Exp No: 3   **Date:**

<u>VIRTUALIZATION</u>
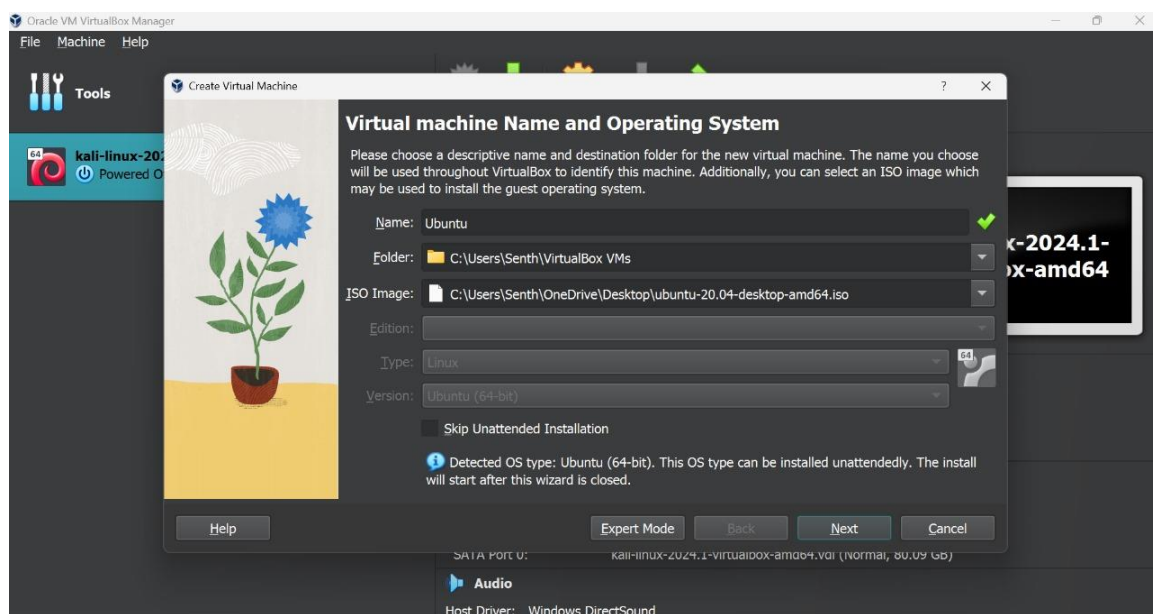## <u>INSTALLATION OF VIRTUAL MACHINE IN VIRTUAL BOX</u>

AIM:

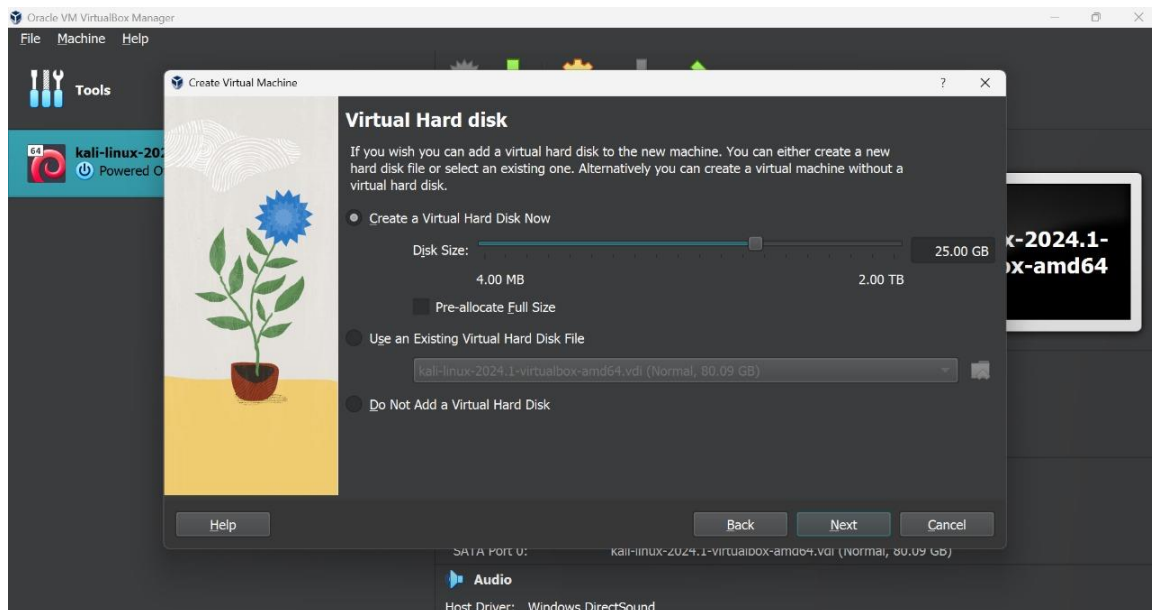   To configure a Virtual Machine using Virtual Box and Launch to execute a simple program using C.

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, PYTHON OR JAVA Compiler and execute a simple program.

OUTPUT:

   The virtual machine of Ubuntu OS was created using a virtual box. Ubuntu virtual machine running in Virtual Box.

Oracle VM VirtualBox Manager

File Machine Help

Tools

kali-linux-202...
Powered O...

Create Virtual Machine   ? ✕

Unattended Guest OS Install Setup

You can configure the unattended guest OS install by modifying username, password, and hostname. Additionally you can enable guest additions install. For Microsoft Windows guests it is possible to provide a product key.

Username and Password

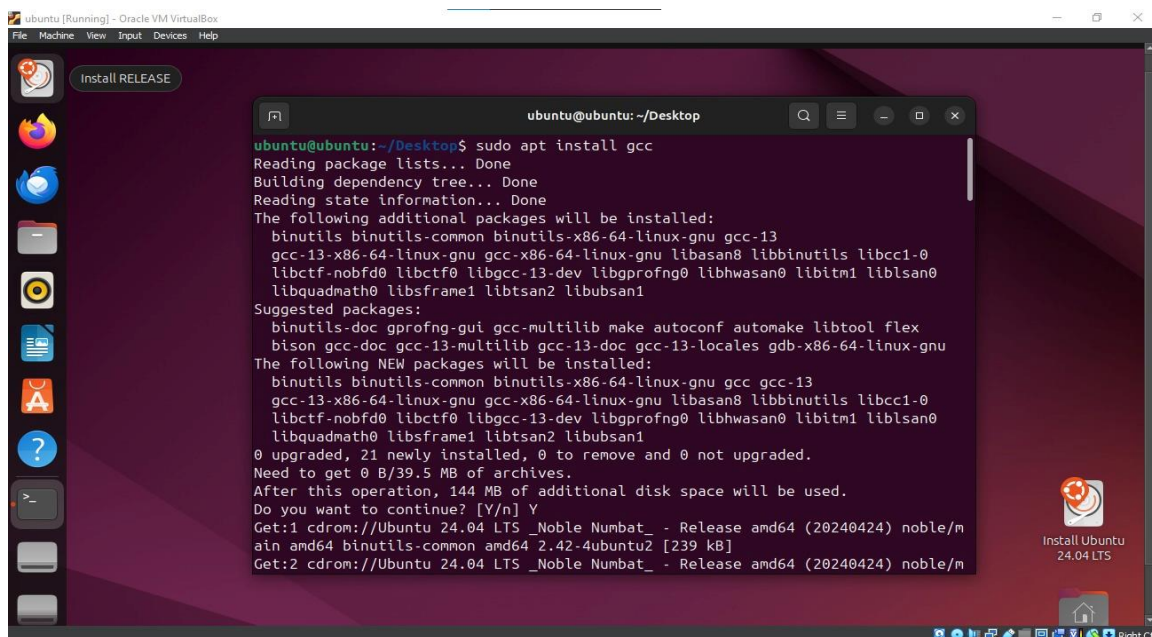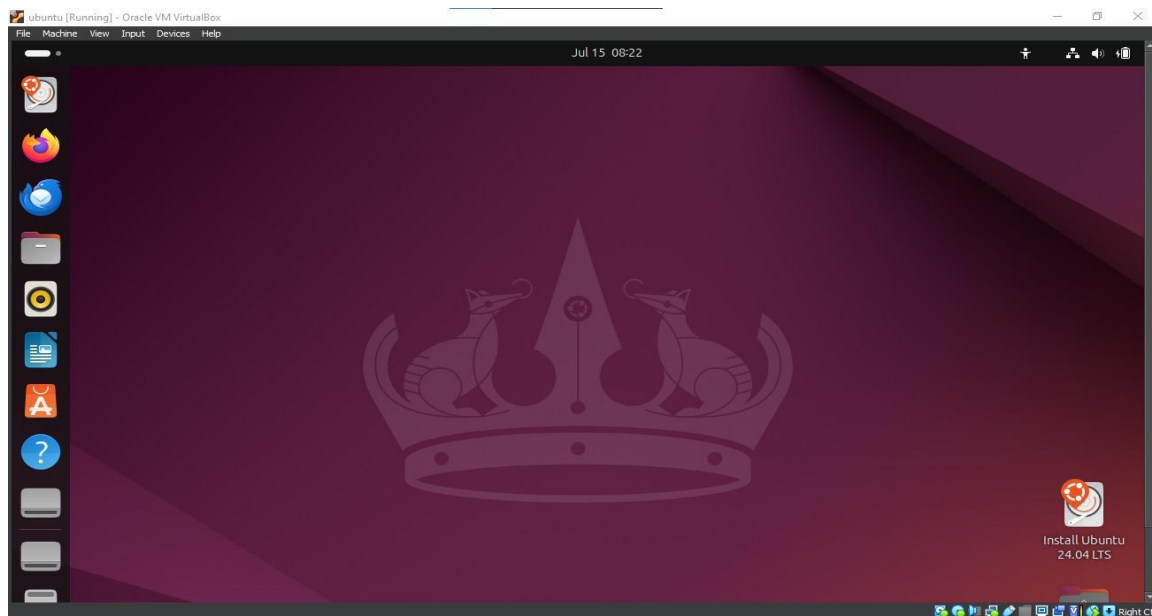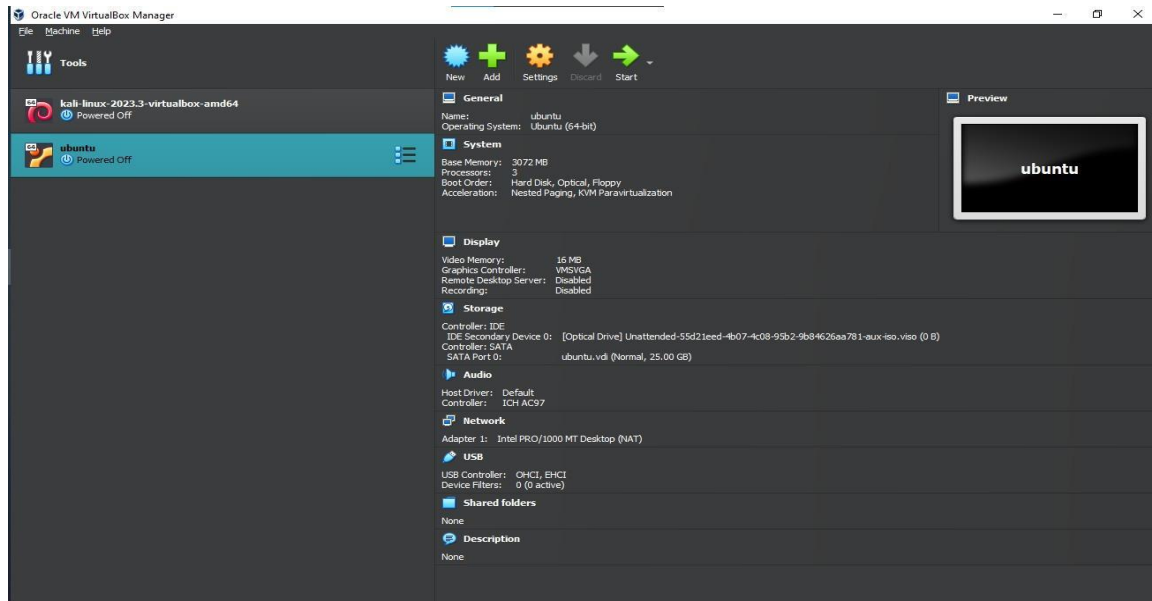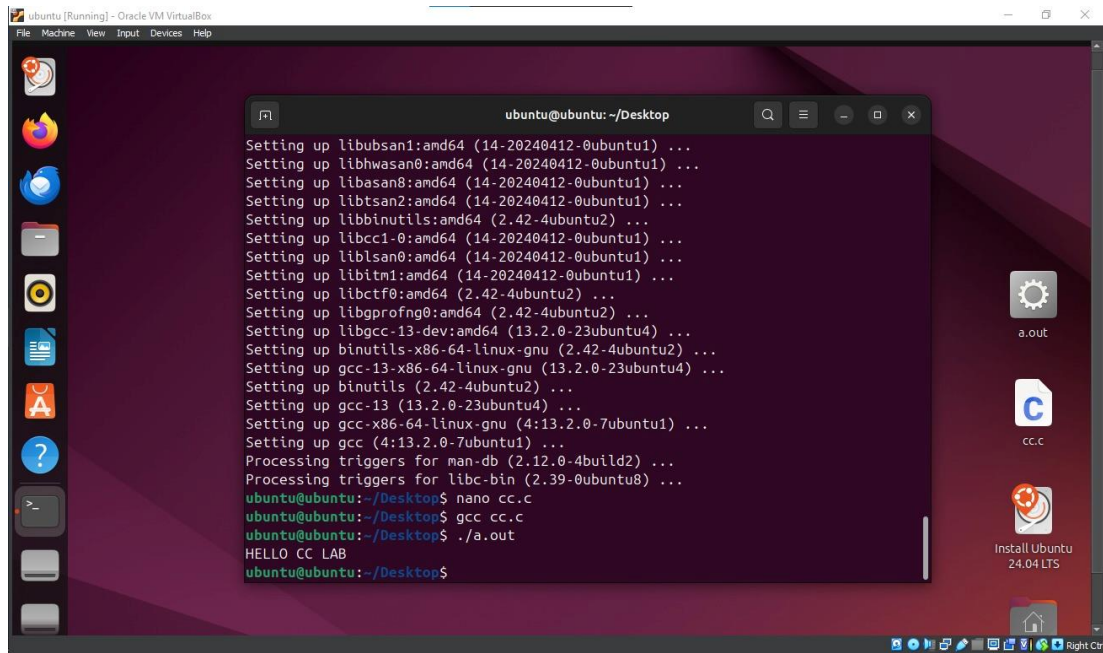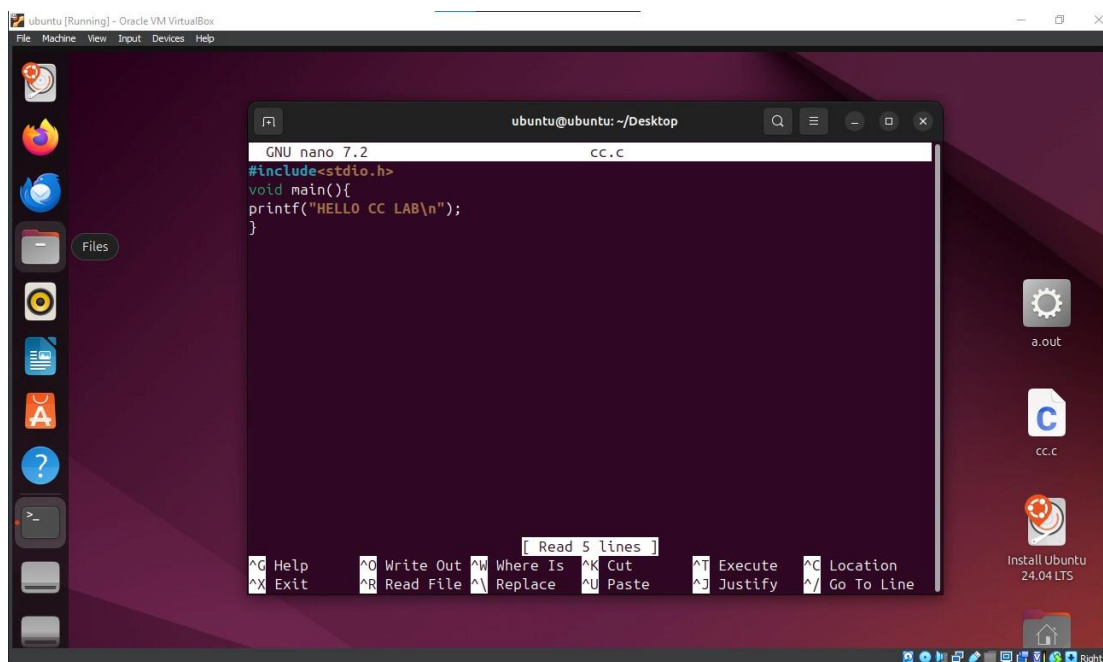Username: vboxuser ✔
Password: •••••••• 👁
Repeat Password: •••••••• 👁

Additional Options

Product Key: #####-#####-#####-####!
Hostname: Ubuntu ✔
Domain Name: myguest.virtualbox.org
☐ Install in Background

☐ Guest Additions
When checked, the guest additions will be installed after the guest OS install.

Guest Additions ISO: ☐ C:\Program Files\Oracle\VirtualBox\VBoxGuestAdditions.iso

Help   Back   Next   Cancel

SATA Port 0:   kali-linux-2024.1-virtualbox-amd64.vdi (Normal, 80.09 GB)
🔊 **Audio**
Host Driver: Windows DirectSound

x-2024.1-
ox-amd64

Oracle VM VirtualBox Manager

File Machine Help

Tools

kali-linux-202...
Powered O...

Create Virtual Machine   ? ✕

Hardware

You can modify virtual machine's hardware by changing amount of RAM and virtual CPU count. Enabling EFI is also possible.

Base Memory: ———————————————— 4096 MB
4 MB   16384 MB

Processors: ———————————————— 3
1 CPU   8 CPUs

☐ Enable EFI (special OSes only)

Help   Back   Next   Cancel

SATA Port 0:   kali-linux-2024.1-virtualbox-amd64.vdi (Normal, 80.09 GB)
🔊 **Audio**
Host Driver: Windows DirectSound

x-2024.1-
ox-amd64

Oracle VM VirtualBox Manager

File Machine Help

Tools

kali-linux-202...
Powered O...

Create Virtual Machine   ? ✕

Virtual Hard disk

If you wish you can add a virtual hard disk to the new machine. You can either create a new hard disk file or select an existing one. Alternatively you can create a virtual machine without a virtual hard disk.

◉ Create a Virtual Hard Disk Now

Disk Size: ———————————————— 25.00 GB
4.00 MB   2.00 TB

☐ Pre-allocate Full Size

○ Use an Existing Virtual Hard Disk File
kali-linux-2024.1-virtualbox-amd64.vdi (Normal, 80.09 GB)

○ Do Not Add a Virtual Hard Disk

Help   Back   Next   Cancel

SATA Port 0:   kali-linux-2024.1-virtualbox-amd64.vdi (Normal, 80.09 GB)
🔊 **Audio**
Host Driver: Windows DirectSound

x-2024.1-
ox-amd64

Oracle VM VirtualBox Manager

File   Machine   Help

Tools

kali-linux-2023.3-virtualbox-amd64
Powered Off

ubuntu
Powered Off

New   Add   Settings   Discard   Start

General
Name: ubuntu
Operating System: Ubuntu (64-bit)

System
Base Memory: 3072 MB
Processors: 3
Boot Order: Hard Disk, Optical, Floppy
Acceleration: Nested Paging, KVM Paravirtualization

Preview

ubuntu

Display
Video Memory: 16 MB
Graphics Controller: VMSVGA
Remote Desktop Server: Disabled
Recording: Disabled

Storage
Controller: IDE
  IDE Secondary Device 0:   [Optical Drive] Unattended-55d21eed-4b07-4c08-95b2-9b84626aa781-aux-iso.viso (0 B)
Controller: SATA
  SATA Port 0:   ubuntu.vdi (Normal, 25.00 GB)

Audio
Host Driver: Default
Controller: ICH AC97

Network
Adapter 1:   Intel PRO/1000 MT Desktop (NAT)

USB
USB Controller: OHCI, EHCI
Device Filters: 0 (0 active)

Shared folders
None

Description
None

---

ubuntu [Running] - Oracle VM VirtualBox

File   Machine   View   Input   Devices   Help

Jul 15 08:22

Install Ubuntu
24.04 LTS

---

ubuntu [Running] - Oracle VM VirtualBox

File   Machine   View   Input   Devices   Help

Install RELEASE

ubuntu@ubuntu: ~/Desktop

```
ubuntu@ubuntu:~/Desktop$ sudo apt install gcc
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  binutils binutils-common binutils-x86-64-linux-gnu gcc-13
  gcc-13-x86-64-linux-gnu gcc-x86-64-linux-gnu libasan8 libbinutils libcc1-0
  libctf-nobfd0 libctf0 libgcc-13-dev libgprofng0 libhwasan0 libitm1 liblsan0
  libquadmath0 libsframe1 libtsan2 libubsan1
Suggested packages:
  binutils-doc gprofng-gui gcc-multilib make autoconf automake libtool flex
  bison gcc-doc gcc-13-multilib gcc-13-doc gcc-13-locales gdb-x86-64-linux-gnu
The following NEW packages will be installed:
  binutils binutils-common binutils-x86-64-linux-gnu gcc gcc-13
  gcc-13-x86-64-linux-gnu gcc-x86-64-linux-gnu libasan8 libbinutils libcc1-0
  libctf-nobfd0 libctf0 libgcc-13-dev libgprofng0 libhwasan0 libitm1 liblsan0
  libquadmath0 libsframe1 libtsan2 libubsan1
0 upgraded, 21 newly installed, 0 to remove and 0 not upgraded.
Need to get 0 B/39.5 MB of archives.
After this operation, 144 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 cdrom://Ubuntu 24.04 LTS _Noble Numbat_ - Release amd64 (20240424) noble/m
ain amd64 binutils-common amd64 2.42-4ubuntu2 [239 kB]
Get:2 cdrom://Ubuntu 24.04 LTS _Noble Numbat_ - Release amd64 (20240424) noble/m
```

Install Ubuntu
24.04 LTS

cc.c

RESULT:

Thus a virtual machine is configured using Virtual box and a simple C program is executed successfully.