

# Week Report 2

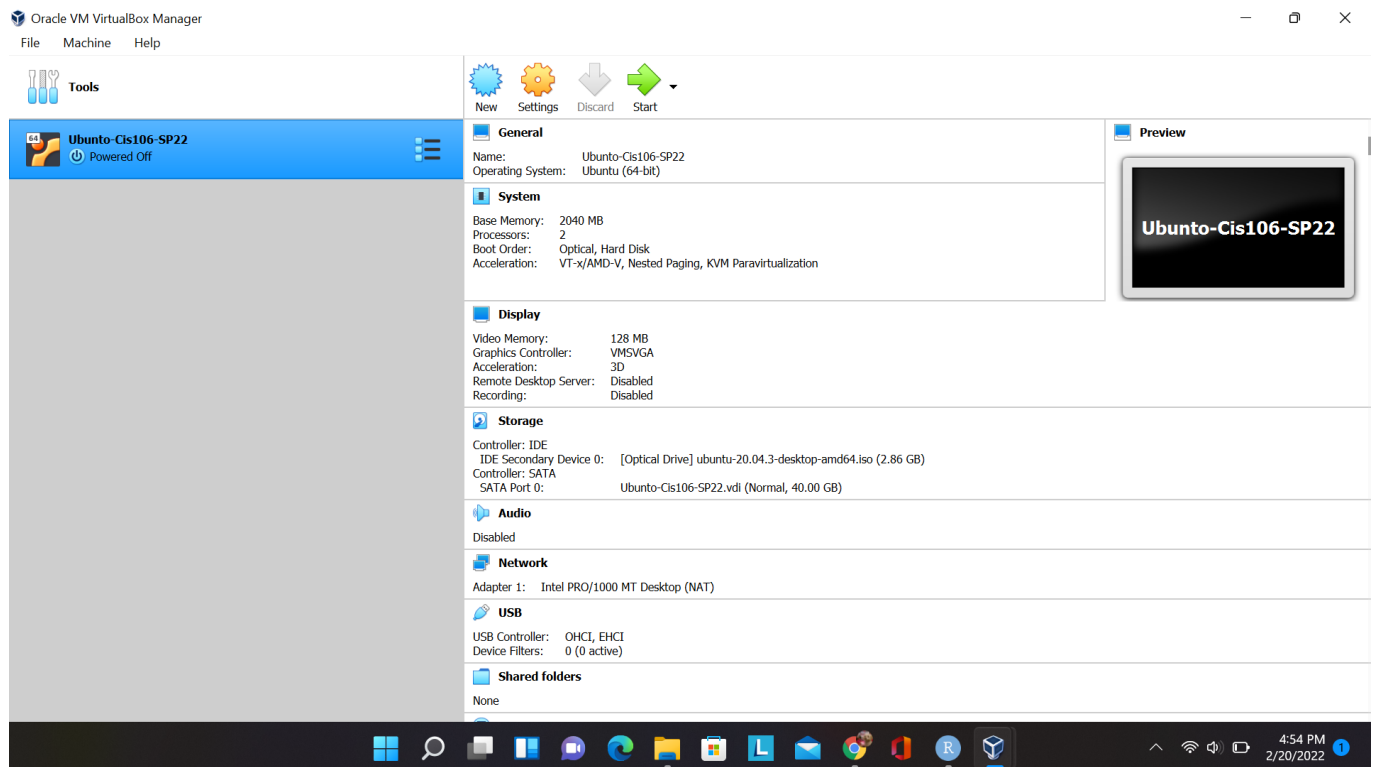
## Summary of Presentations: Virtualization and The Raspberry Pi

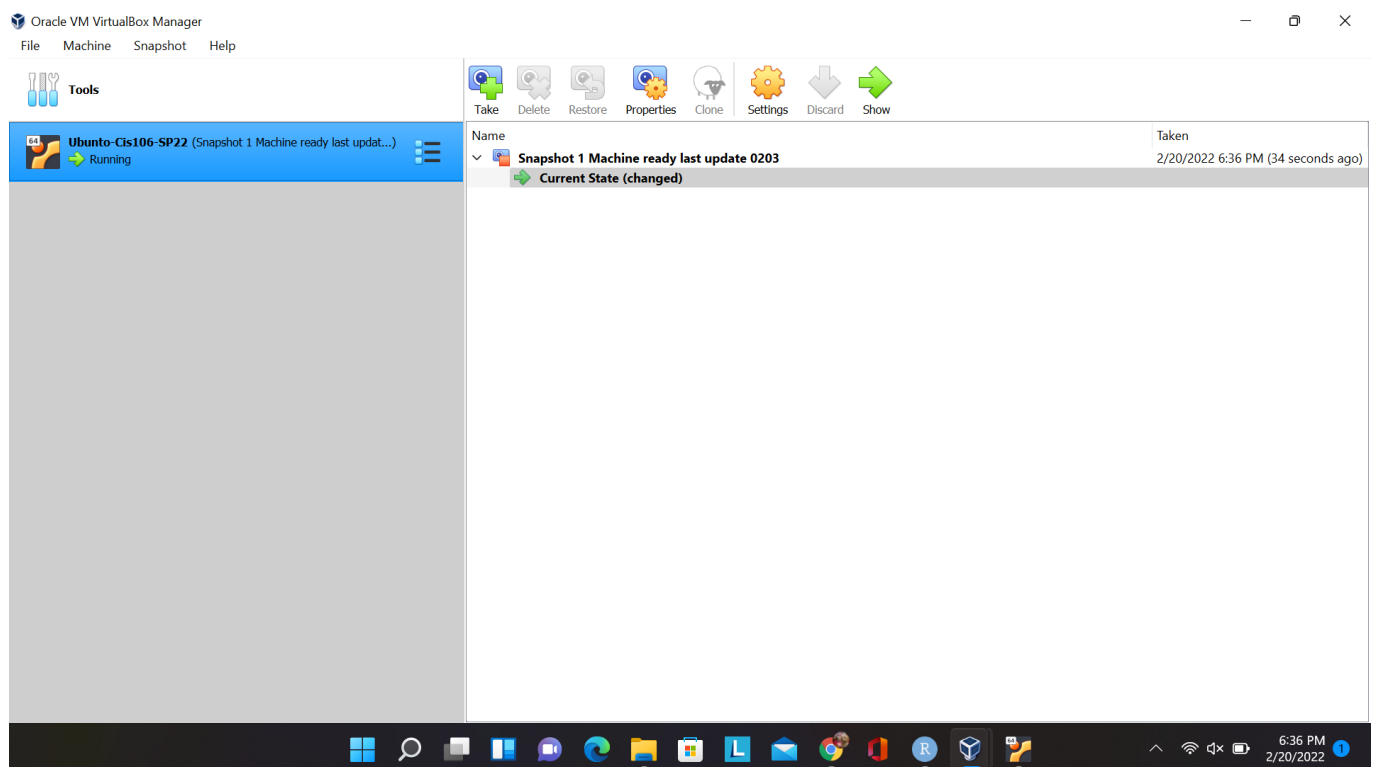
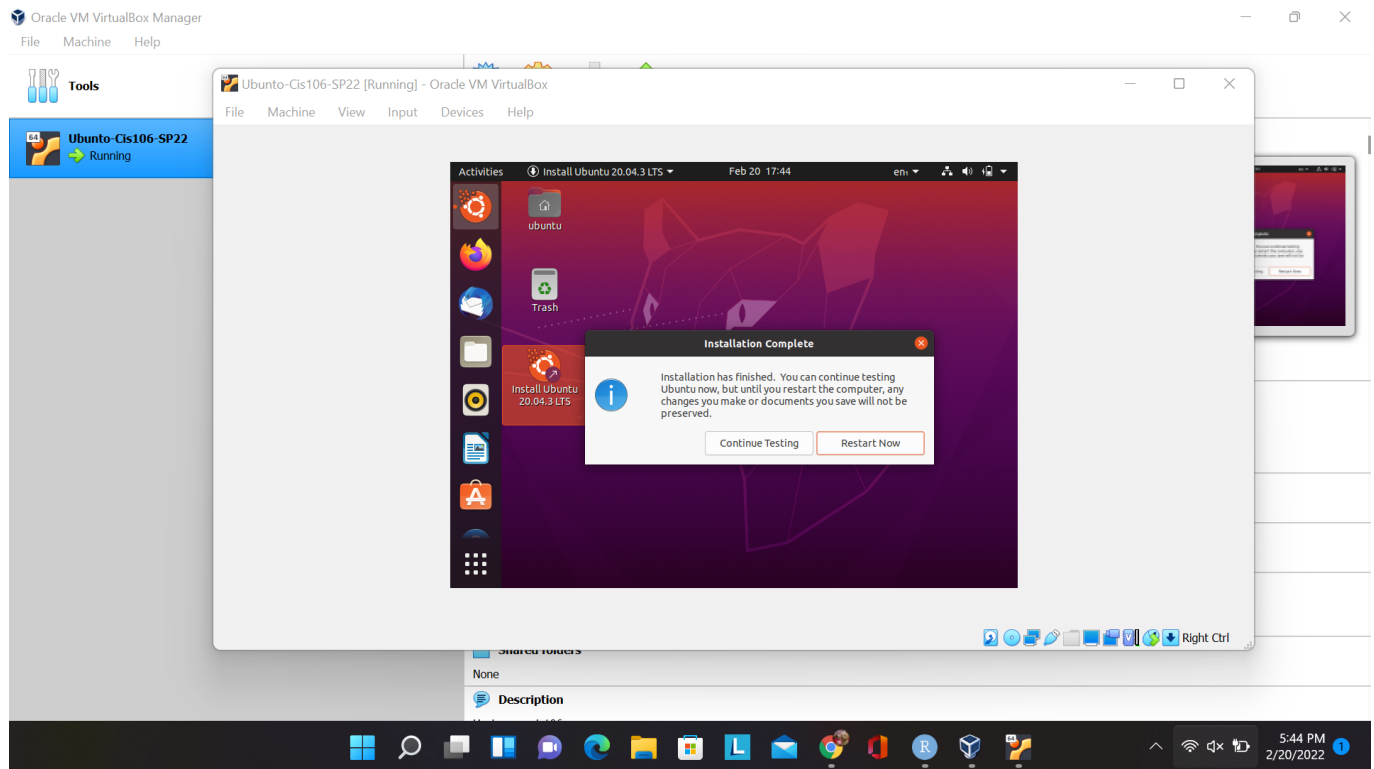
The presentation for week 2 was the basics of virtualization, how to use virtualbox, how to install Ubuntu and what is a raspberry pi.

Virtualization is a replication of hardware to simulate a virtual machine inside a real machine.

There are two different types of virtualization which are server-side virtualization and client-side virtualization. Some of the benefits of virtualization are:

- It allows running multiple OSs on one machine
- Allows applications to be tested before installing it in the host machine
- It lets you experiment with untested programs

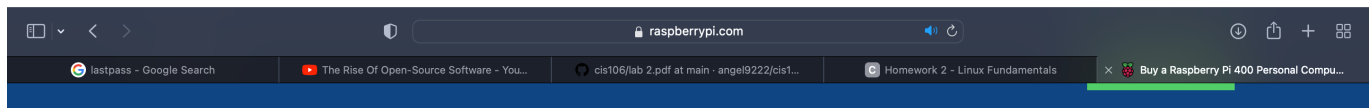




Raspberry pi is a credit-card sized computer. You can plug it into a monitor or tv. The device lets you do everything you can do on a desktop computer.

5 different versions of the raspberry pi are:

- Raspberry Pi 4
- Raspberry pi 3
- Pi Zero W
- Pi 3 A+
- Raspberry Pi 400



### Raspberry Pi 400 specification

Broadcom BCM2711 quad-core Cortex-A72 (ARM v8) 64-bit SoC @ 1.8GHz  
4GB LPDDR4-3200  
Dual-band (2.4GHz and 5.0GHz) IEEE 802.11b/g/n/ac wireless LAN  
Bluetooth 5.0, BLE  
Gigabit Ethernet  
2 × USB 3.0 and 1 × USB 2.0 ports  
Horizontal 40-pin GPIO header  
2 × micro HDMI ports (supports up to 4Kp60)  
H.265 (4Kp60 decode); H.264 (1080p60 decode, 1080p30 encode);  
OpenGL ES 3.1, Vulkan 1.0  
MicroSD card slot for operating system and data storage  
78- or 79-key compact keyboard (depending on regional variant)  
5V DC via USB connector  
Operating temperature: 0°C to +50°C ambient  
Maximum dimensions 286 mm × 122 mm × 23 mm

For further details, see the [Raspberry Pi 400 product brief](#).

You can also view specifications for the [mouse](#), [power supply](#), and [micro HDMI to Standard HDMI cable](#) that are included in the Raspberry Pi 400 Personal Computer Kit.

## 5 projects you can do with a Raspberry Pi:

- Wifi extender
- Remote controlled 3d printer
- Language translator
- Raspberry pi tablet
- Media center