

**RAJALAKSHMI ENGINEERING COLLEGE**  
**AN AUTONOMOUS INSTITUTION**  
**Affiliated to ANNA UNIVERSITY**  
**Rajalakshmi Nagar, Thandalam,**  
**Chennai-602105**



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**ENGINEERING COLLEGE**  
An AUTONOMOUS Institution  
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**DEPARTMENT OF COMPUTER SCIENCE**  
**AND ENGINEERING**

**CS19741 CLOUD COMPUTING LABORATORY**  
**ACADEMIC YEAR:2024-2025 (ODD)**

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<b>Ex.No</b>	<b>List of Experiments</b>	<b>PageNo.</b>	<b>Signature</b>
	<b>VIRTUALIZATION</b>		
<b>1</b>	Create and run a virtual machine in your system using VMWare Workstation pro		
<b>2</b>	Virtualize a machine and check how many virtual machines can be utilized at a particular time		
<b>3</b>	Create a VM clone and attach a virtual block to the cloned VM		
	<b>PUBLIC CLOUD</b>		
<b>4</b>	Develop a simple email automation service using Salesforce		
<b>5</b>	Launch a cloud instance using a public IaaS cloud service like the IBM cloud		
<b>6</b>	Work with a public cloud service such as the ServiceNow/MS Azure		
	<b>CLOUD SIMULATION</b>		
<b>7</b>	Model a cloud environment using CloudSim		
<b>8</b>	Implement RoundRobin task scheduling in both TimeShared and SpaceShared CPU assignment		
	<b>HADOOP – MAP REDUCE</b>		
<b>9</b>	Setup a single node Hadoop cluster and show the process using WEB UI		
<b>10</b>	Demonstrate the MapReduce programming model by counting the number of words in a file		
<b>11</b>	Implement the MaxTemperature MapReduce program to identify the year wise maximum temperature from sensor data		

**Ex. No. 1****INSTALLATION OF VIRTUAL MACHINE IN VIRTUAL BOX****AIM:**

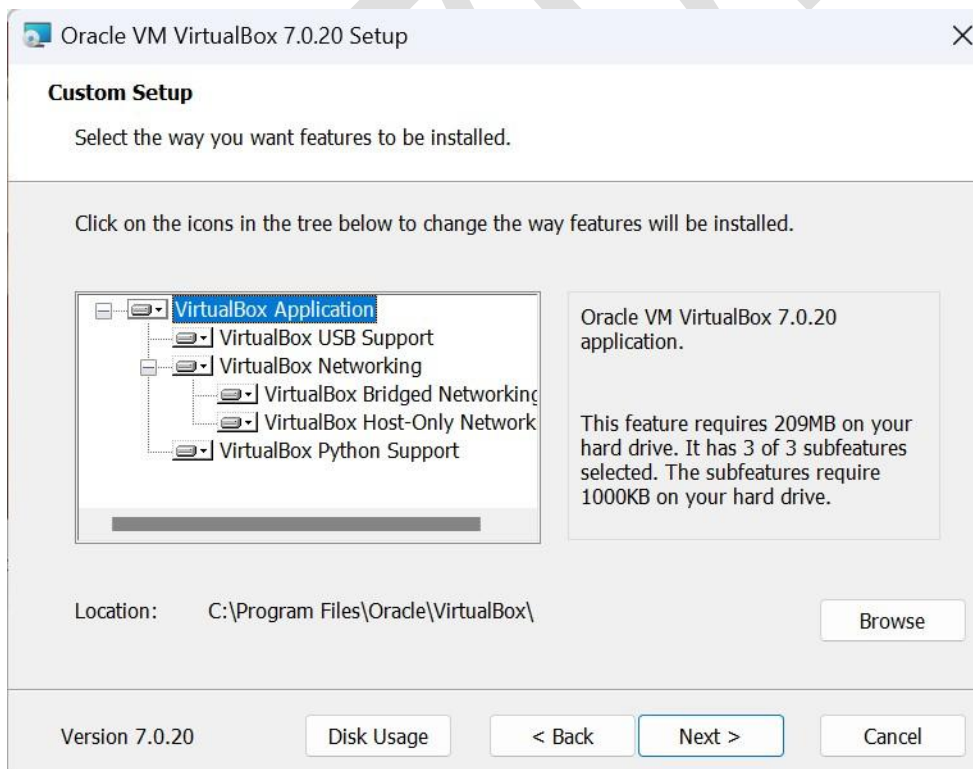
To configure a Virtual Machine using Virtual Box and Launch to execute a simple program

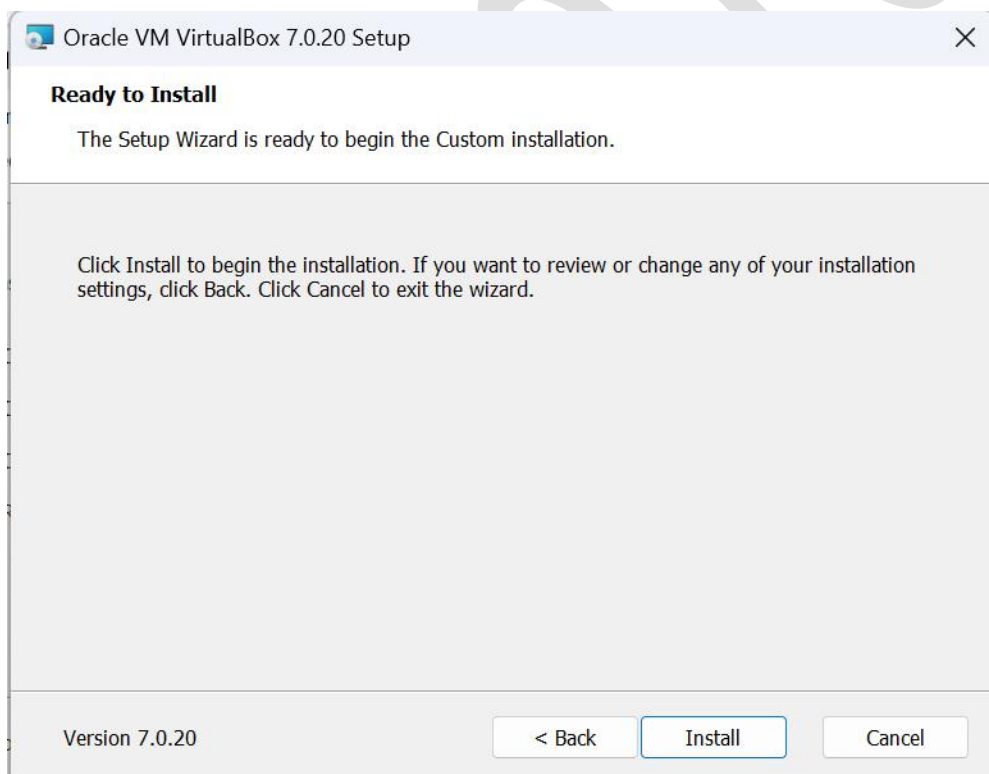
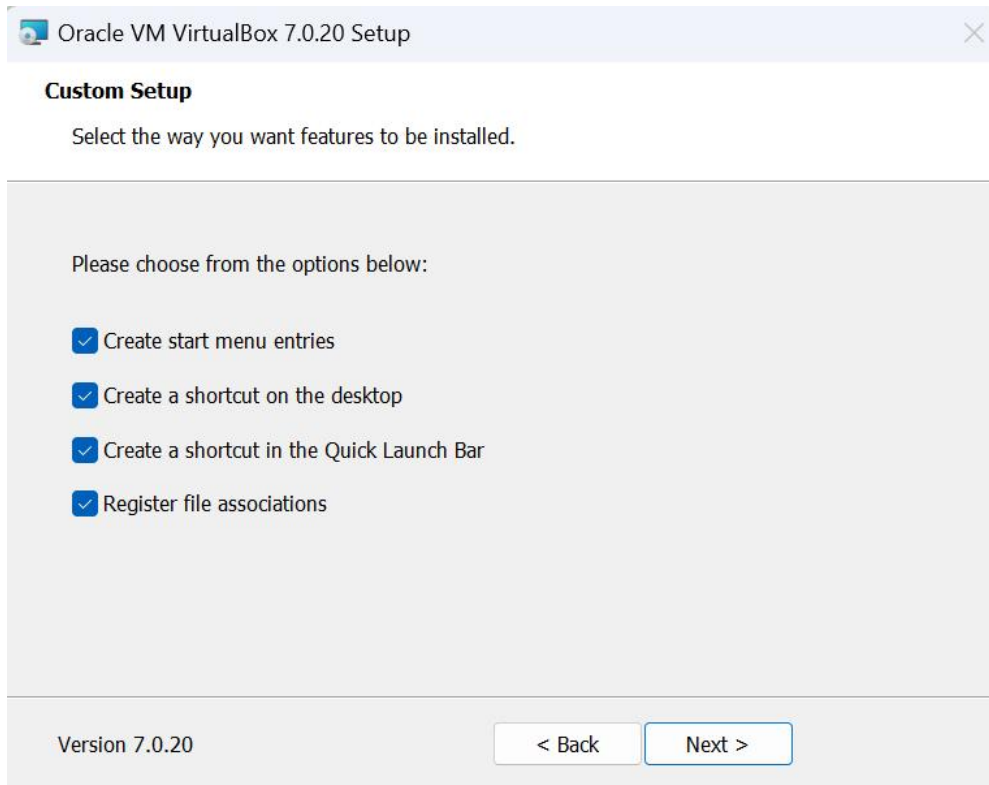
**PROCEDURE:**

1. Launch a Virtual Box
2. Create new virtual machine
3. Customize the set-up
4. Set username and password
5. Browse for .iso file of an operating system
6. Configure the hardware capacity
7. Finish and power on the VM
8. Install C or PYTHON OR JAVA Compiler and execute a simple program

**OUTPUT:**

Download and run the VirtualBox installer

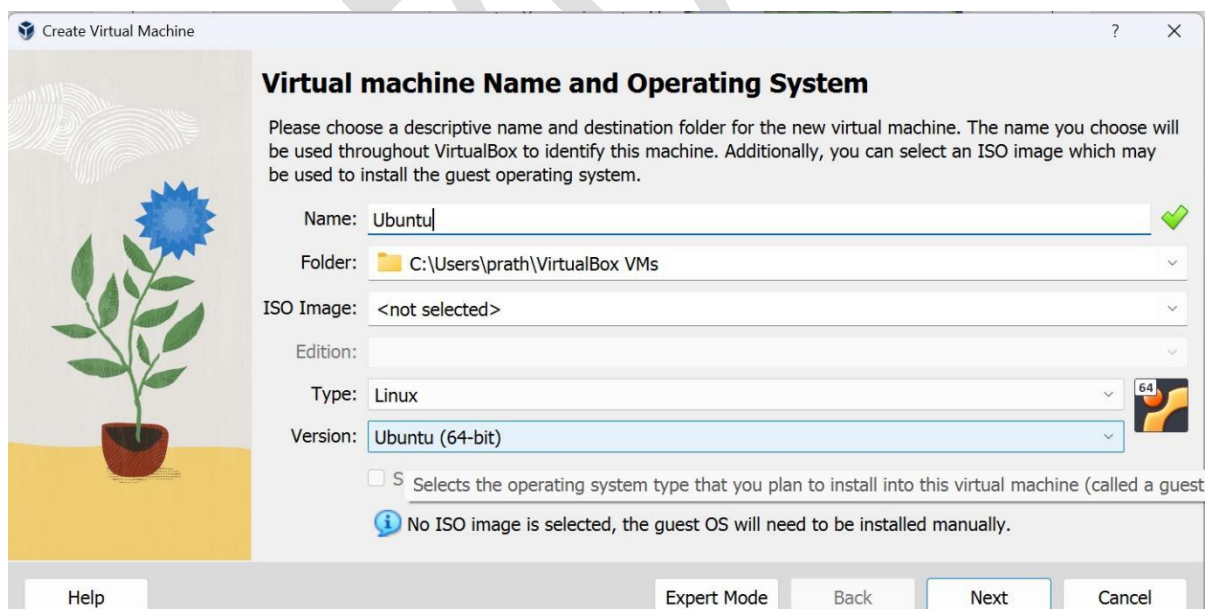


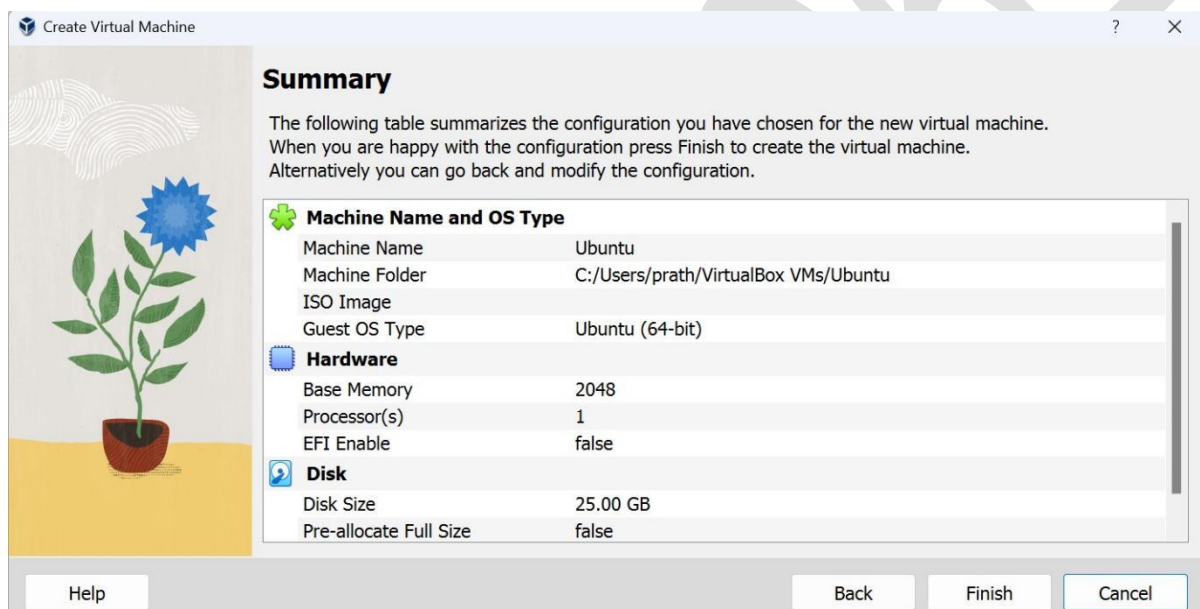
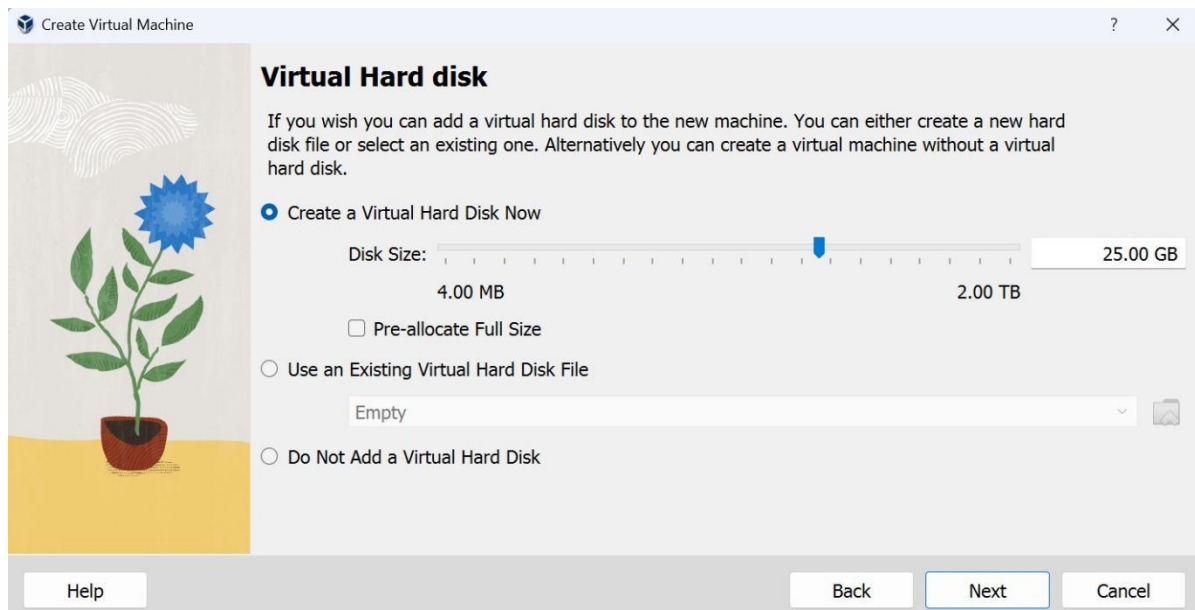


## Open Oracle VM VirtualBox



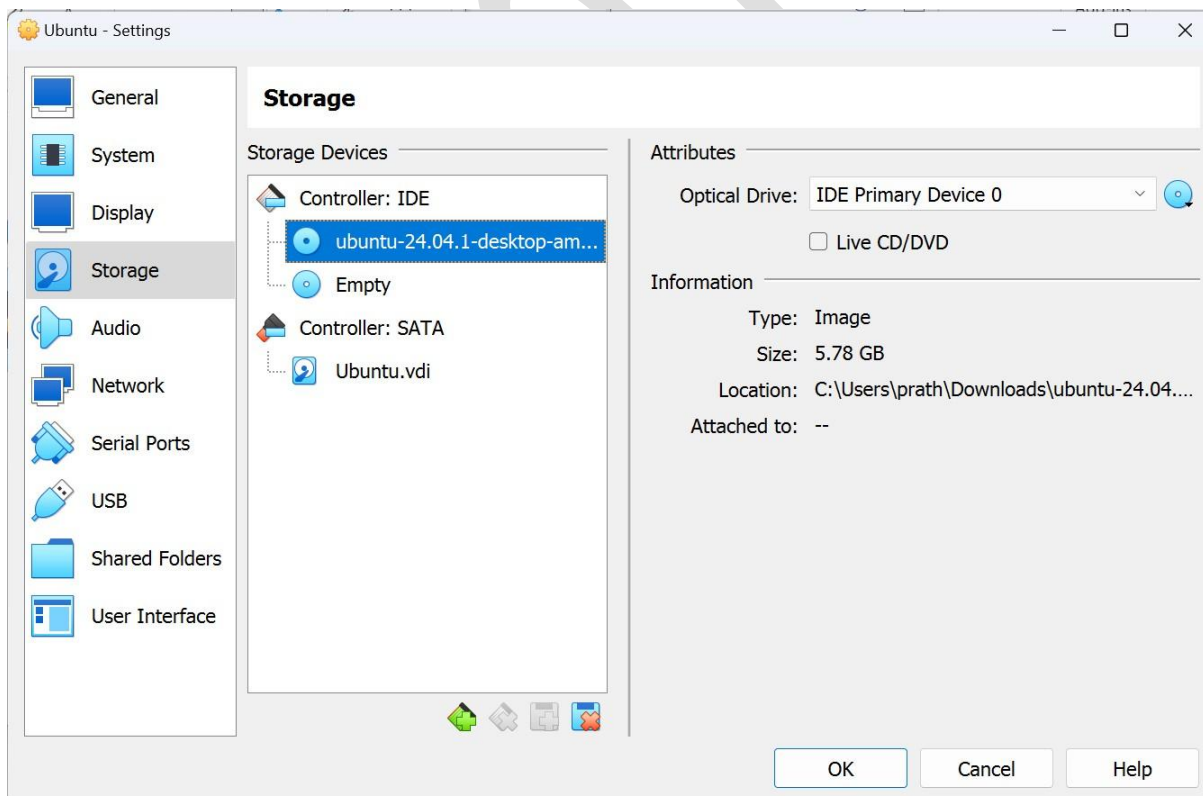
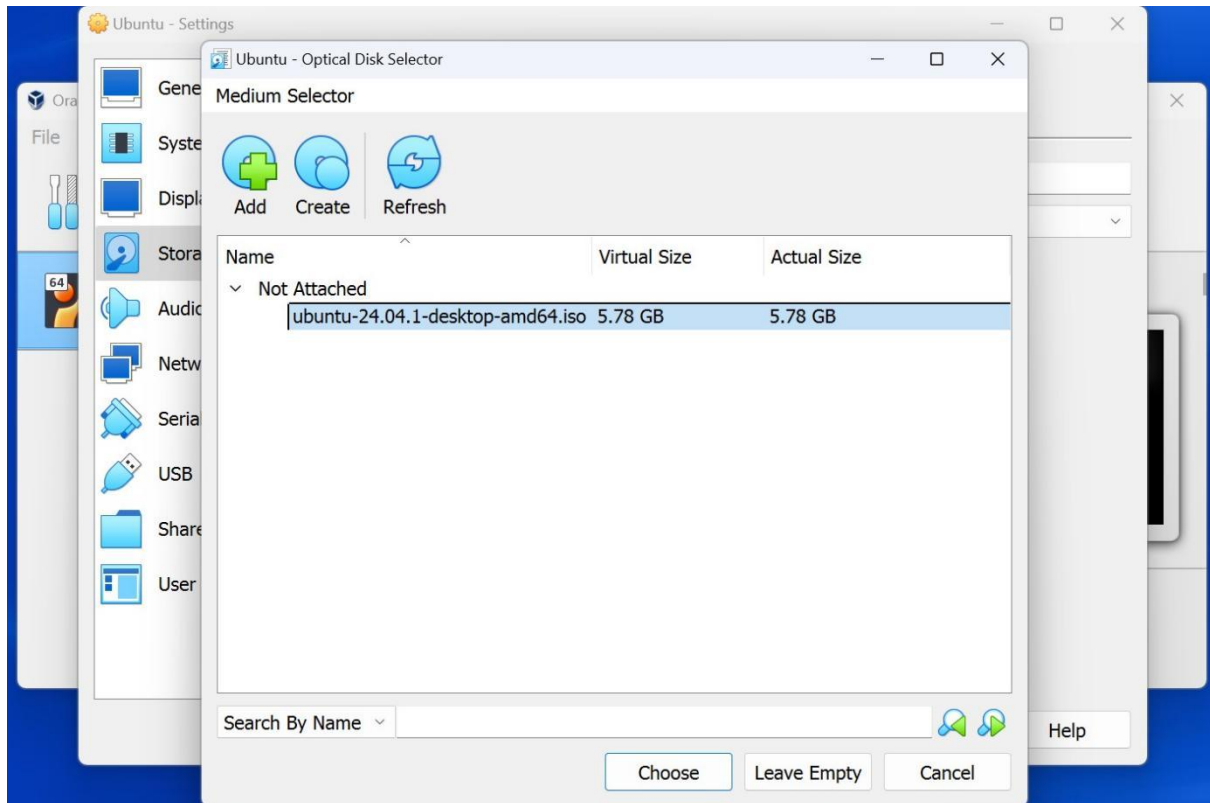
## Click on 'New' and create a new virtual machine





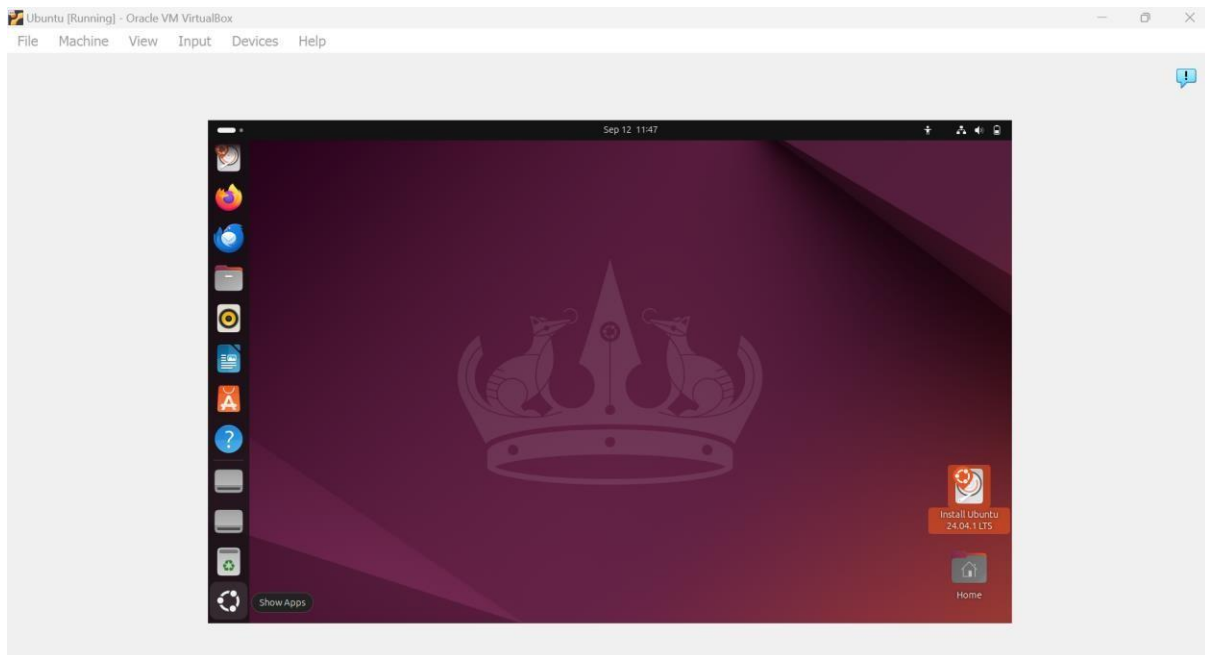
Launch the iso file of Ubuntu operating system into the virtual machine.







## Start the virtual machine



Open terminal and install vim using the command:

`sudo apt install vim`

```
ubuntu@ubuntu: ~  
ubuntu@ubuntu:~$ sudo apt install vim  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following additional packages will be installed:  
  vim-common vim-runtime vim-tiny xxd  
Suggested packages:  
  ctags vim-doc vim-scripts indent  
The following NEW packages will be installed:  
  vim vim-runtime  
The following packages will be upgraded:  
  vim-common vim-tiny xxd  
3 upgraded, 2 newly installed, 0 to remove and 41 not upgraded.  
Need to get 10.4 MB of archives.  
After this operation, 41.6 MB of additional disk space will be used.  
Do you want to continue? [Y/n] y  
Get:1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 vim-tiny amd64 2:9.1.0016-1ubuntu7.2 [803 kB]  
Get:2 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 vim-common all 2:9.1.0016-1ubuntu7.2 [385 kB]  
Get:3 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 xxd amd64 2:9.1.0016-1ubuntu7.2 [63.0 kB]  
Get:4 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 vim-runtime all 2:9.1.0016-1ubuntu7.2 [7278 kB]
```

Create a Python program and execute it

```
Processing triggers for human interfaces (2.11.2-1ubuntu1) ...  
ubuntu@ubuntu:~$ vim sumdigits.py  
ubuntu@ubuntu:~$ python3 sumdigits.py  
5432  
The sum of digits is: 14  
ubuntu@ubuntu:~$
```

### RESULT:

A virtual machine is created using Virtual Box and a simple program is executed on the virtual machine.