ECE 4310
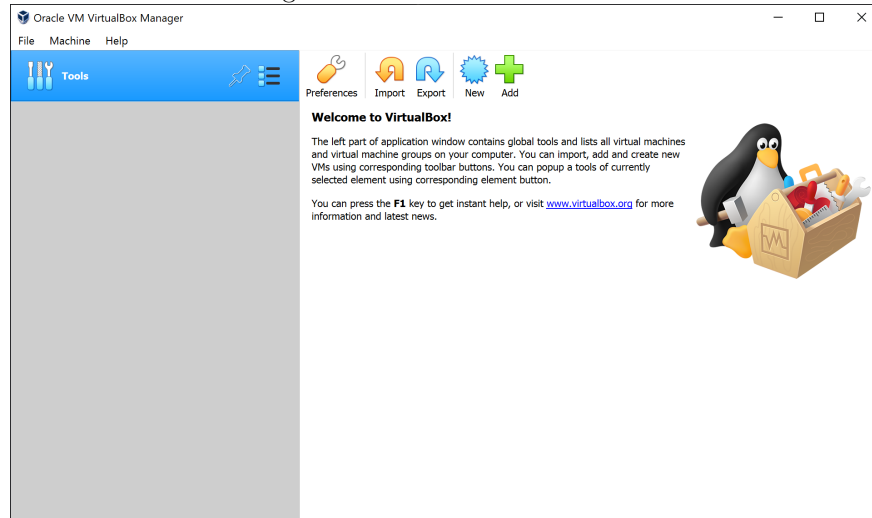# Operating Systems for Embedded Application

Project 3

Choi Tim Antony Yung

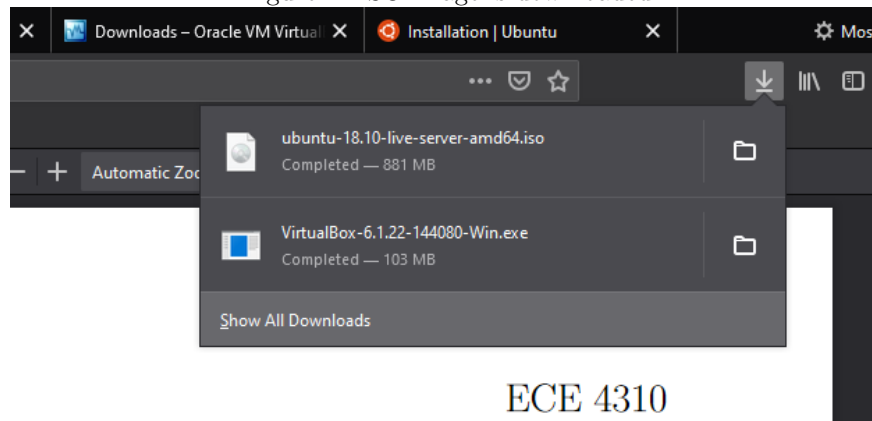May 13, 2021

1   Virtual Machine Initialization

1.1   Download and install VirtualBox

Figure 1: VirtualBox is installed
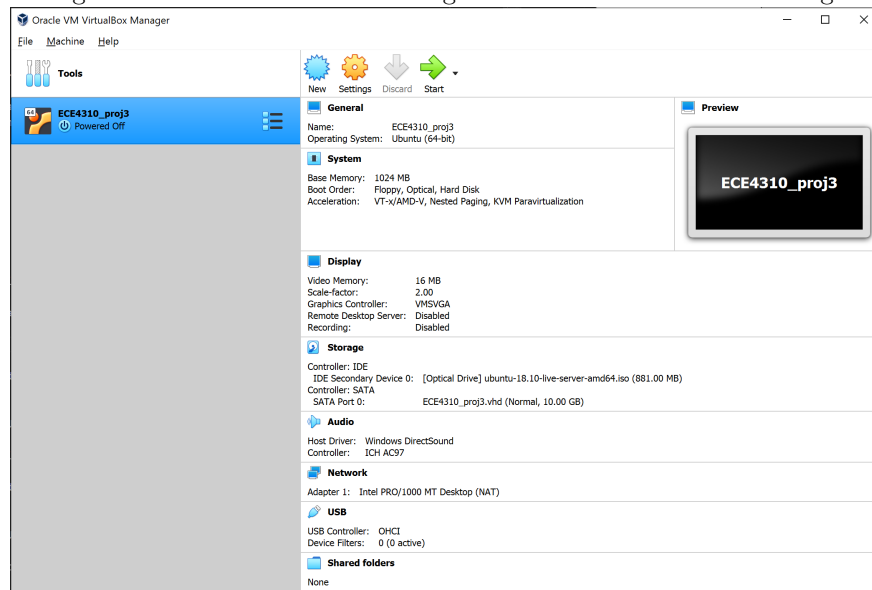

1.2   Download Ubuntu Server 18.10

Figure 2: ISO image is downloaded

1.3   Create VM

Figure 3: VM is created and configured to boot with Live CD image

1.4   Install Ubuntu

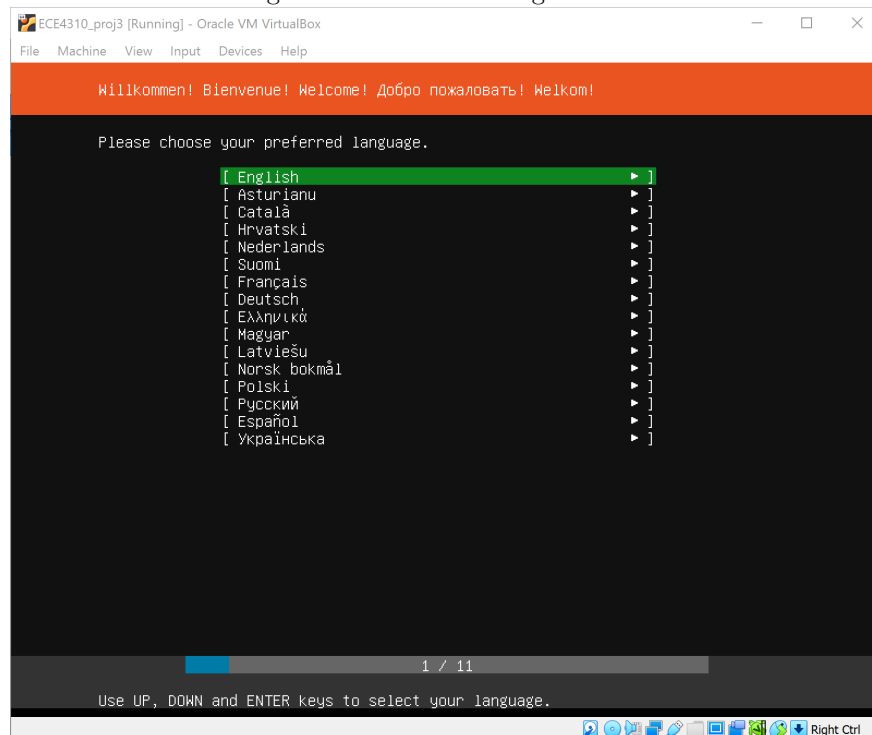Figure 4: Ubuntu is being installed

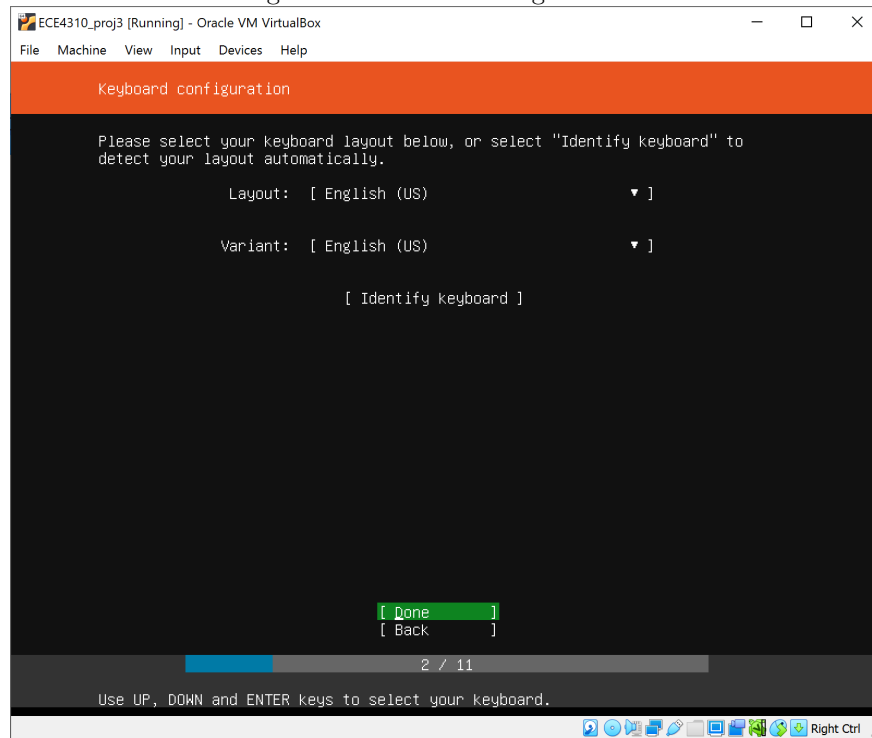Figure 5: Ubuntu is being installed
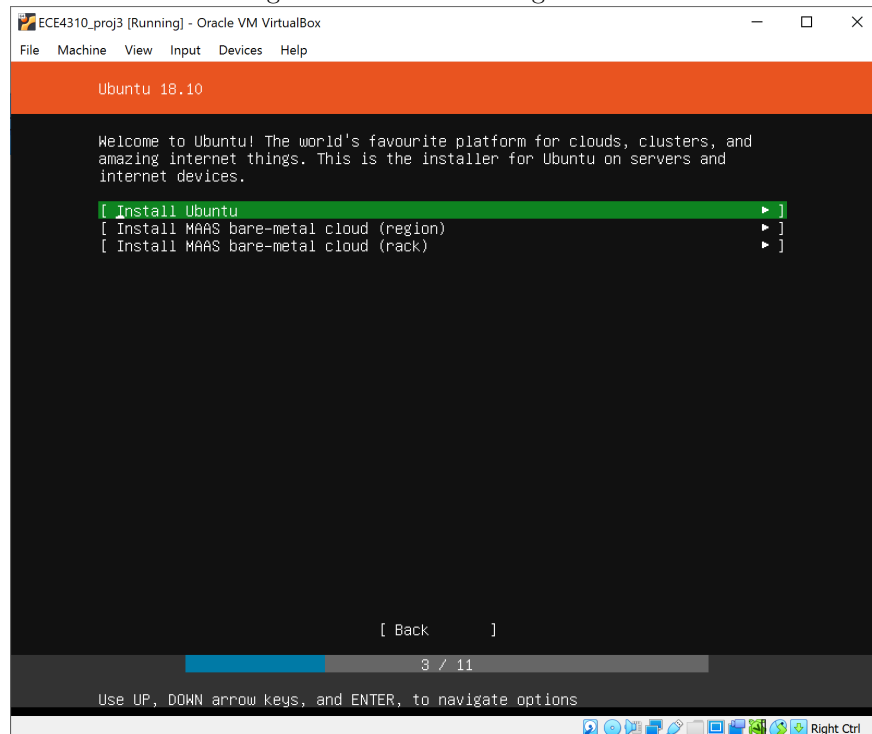

Figure 6: Ubuntu is being installed
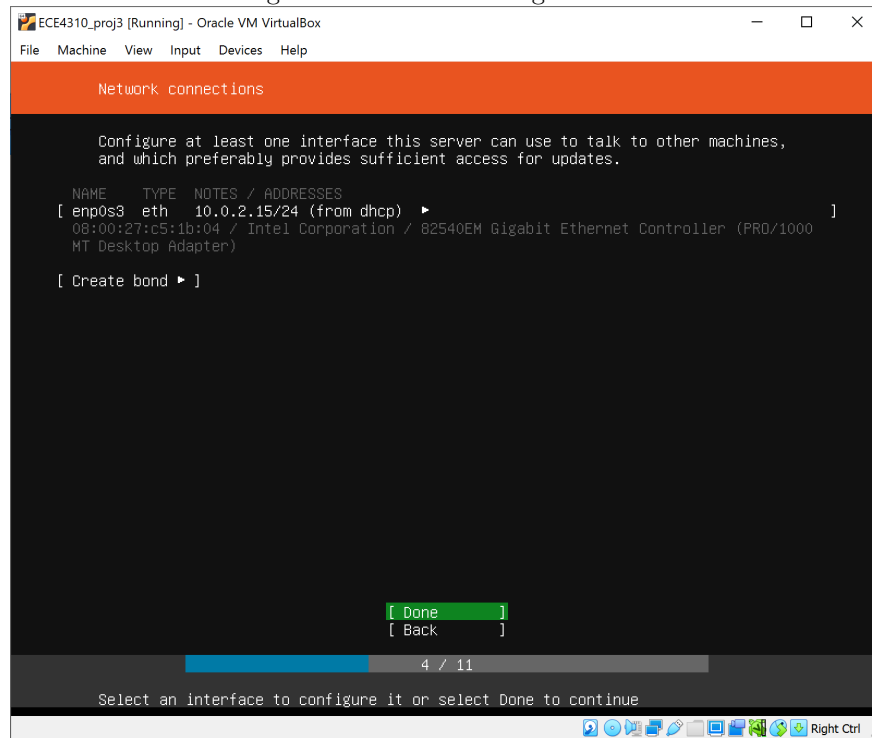
Figure 7: Ubuntu is being installed

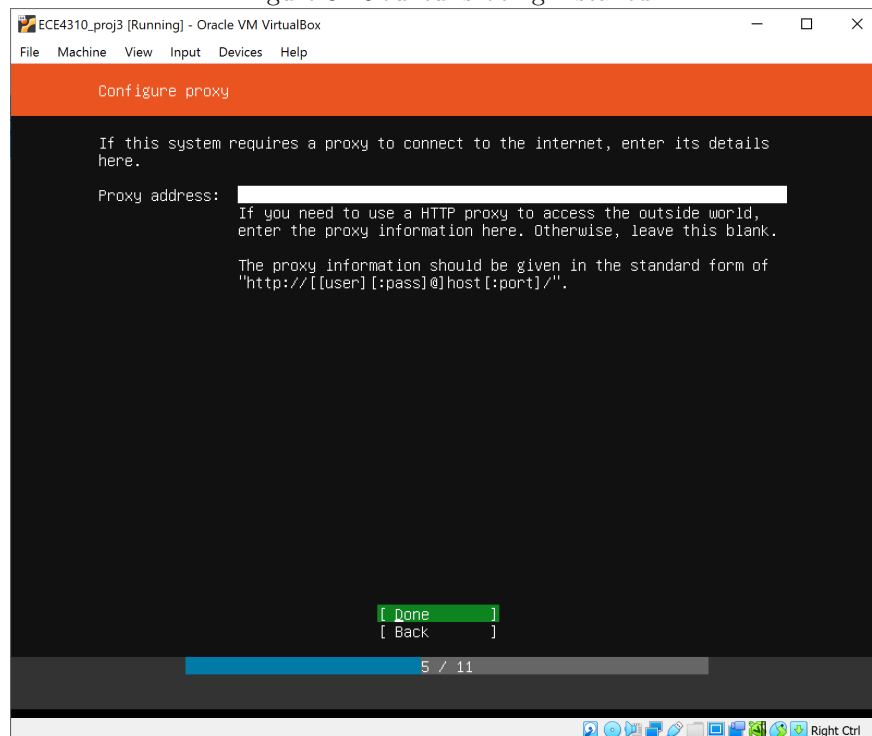Figure 8: Ubuntu is being installed
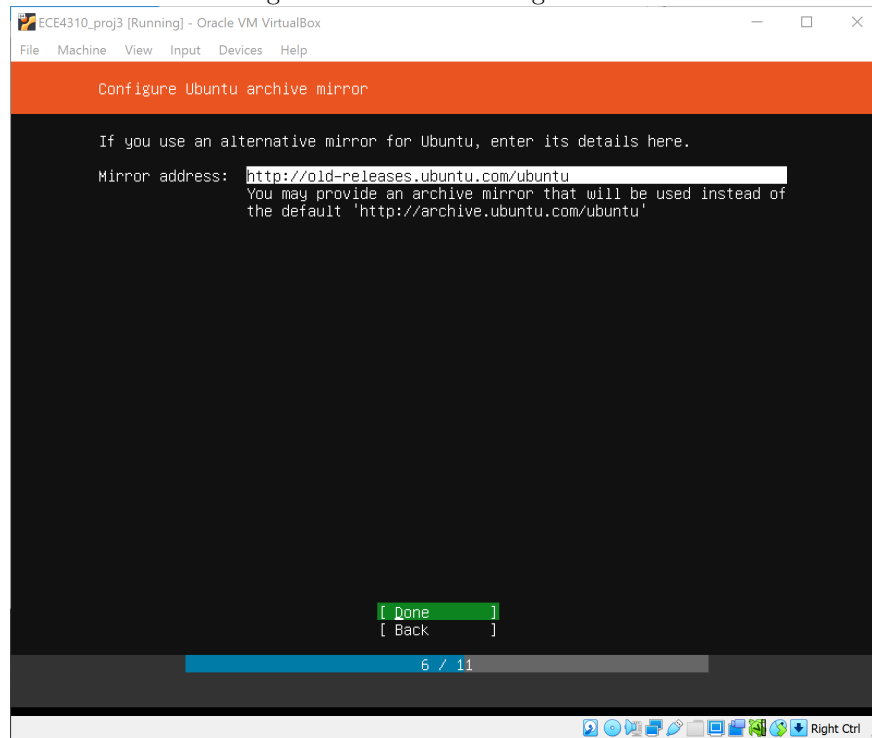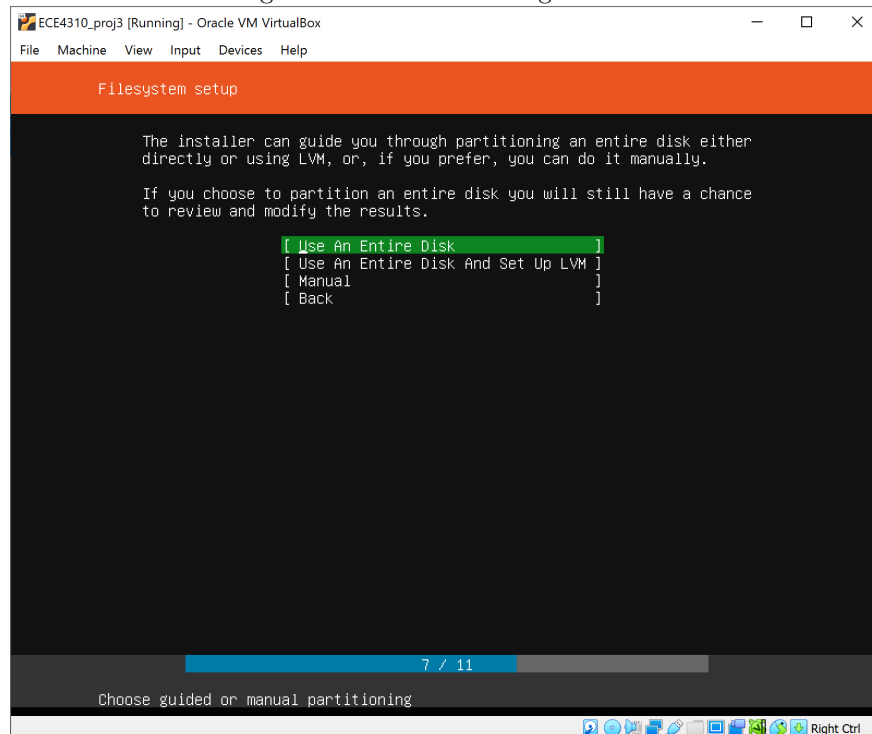
Figure 9: Ubuntu is being installed

Figure 10: Ubuntu is being installed

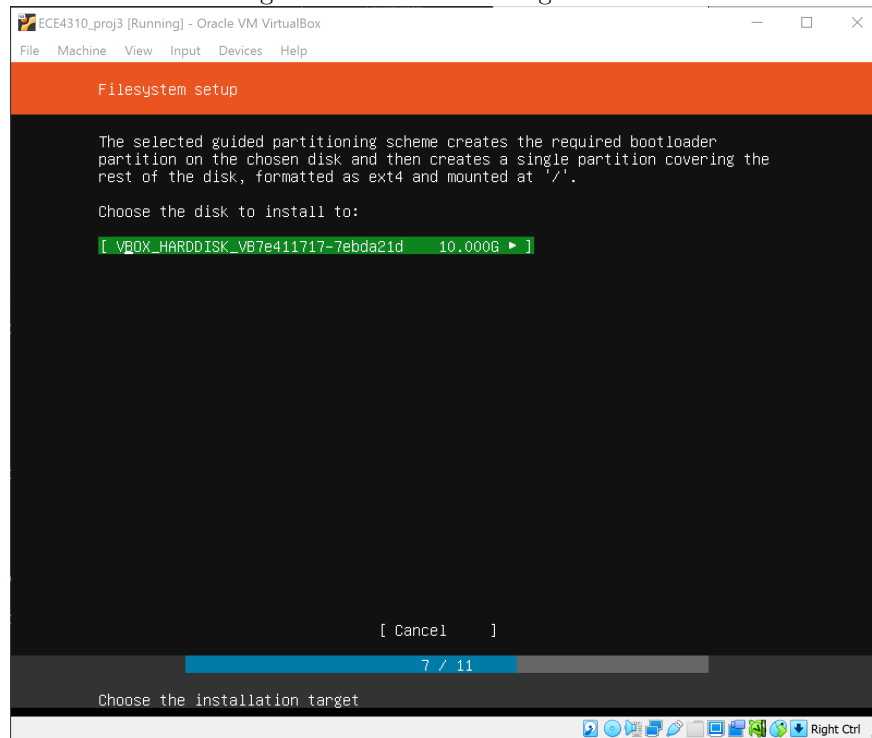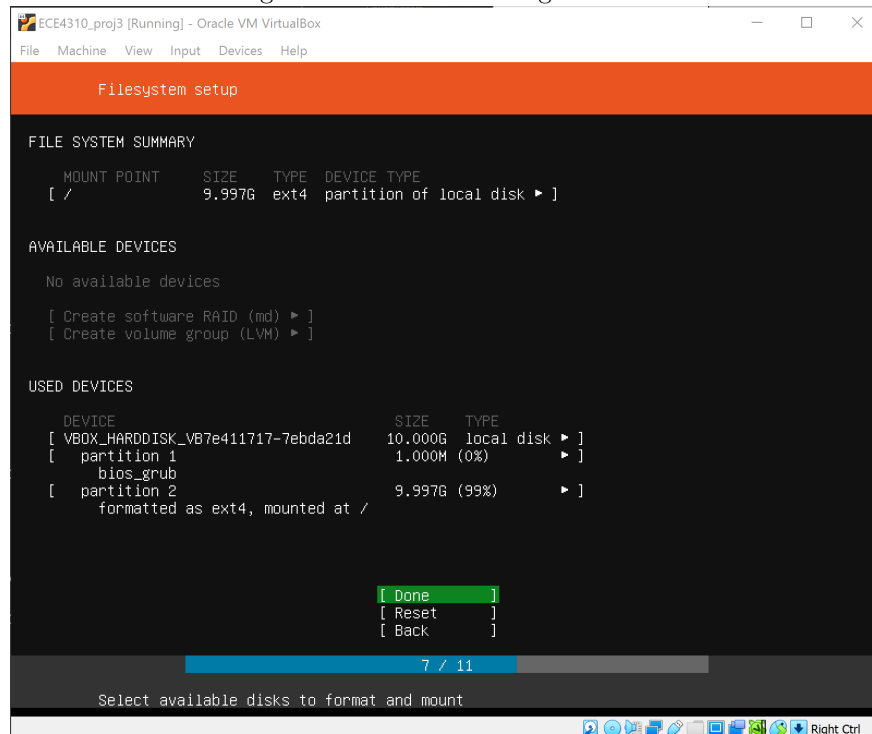Figure 11: Ubuntu is being installed

Figure 12: Ubuntu is being installed
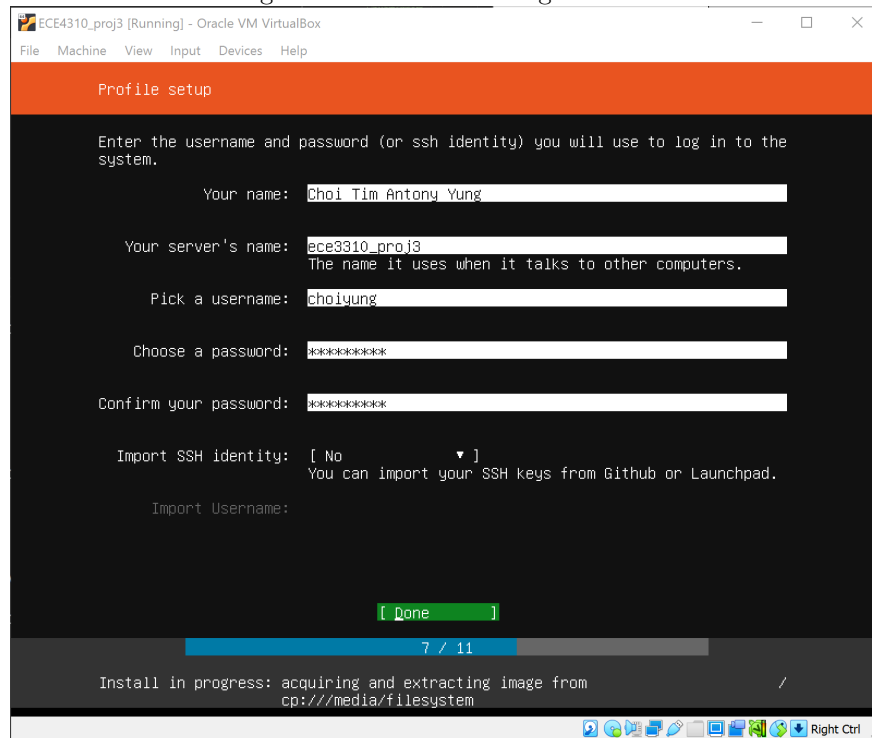
Figure 13: Ubuntu is being installed
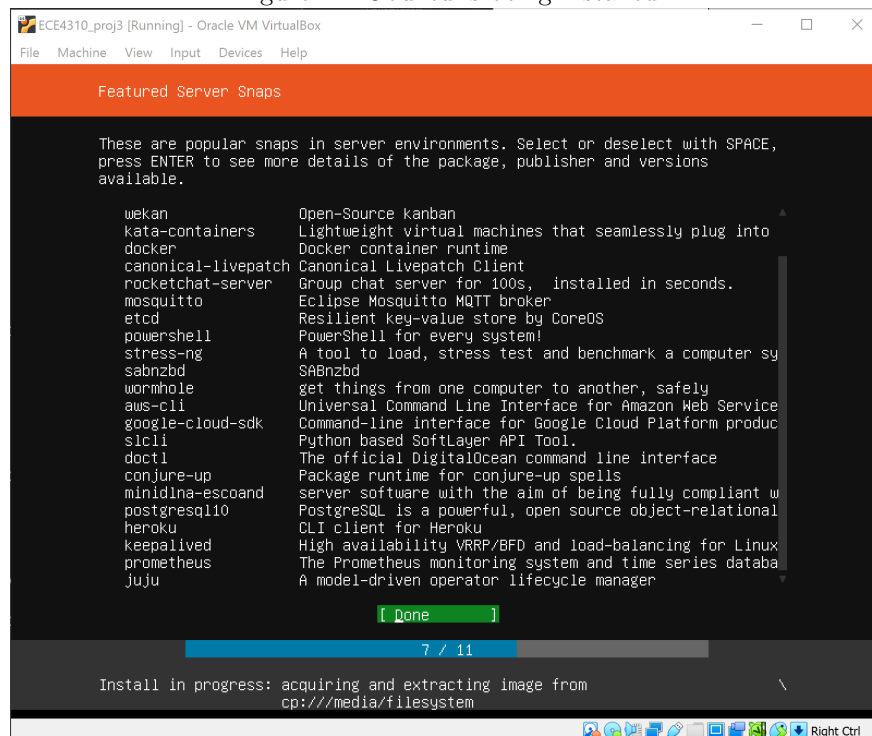

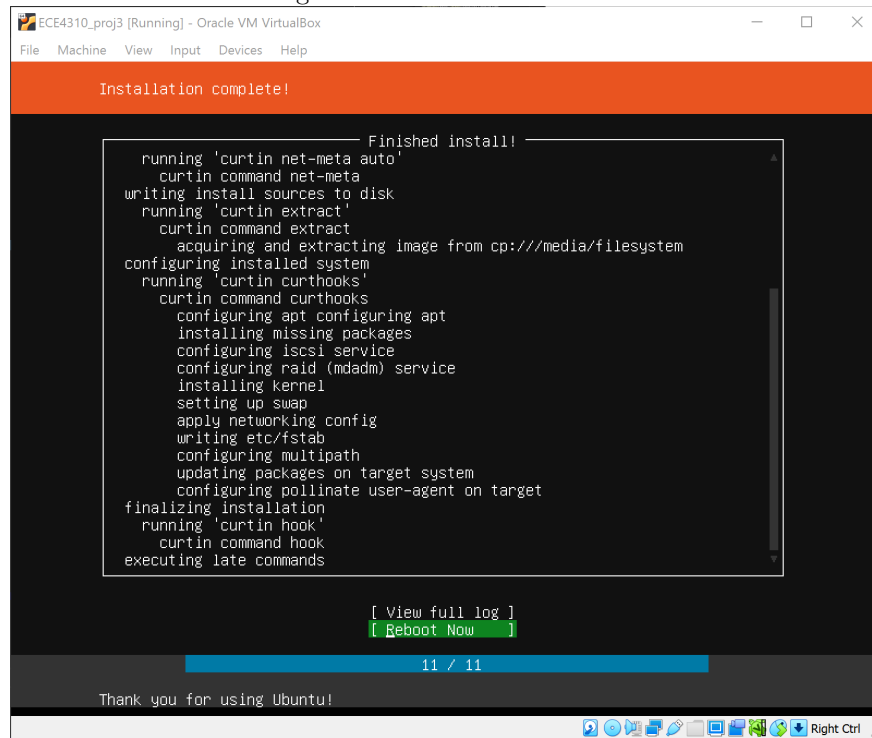Figure 14: Ubuntu is being installed
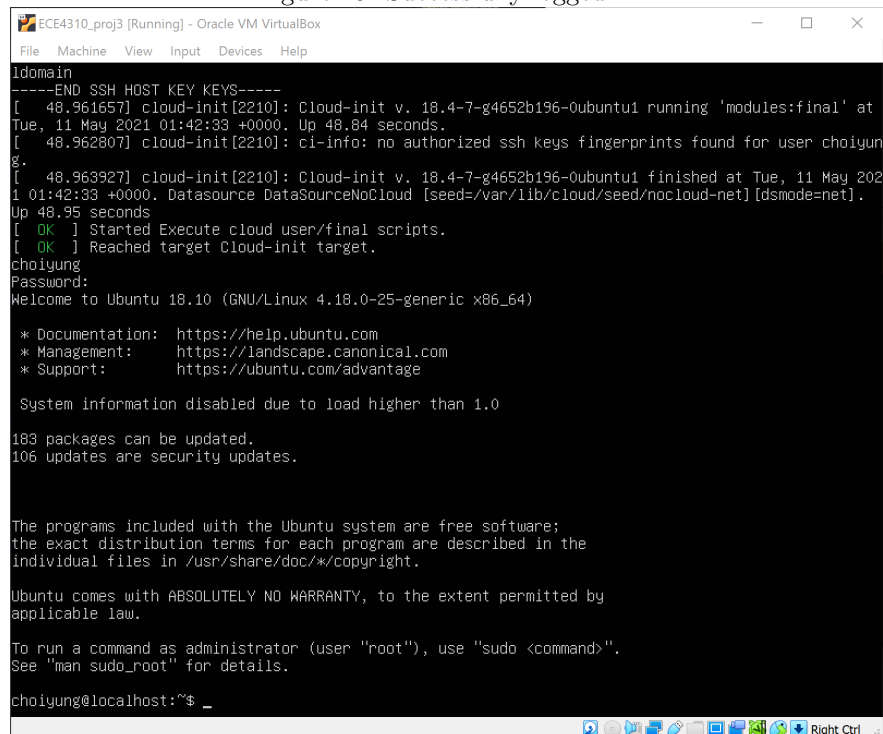
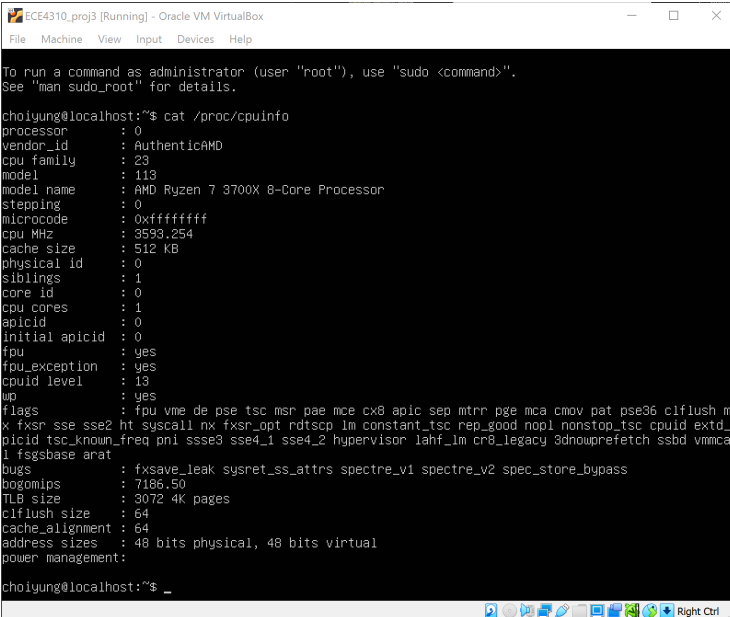Figure 15: Ubuntu is installed

1.5 Reboot and Log in

Figure 16: Successfully logged in

2 Virtual Machine Specifications
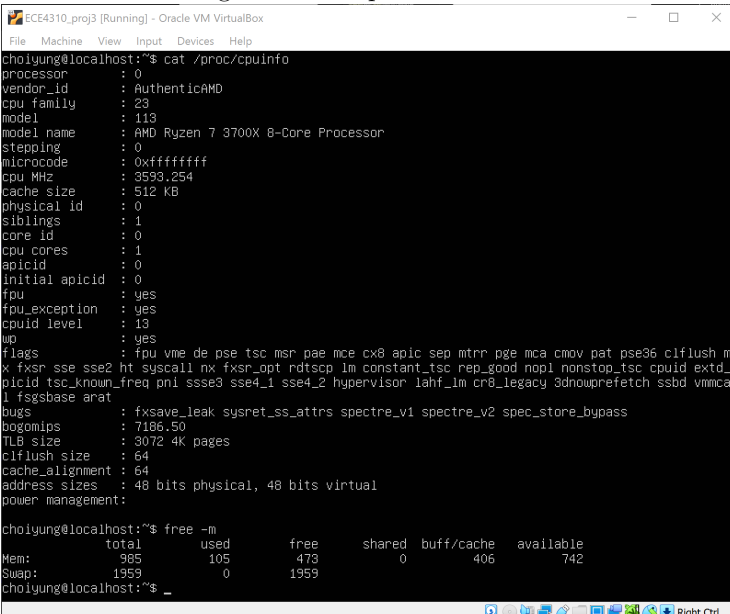
2.1 `cat /proc/cpuinfo`

Figure 17: Output of `cat /proc/cpuinfo`

1 CPU is assigned to my VM and it is an AMD Ryzen 7 3700X

2.2 `cat free -m`

Figure 18: Output of `free -m`

985 MB of memory is assigned to the VM

2.3 `cat uname -a`

Figure 19: Output of `uname -a`

The linux kernel version is 4.18.0-25-generic

2.4 `sudo fdisk -l /dev/sda`

Figure 20: Output of `sudo fdisk -l /dev/sda`

10737418240 bytes ≈ 10 GB of disk space is allocated to the VM

2.5 lspci | grep Ether

Figure 21: Output of lspci | grep Ether

An Intel Corporation 82540EM Gigabit Ethernet Controller (rev 02) network card is installed.