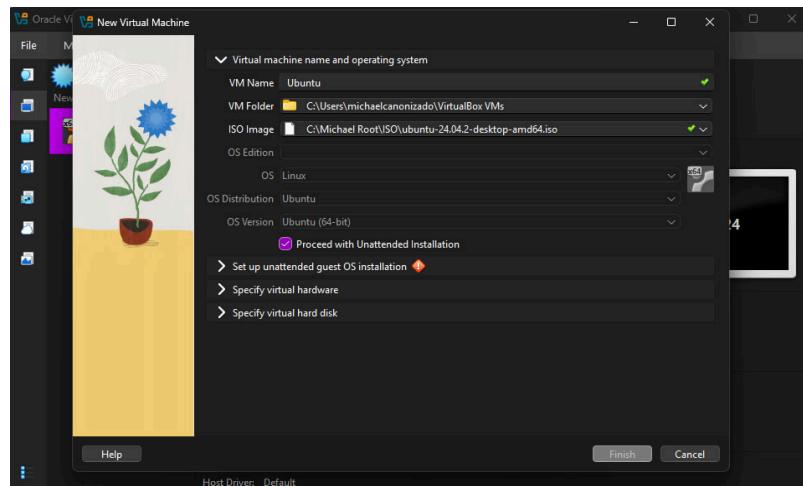


# Michael Xavier Canonizado

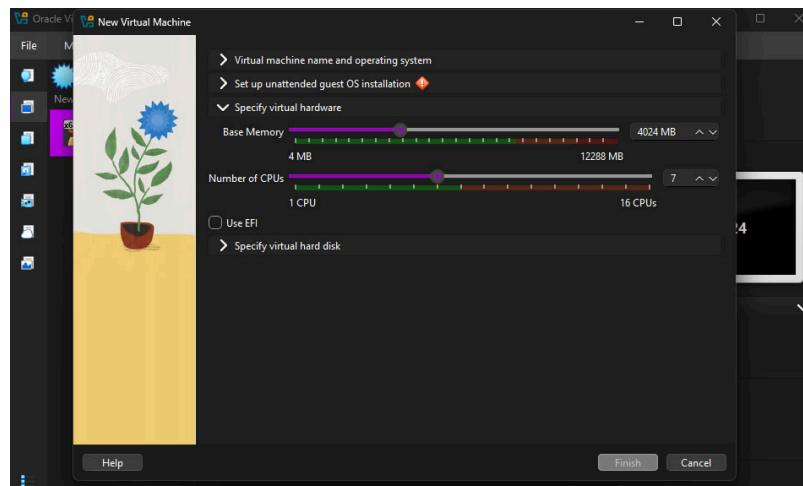
## BSCS 3A - Operating Systems

### Laboratory 1

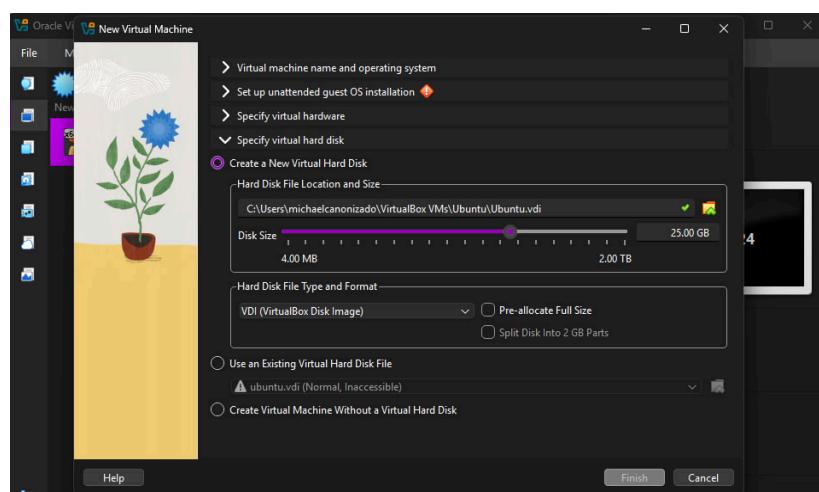
#### Part A – Setup Virtual Machine



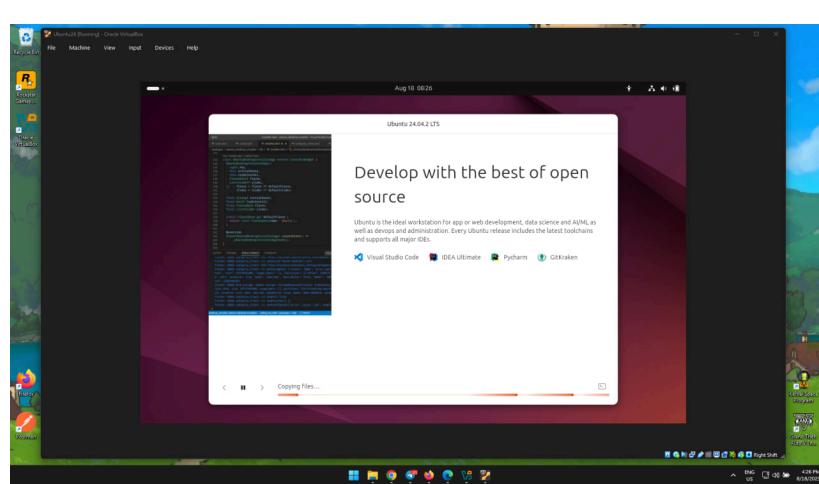
#### A.1 Choosing OS



#### A.2 Allocating RAM and CPU Cores

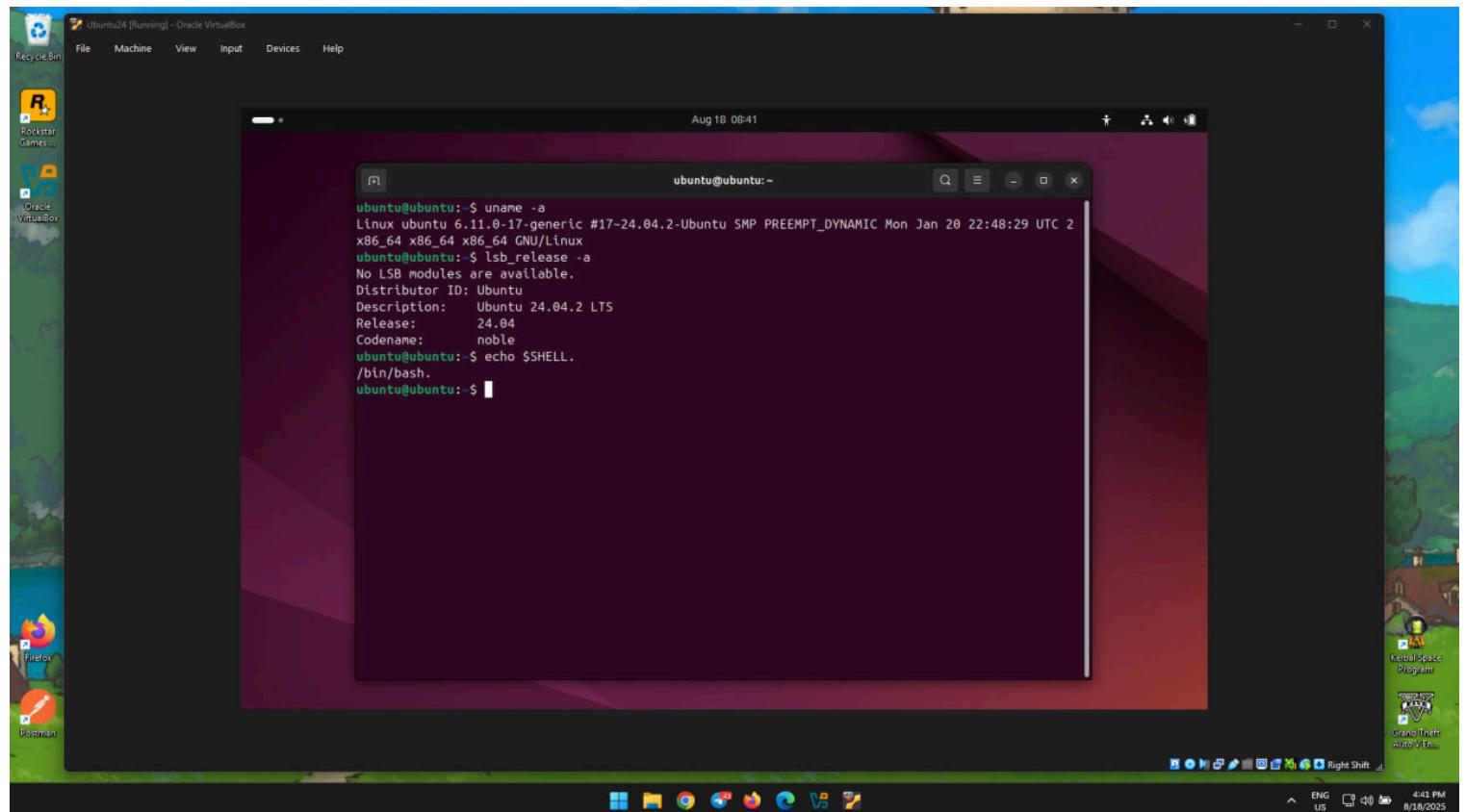


#### A.3 Allocating Disk Storage



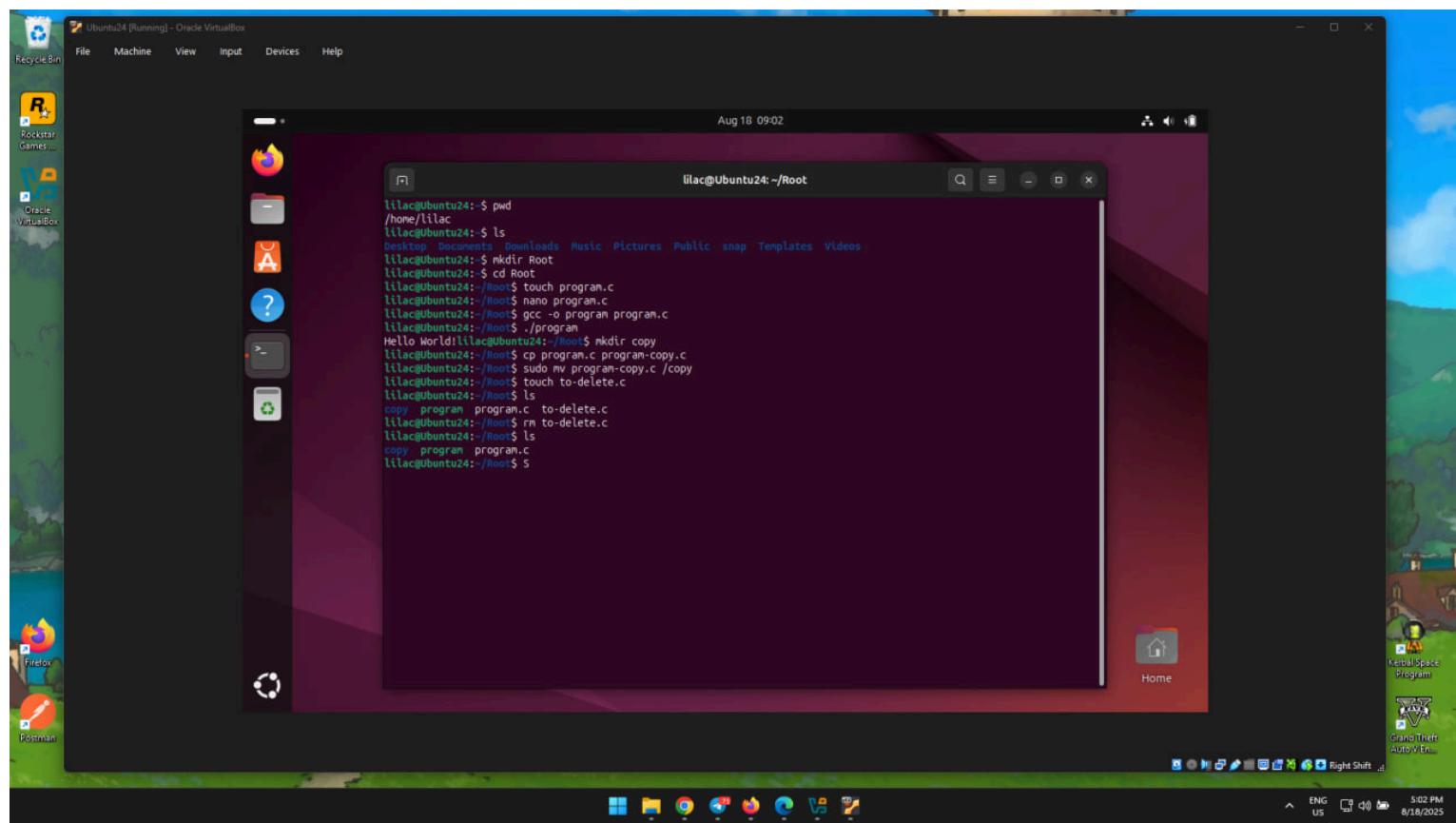
#### A.4 Installing Ubuntu

## Part B – Exploring the Installed OS



### B.1 Identify OS version and kernel

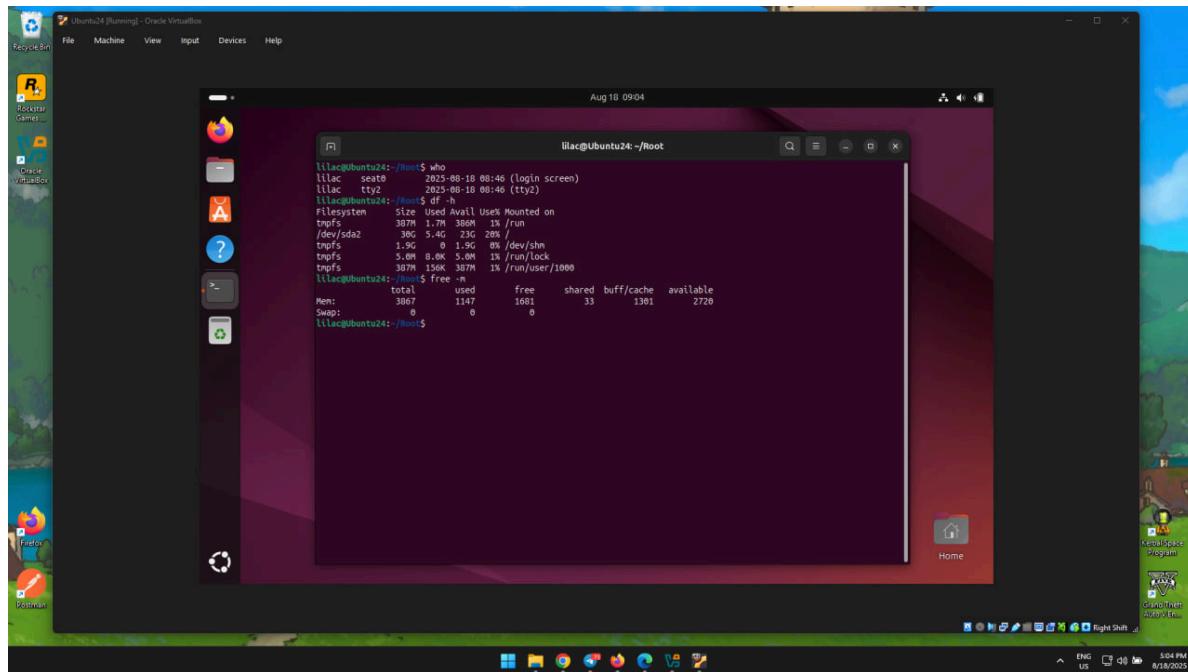
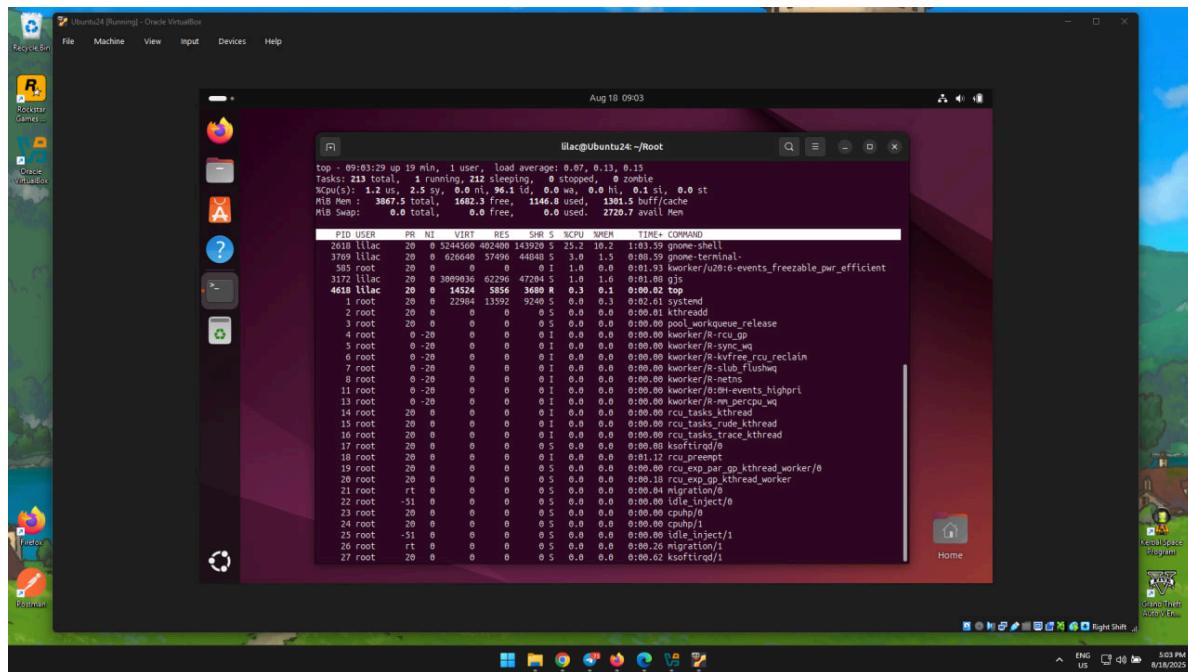
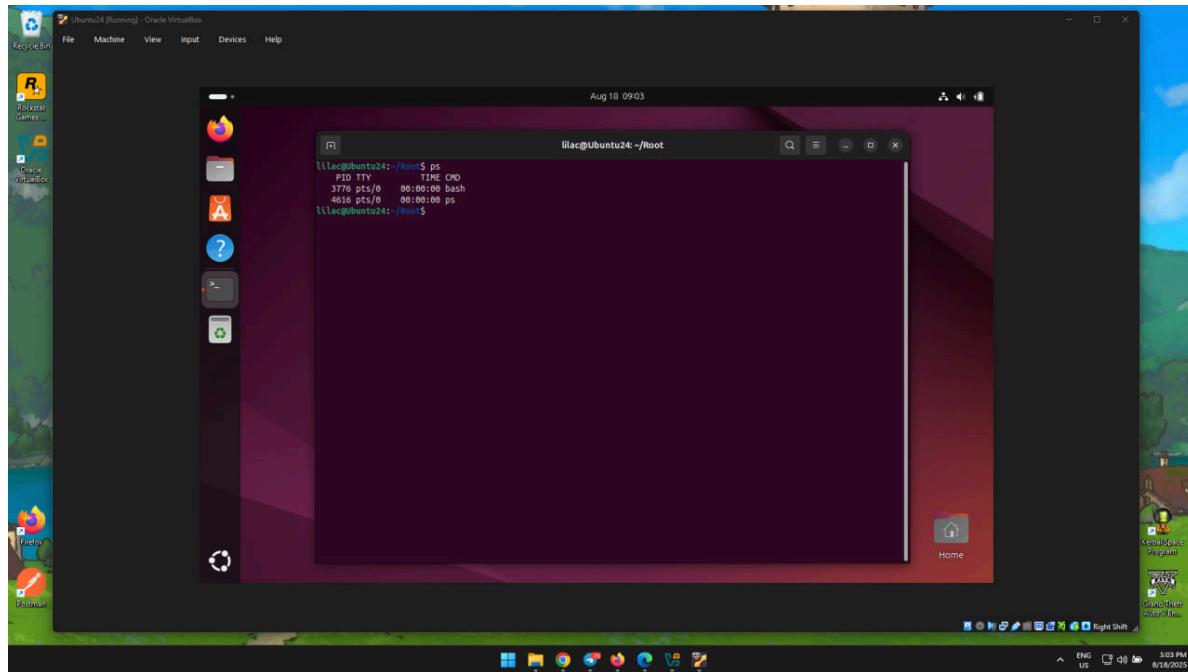
- uname -a
- lsb\_release -a
- echo \$SHELL.



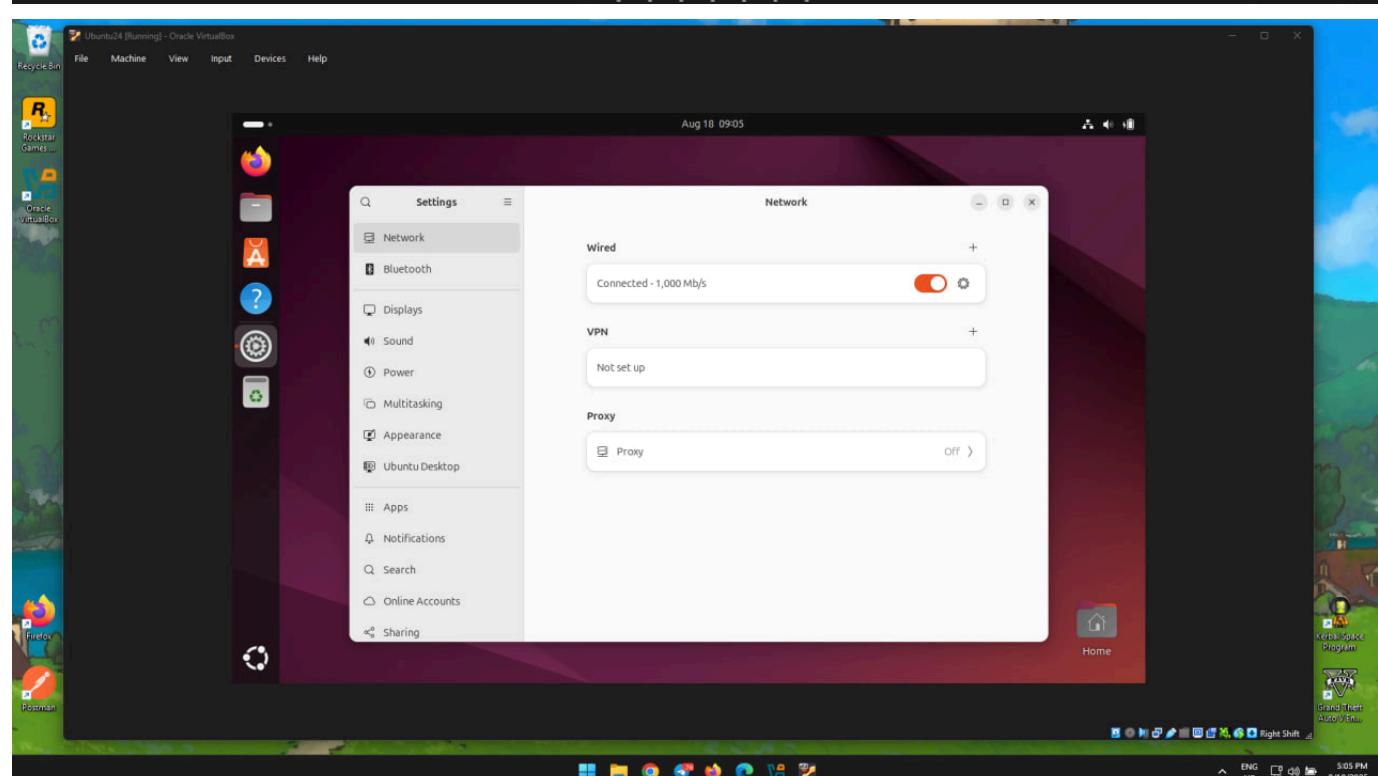
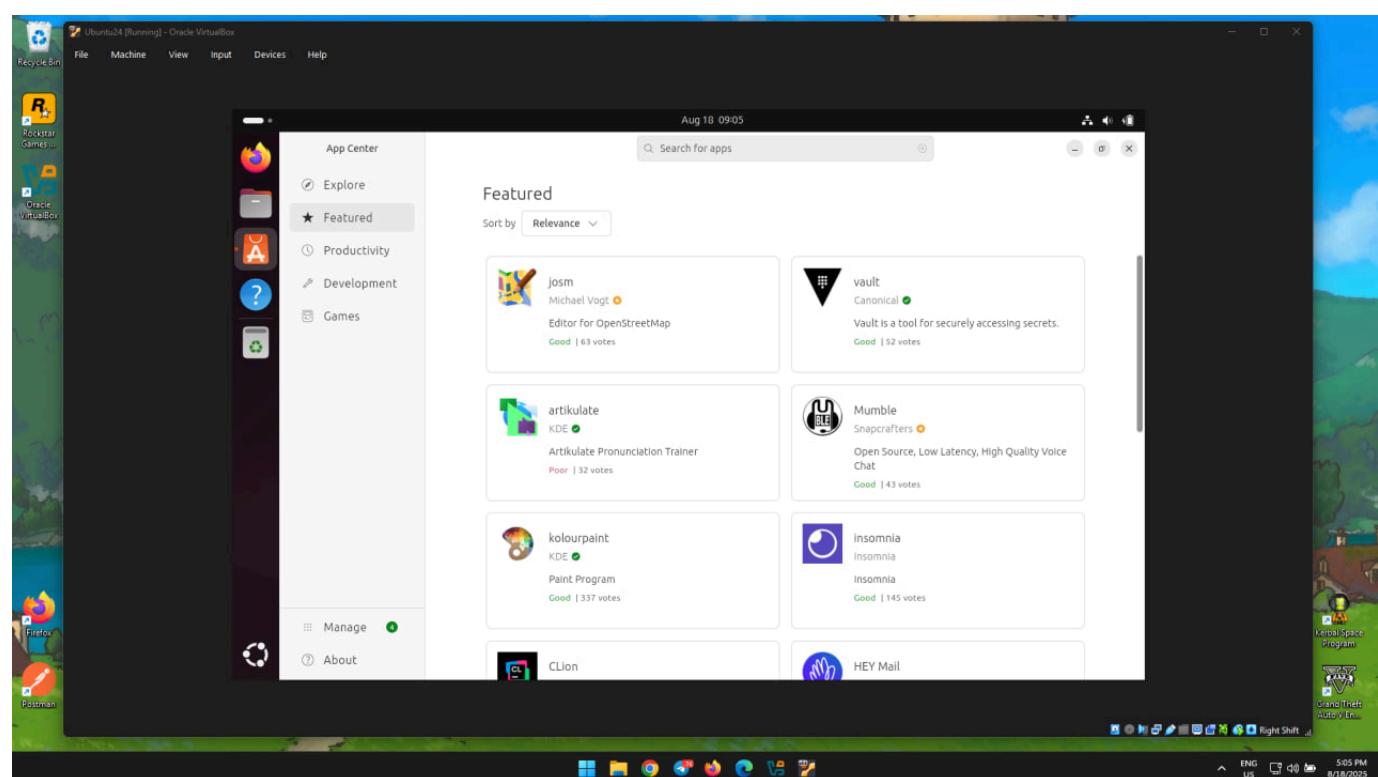
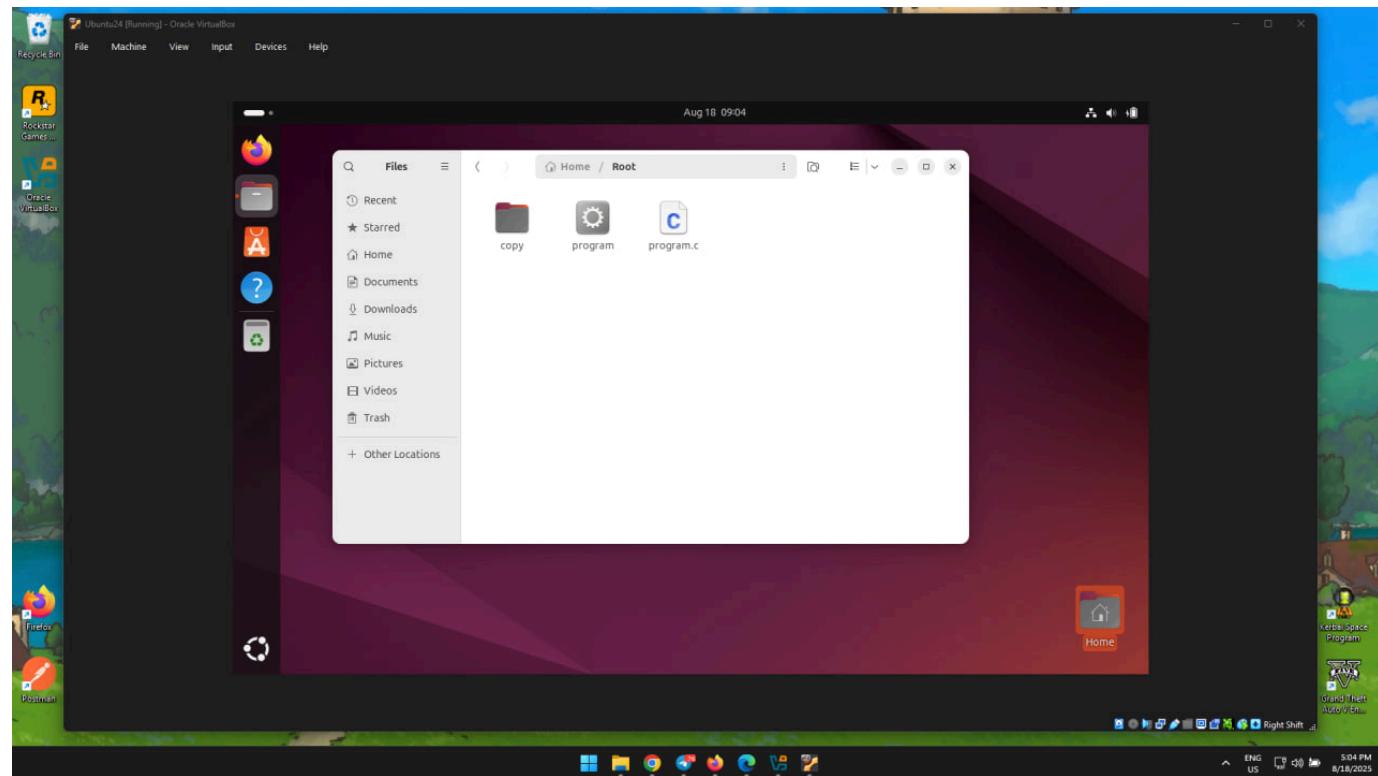
### B.2 Perform navigation and file manipulation

- pwd
- ls
- mkdir
- cd
- touch
- nano
- gcc
- cp
- mv
- rm

## B.3 Explore system monitoring



## B.4 Explore the graphical user interface



#### B.5 Compare the installed OS with your host OS in terms of:

- User Interface
- System utilities
- Performance

The UI of Ubuntu and Windows 11 are quite different. Windows has a familiar UI since it's widely used around the world. It features a taskbar at the bottom, and time and dates at the bottom right. Ubuntu on the other hand initially has minimal UI: settings, terminal, file explorer, and firefox. It also has the taskbar on the right which is quite different. Since Ubuntu's not that well known, its UI has quite a steep learning curve.

Both operating systems come with a wide array of system utilities, but they serve different user bases. Windows provides tools like Task Manager, Control Panel, and various administrative utilities aimed for the general users. Ubuntu on the other hand has more IT professional centered utilities giving them more control. It also leans heavily on command-line utilities for system management.

In terms of performance, Ubuntu has an advantage on resource efficiency. With just 4GB of RAM and 25GB of storage allocated to it by the VM, it still runs smoothly, making it ideal for low-end devices. The same can't be said for Windows 11 which has a higher hardware requirement. It has a lot of background services and focuses on user experience. Though it does have the upper hand on being more performant on games and other apps like video/photo editing softwares.

### Part C - Reflection

When it comes to choosing an operating system, Windows 11 and Ubuntu are the top picks. Each offers unique advantages and drawbacks, making the decision largely dependent on a user's personal or professional needs.

Windows 11 emphasizes user-friendliness and aesthetics, it is designed to appeal to everyday users. Its strong compatibility with popular software, especially in gaming and productivity, gives it a clear edge. Adobe products, or the latest PC games. However, Windows 11 is resource-intensive and requires relatively modern hardware. It also places users in a more controlled ecosystem, where customization is somewhat limited, and frequent updates can be intrusive.

On the other hand, Ubuntu represents flexibility and freedom. Developers, system administrators, and tech enthusiasts often prefer Linux because of its powerful command-line tools, stability, and security. Unlike Windows, Linux is highly customizable, letting users adjust everything from the desktop environment to kernel-level settings. Moreover, Linux typically consumes fewer resources, making it suitable for older hardware. However, Linux has a steeper learning curve, and software compatibility remains an issue, particularly with proprietary applications and games.

In conclusion, Windows 11 and Linux cater to different audiences. Windows 11 is ideal for users who prioritize ease of use, wide software compatibility, and modern design, while Linux is better suited for those who value control, stability, and open-source flexibility. Ultimately, the best choice depends on whether the user prefers convenience or customization.