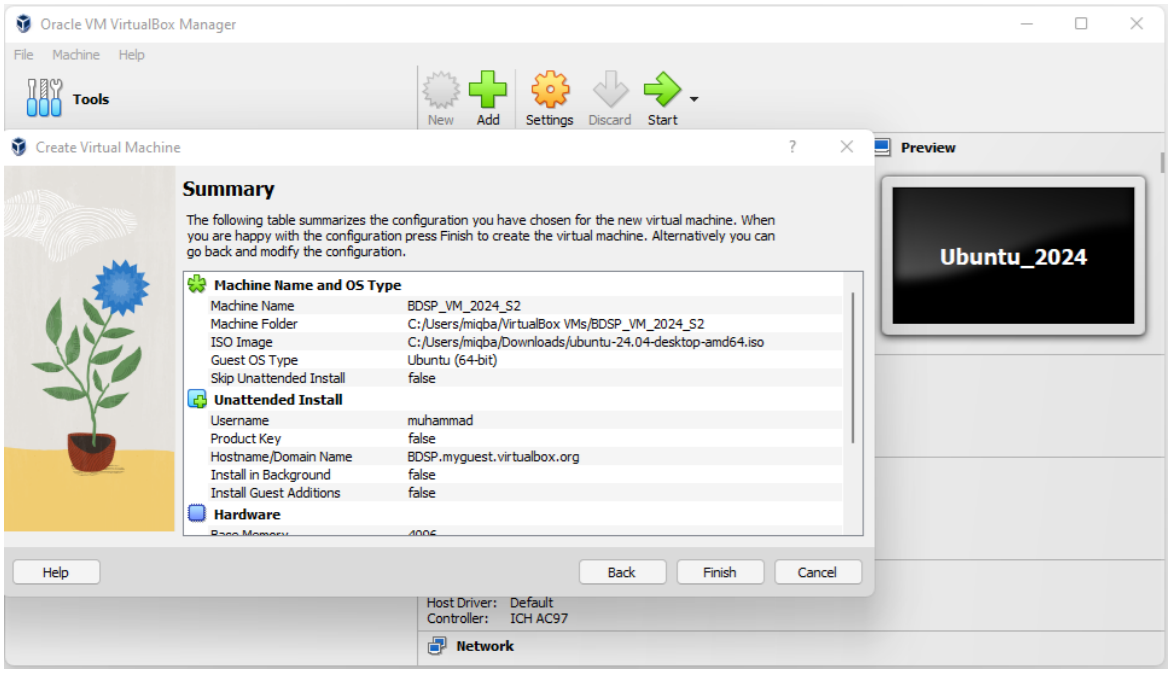
and click on next button. Set the ram 4 GB for Ubuntu 24.04 LTS and 2 Processors as shown below.



(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.

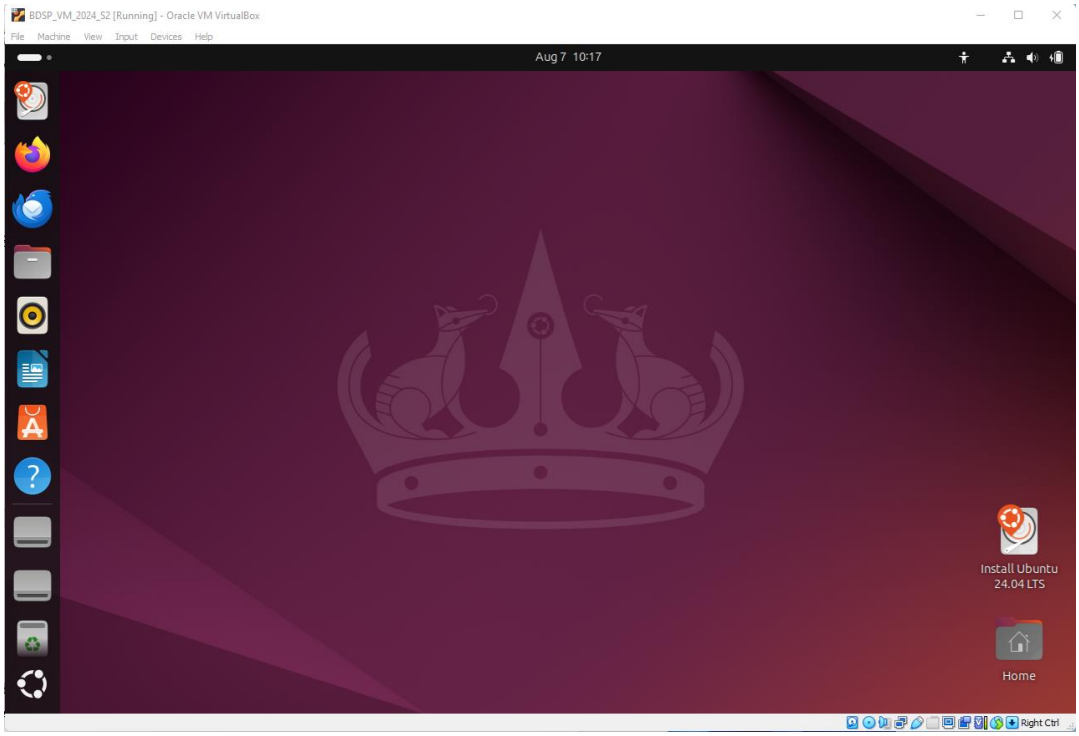


(iv) All setting are completed and the summary of installation is shown below.

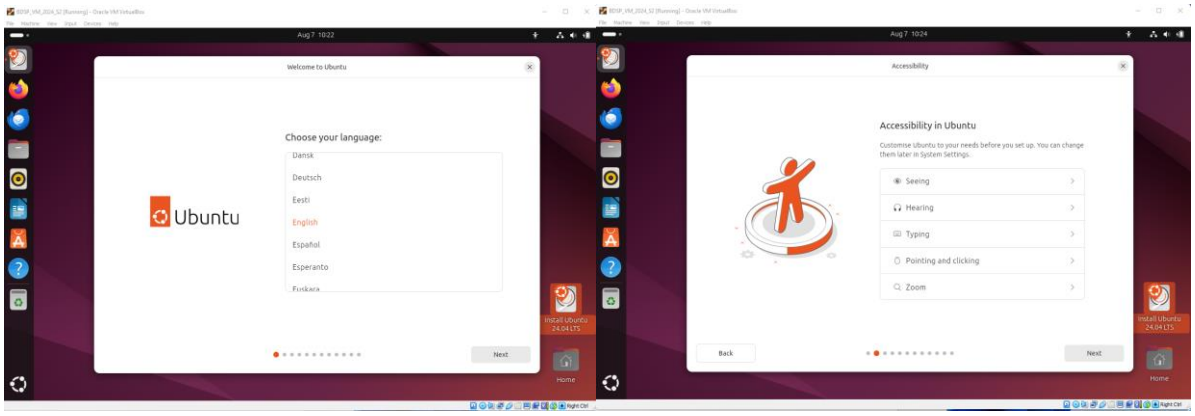


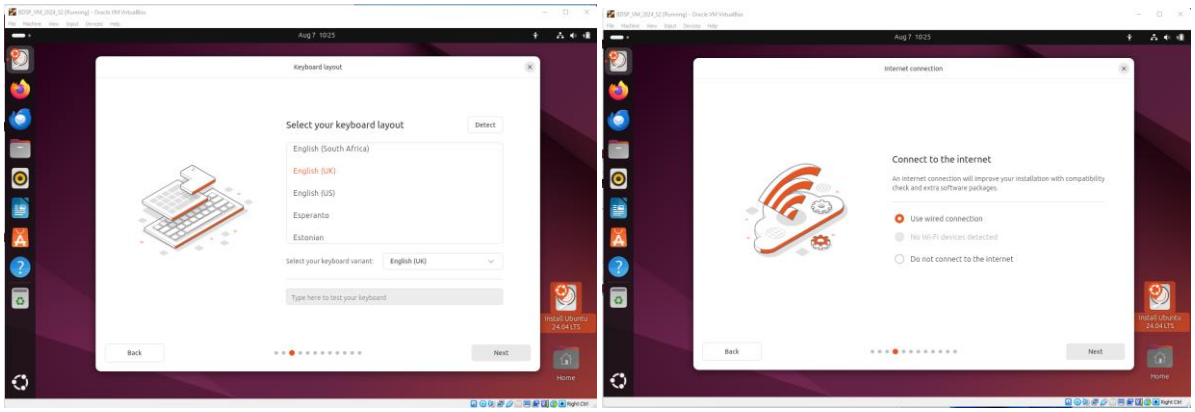
Click on the **Finish** button to complete this process.

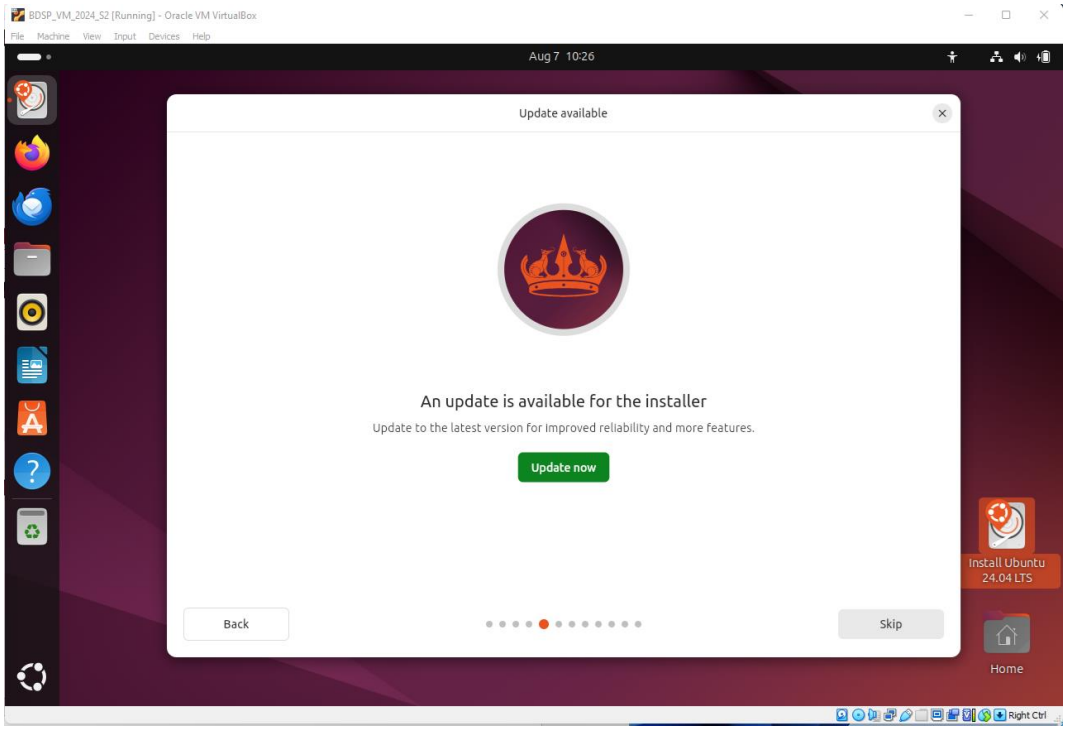
(v) The virtual machine is created, and Ubuntu installation process will be started automatically after this step. You will get the following screenshot as mentioned below



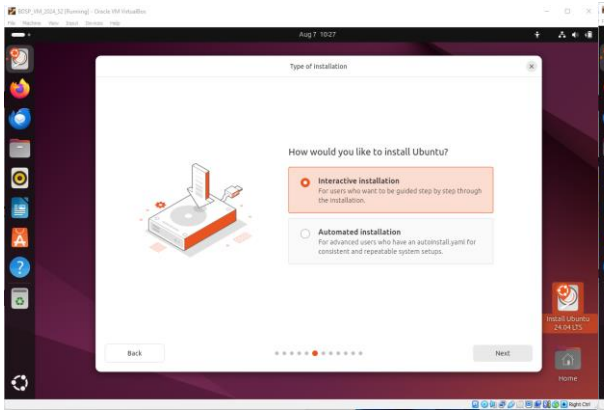
Click on the icon on the lower right side of the screen “Install Ubuntu 24.04 LTS” and it will ask some options for Ubuntu OS for your choice. Please check carefully the options selected in the screenshots.

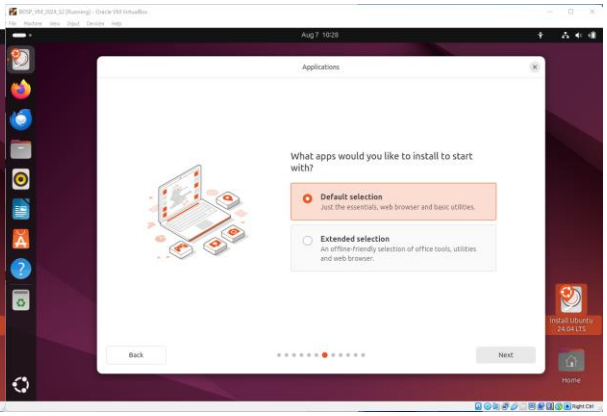


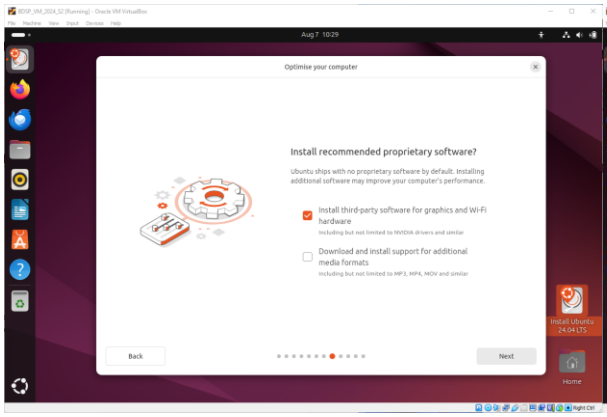


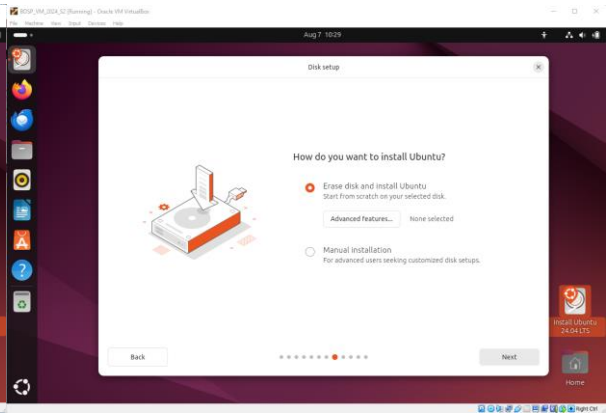


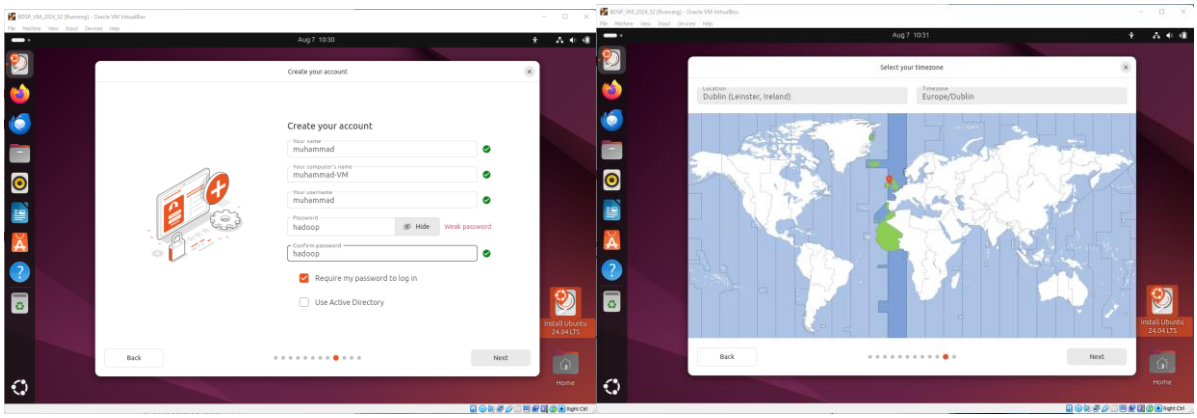
(vi) Skip for the update now and we will update during the installation of technologies.



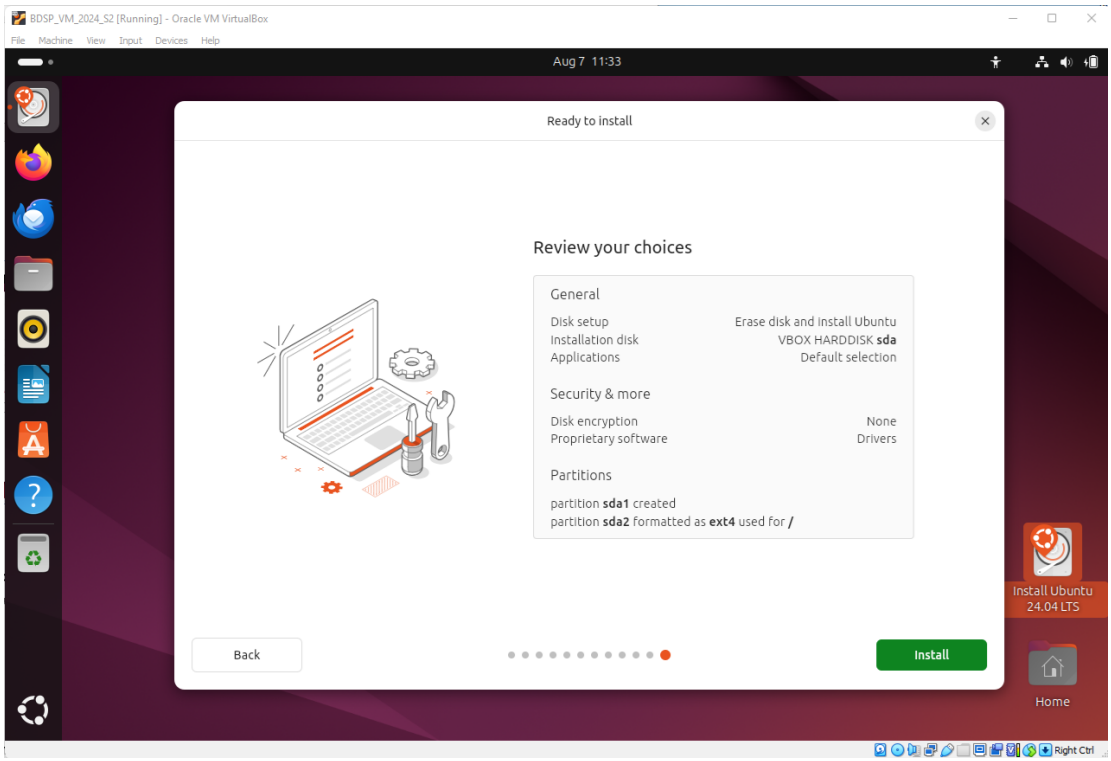




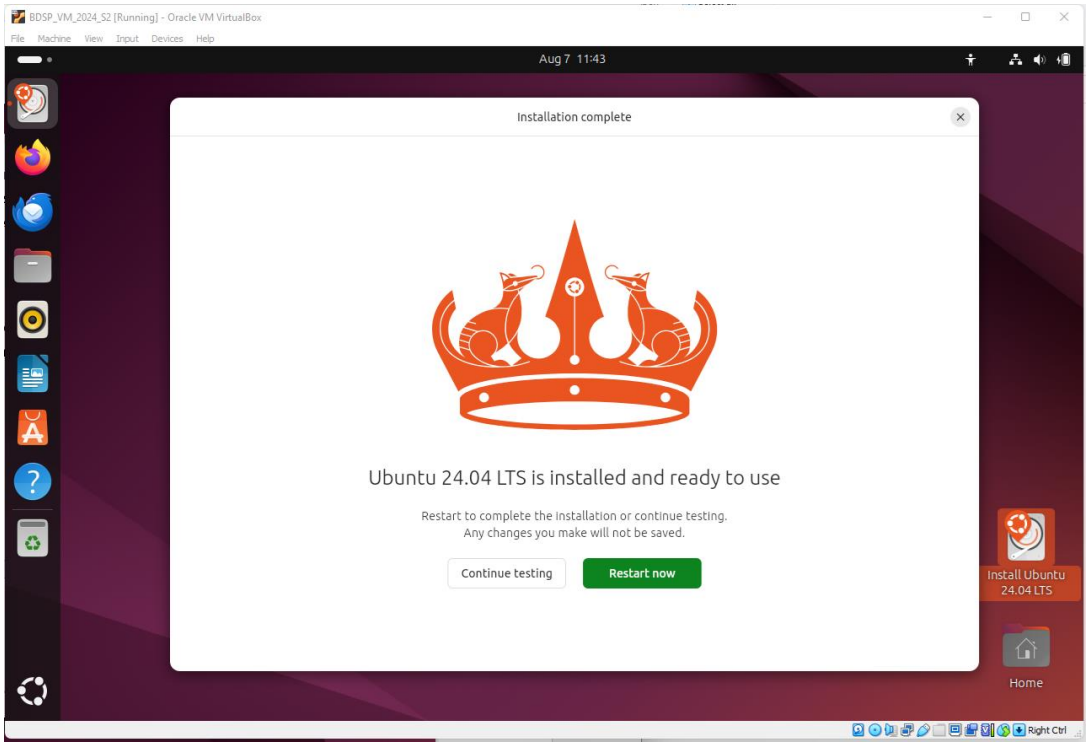




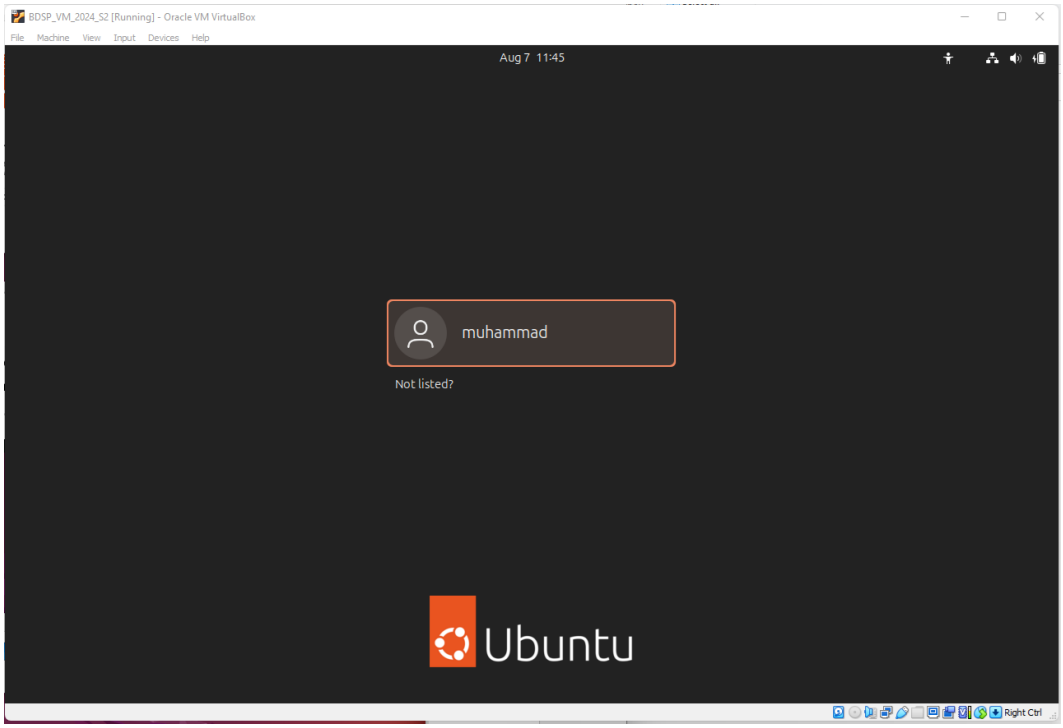
(vii) Use your own username and password as shown in the screenshot. We set the password as **hadoop** and you can choose yourself. Please use small password as you will need to use several times during installation of different technologies in this module.



After selecting some options and leaving the rest as default as shown in the above summary screenshots, you can begin the installation. The process will take some time to complete the installation of Ubuntu operating system depending on the System resources and speed. You will get the following screen after completion of the installation process.



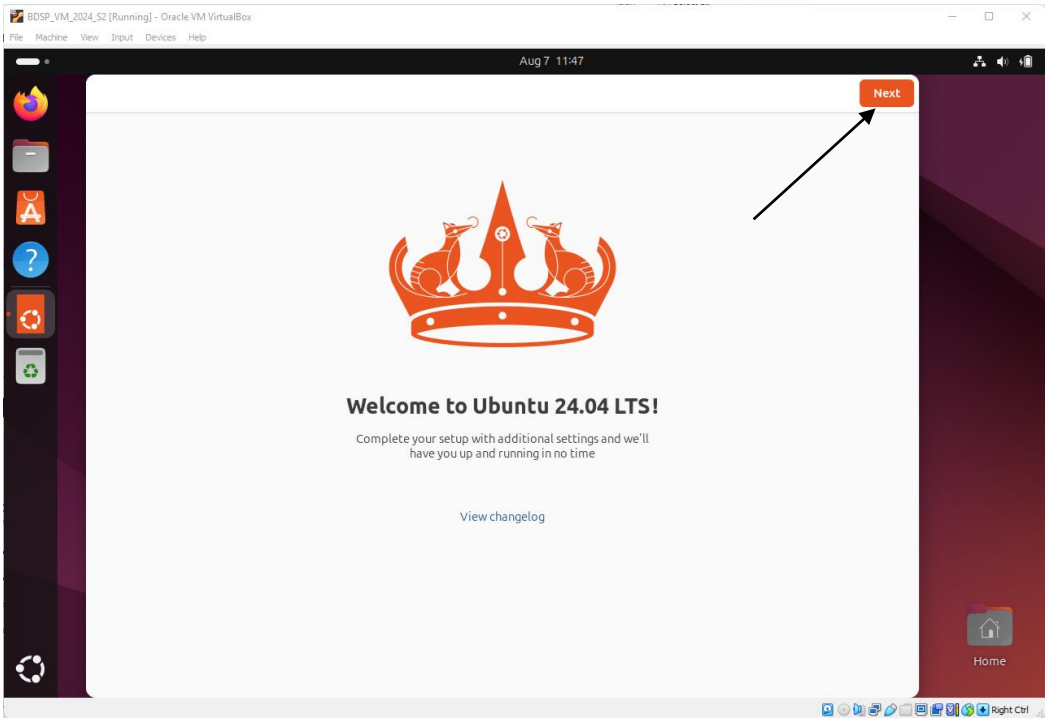
Press the Restart now button and the following screen appears after 30 seconds approximately.

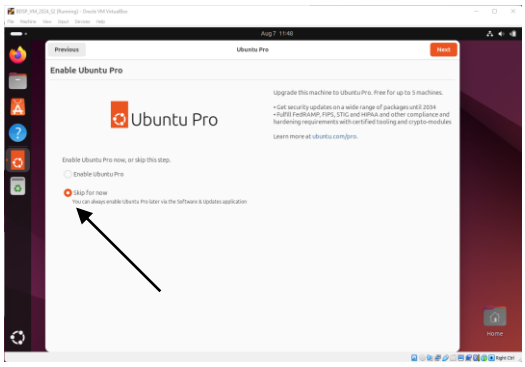


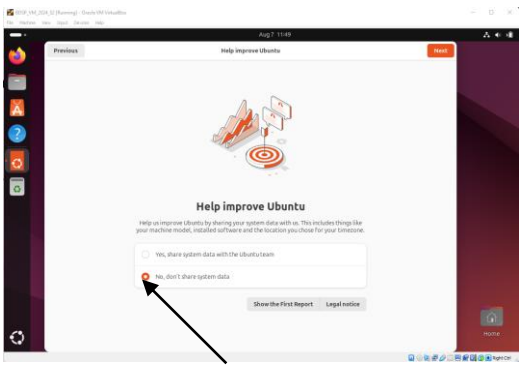
Click on the username and provide the password as you set. We set as “hadoop”.

If the system restart takes too long, power off the Oracle virtual machine by clicking 'Restart Ubuntu OS' window and then start it again.

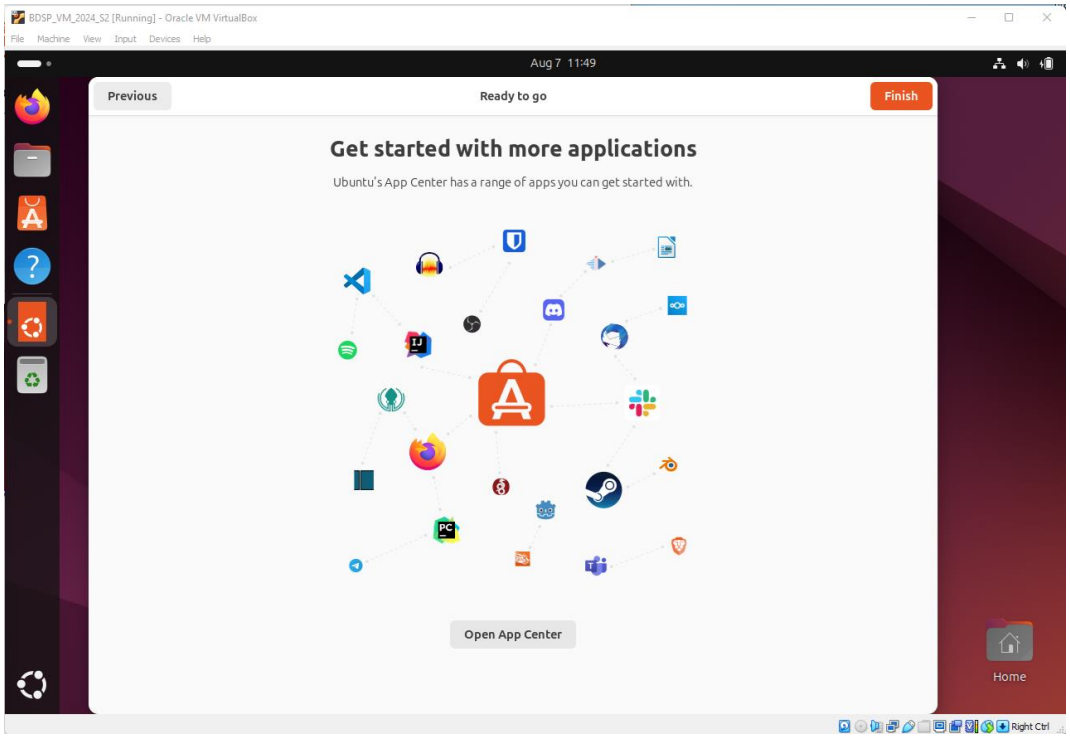
(viii) Press the Next button and then set the screen resolution to fix the screen size as mentioned below



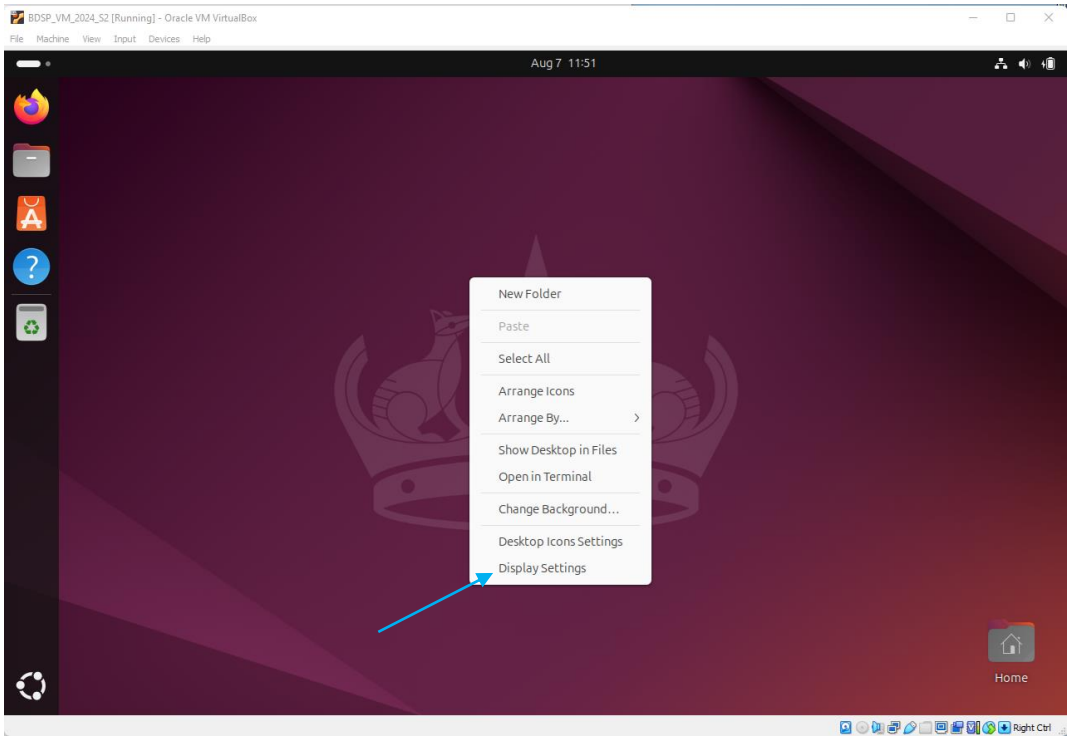


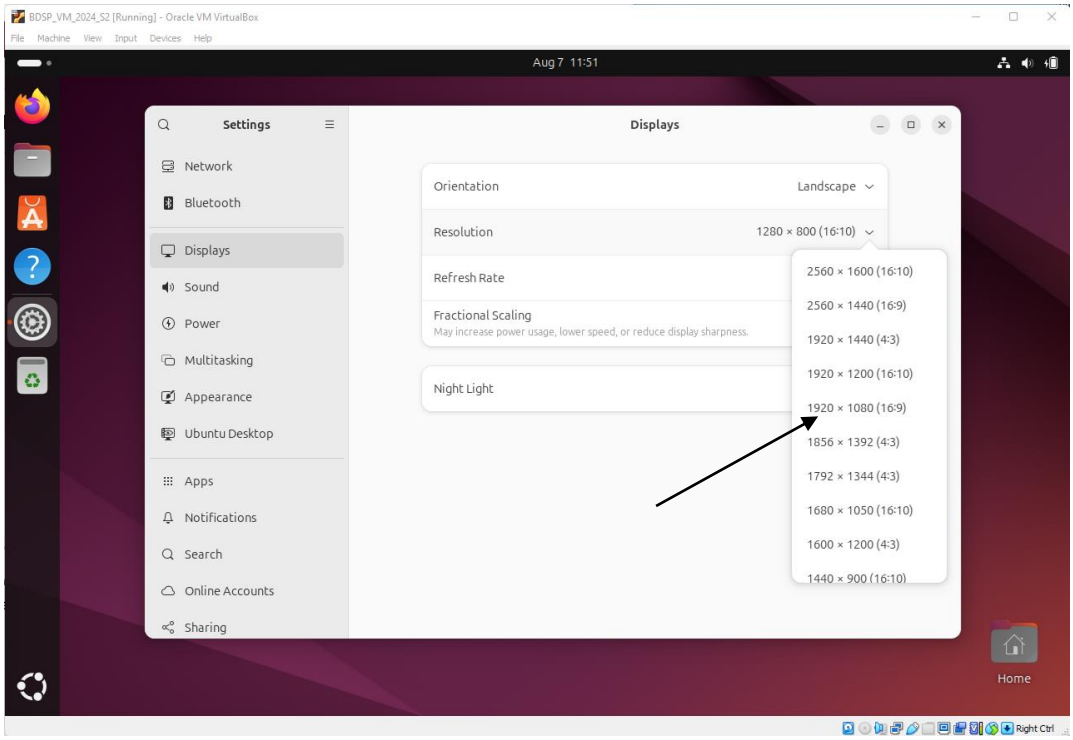


Check the next screenshot

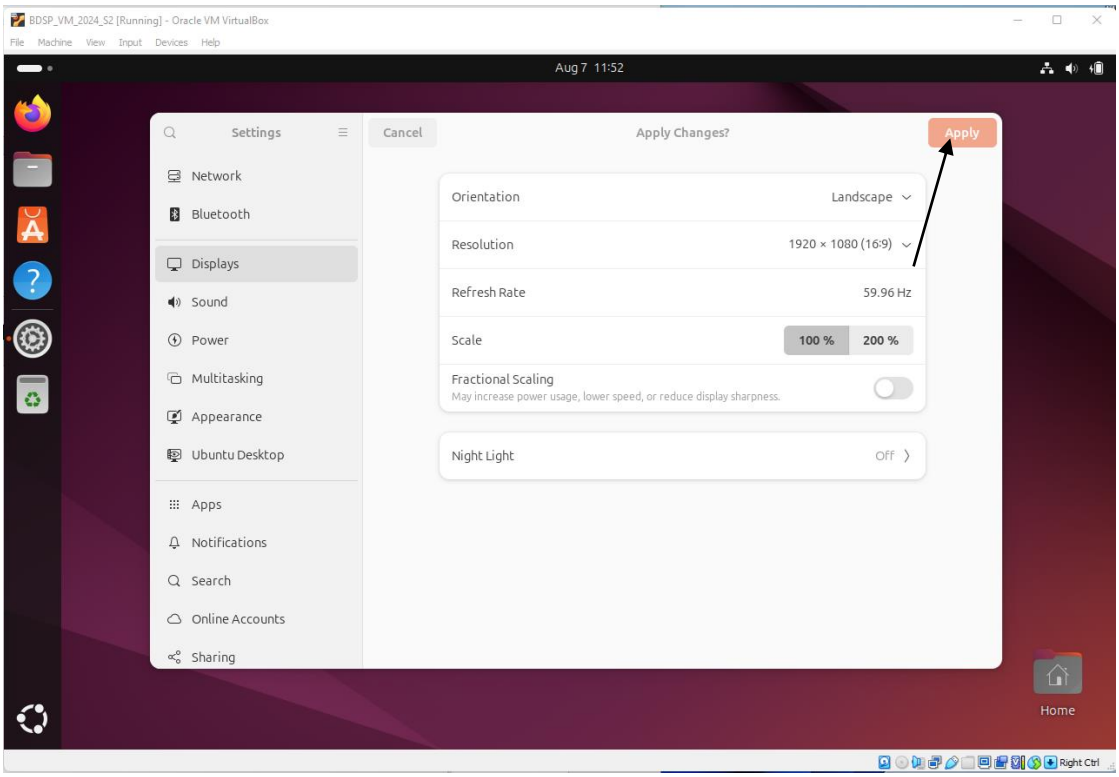


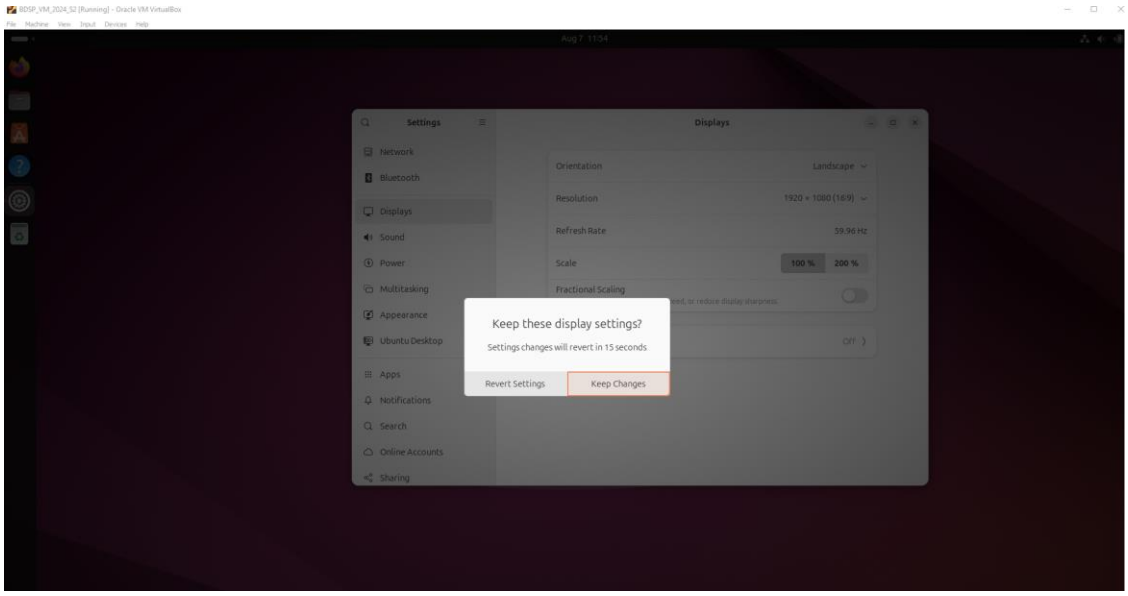
Change the screen resolution if you woule like to change the size of the screen.





ix) 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.

x) 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.