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Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b

Experiment -1B: Installation of UNIX Operating System (Ubuntu OS)

1. **Aim:** To install Ubuntu Operating System.

2. **Objectives:** After study of this experiment, the student will be able to

- Understand installation process of Ubuntu OS.
- Install Ubuntu operating system.

3. **Outcomes:** After study of this experiment, the student will be able to

- Install Ubuntu OS in a single boot or dual boot mode alongside Windows OS. (L402.4)

4. **Prerequisite:** Introduction to Ubuntu operating system.

5. **Requirements**: Personal Computer, Ubuntu Operating System set-up, Internet Connection.

6. Pre-Experiment Exercise:

Brief Theory:

UNIX Operating System

UNIX is an operating system developed at AT&T Bell Laboratories and released in 1973. It is a portable, multitasking, multiuser and time-sharing operating system. UNIX operating systems are widely used in PCs, servers and mobile devices. The UNIX environment was also an essential element in the development of the Internet and networking.

Ubuntu OS

The environment in which the agent acts is called as its task environment. The agent's properties can be grouped under PEAS (Performance, Environment, Actuators, Sensors) representation model. PEAS is a type of model on which an AI agent works upon.

Name: Parth Dali
Class: IT A
Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b
7. Laboratory Exercise

A. Procedure:

STEP1: Boot from USB Stick or CD.

Insert the DVD or USB stick on the system and then reboot the machine. Change the boot sequence on BIOS/UEFI to boot a system from DVD/USB by pressing F2, F10 or F12 keys (read the vendor manual for more information).

STEP2: Preparing to Install Ubuntu 20.04

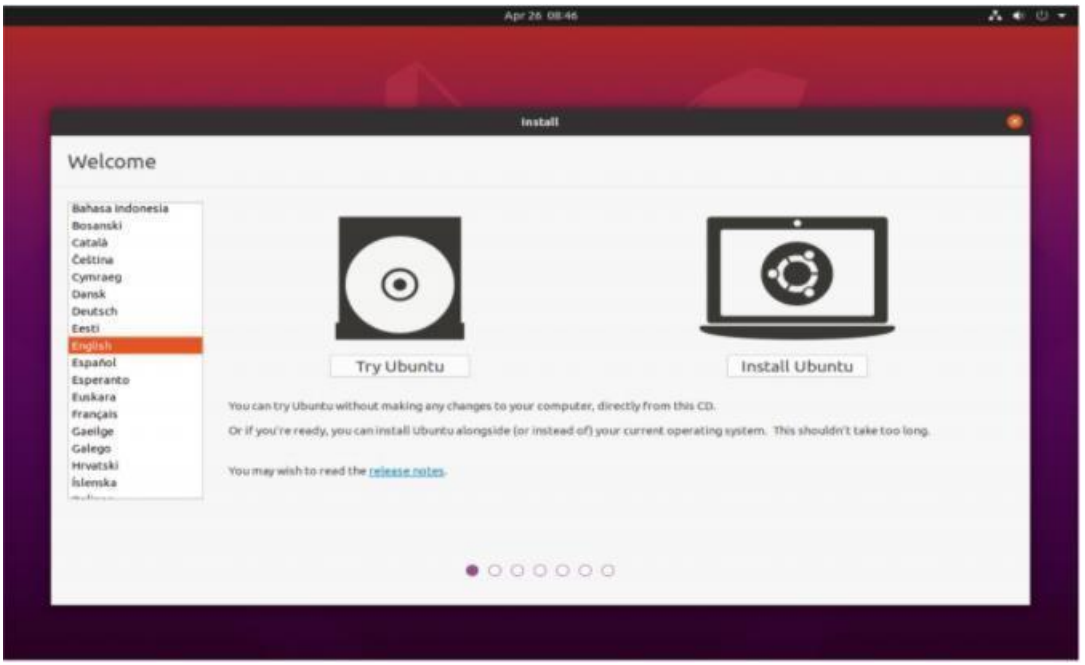
LTS UEFI System

Once the system boots up from DVD/USB drive, the grub boot screen should appear on your machine. Select Ubuntu from the menu and then press Enter.

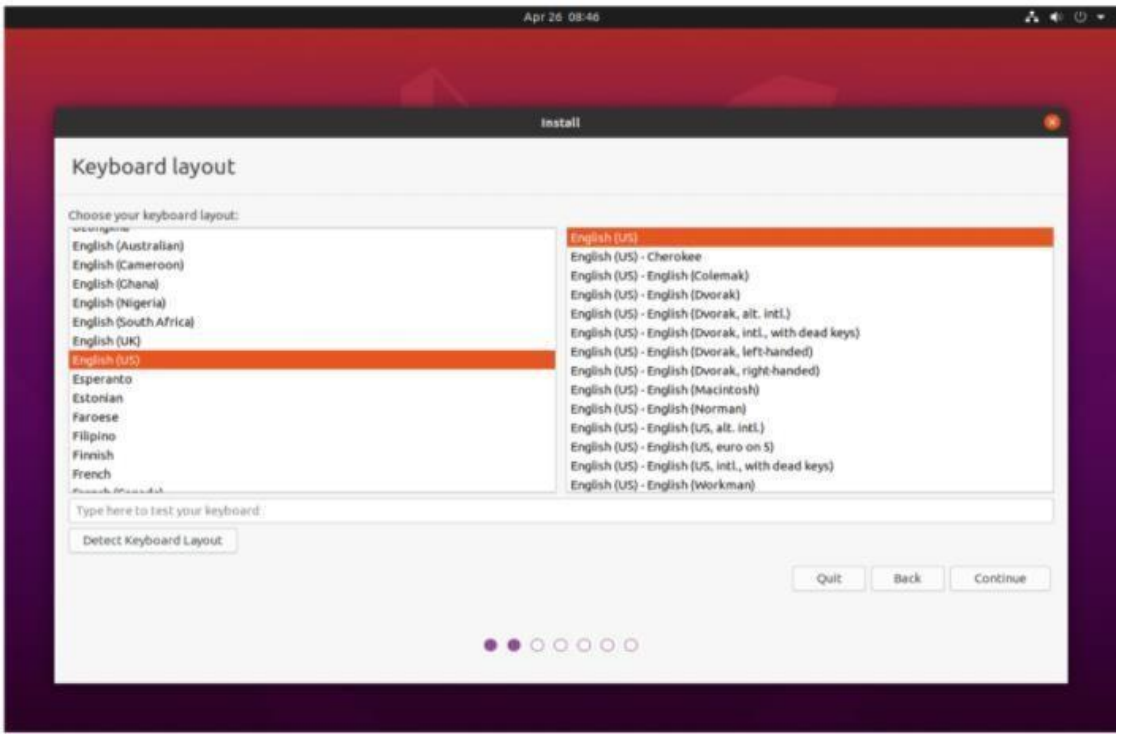
Name: Parth Dali
Class: IT A
Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b

Press Ctrl+C to cancel all filesystem checks.

Name: Parth Dali
Class: IT A
Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b
STEP3:

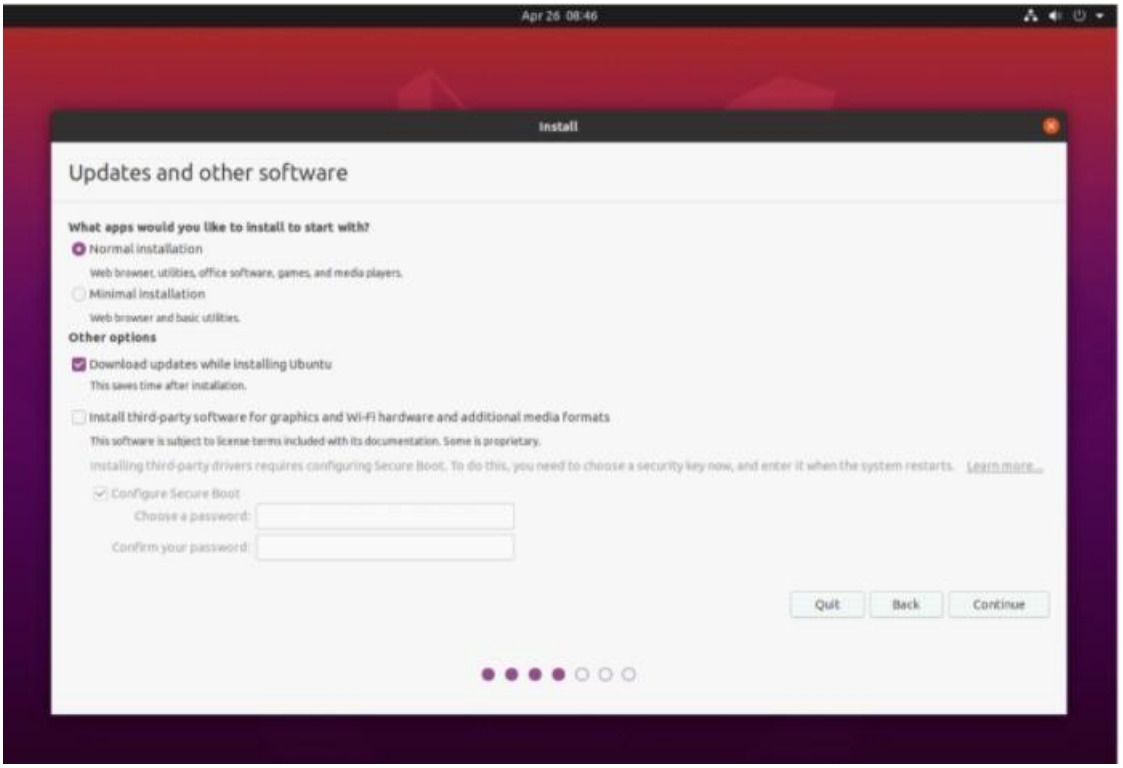


STEP4: Choose the Keyboard layout as ‘English (US)’ and then click Continue to proceed further.



Name: Parth Dali
Class: IT A
Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b

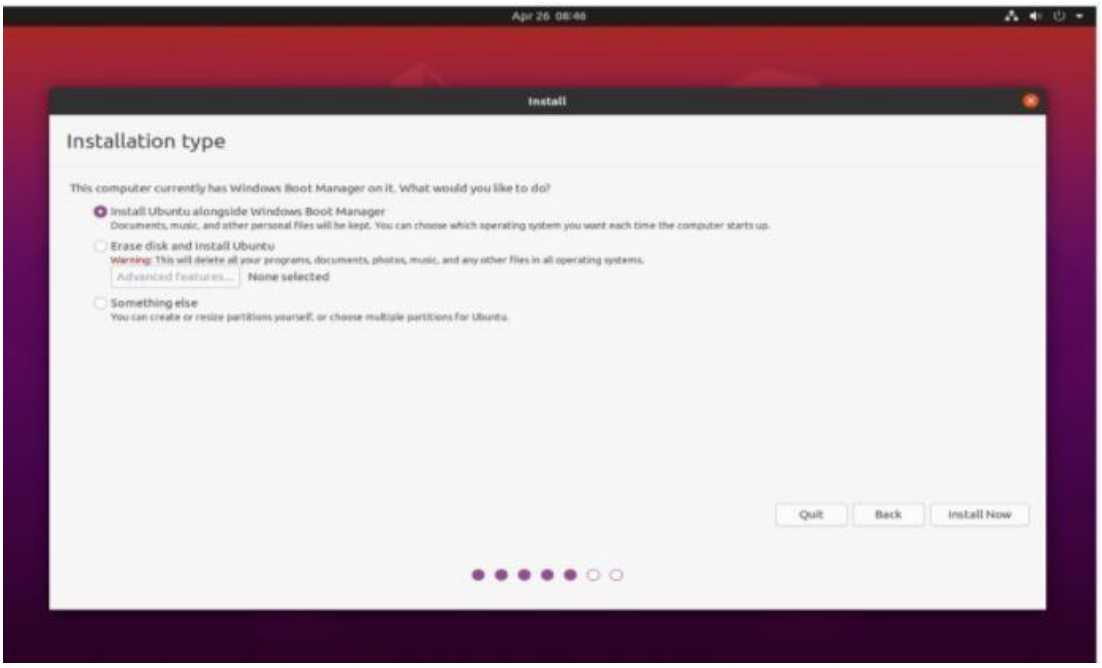
STEP5: Normal/Minimal Installation On this screen, you need to select the apps for installation. Select Normal Installation. Tick ‘Download updates while installing Ubuntu’. Click Continue.



STEP6: Installation Type

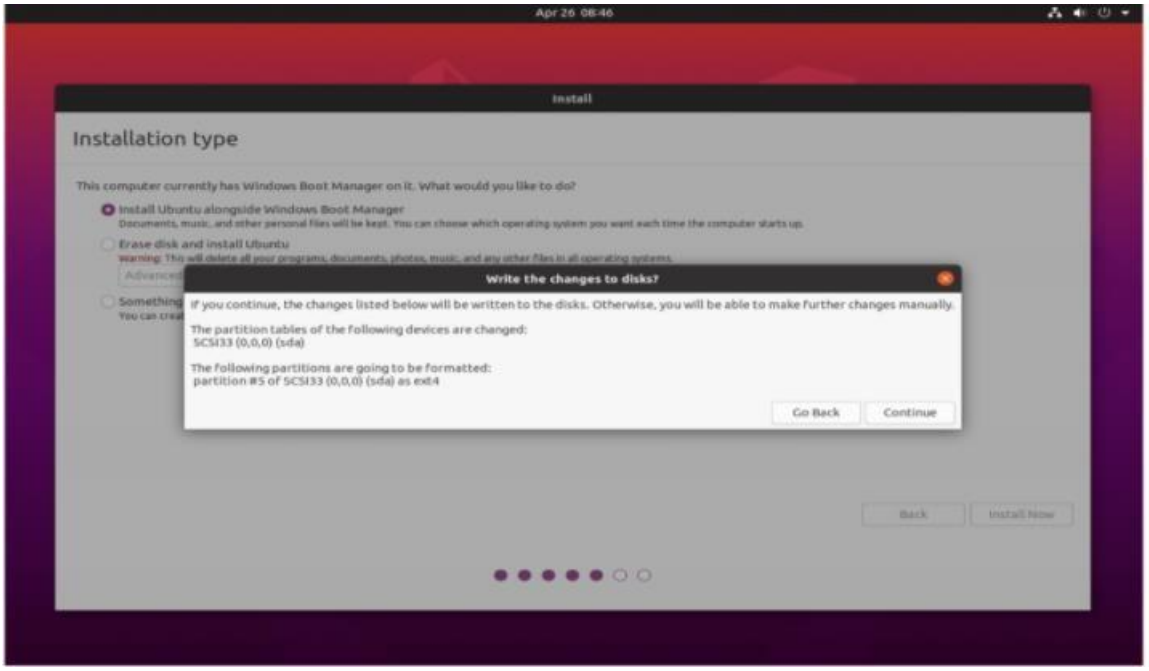
Disk Partitioning (Automatic Partitioning)

Select Install Ubuntu alongside Windows Boot Manager. Click Install Now.

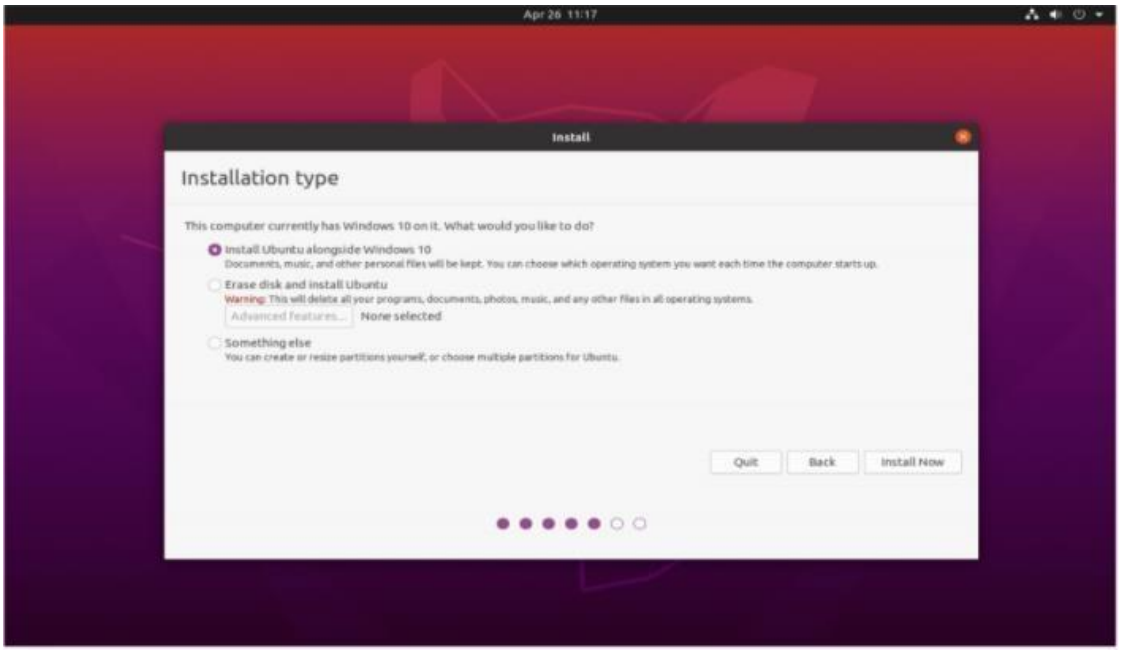


Name: Parth Dali
Class: IT A
Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b

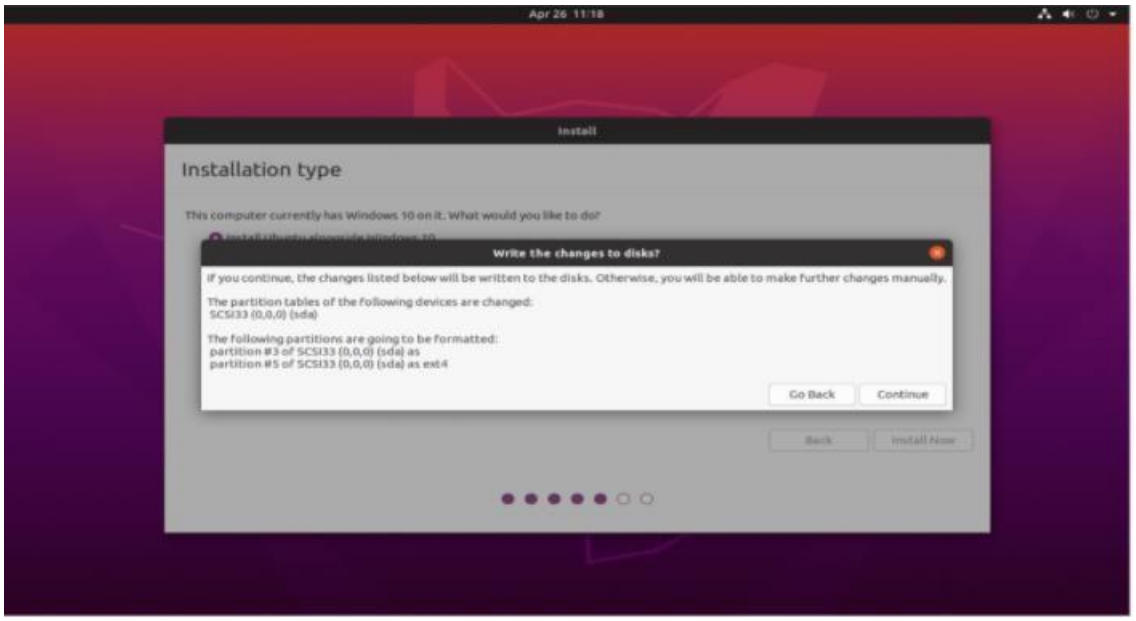
Click Continue to confirm the automatic partition creation.



Click Install Ubuntu Alongside Windows 10. Click Install Now.



Name: Parth Dali
Class: IT A
Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b



STEP7: Setting up Time Zone

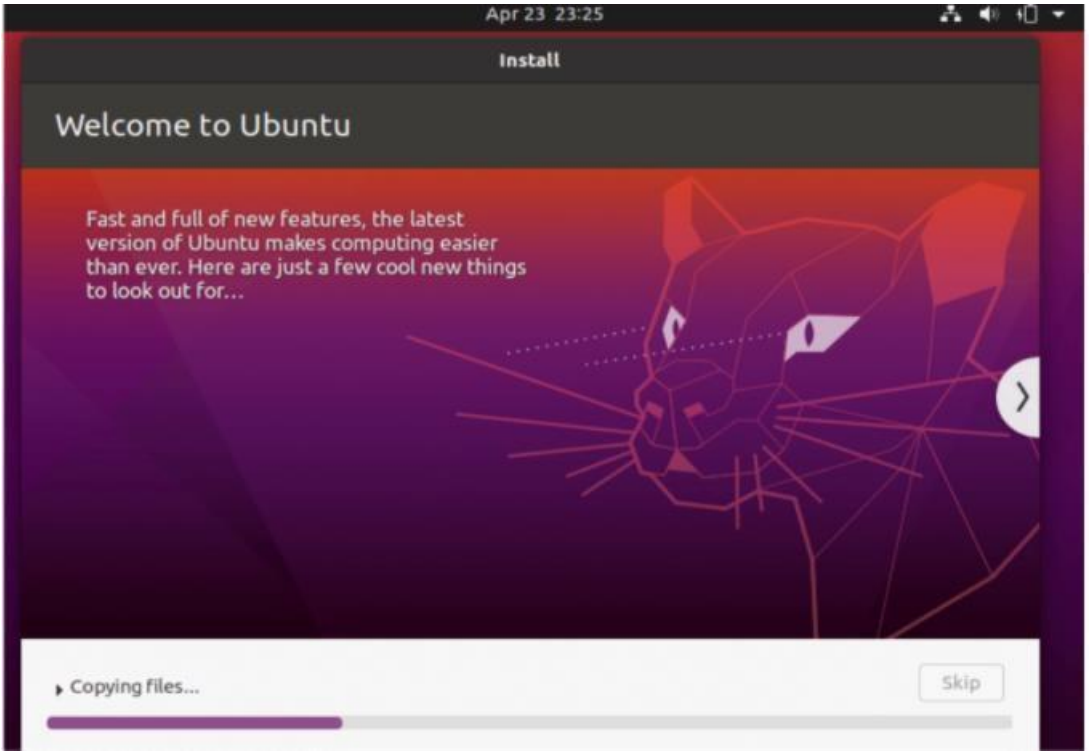
Select Location from the map as ‘Kolkata’. Click Continue.

STEP8: User creation

Fill the user creation form to create a user account (administrative account (sudo)) for your system.Click Continue.

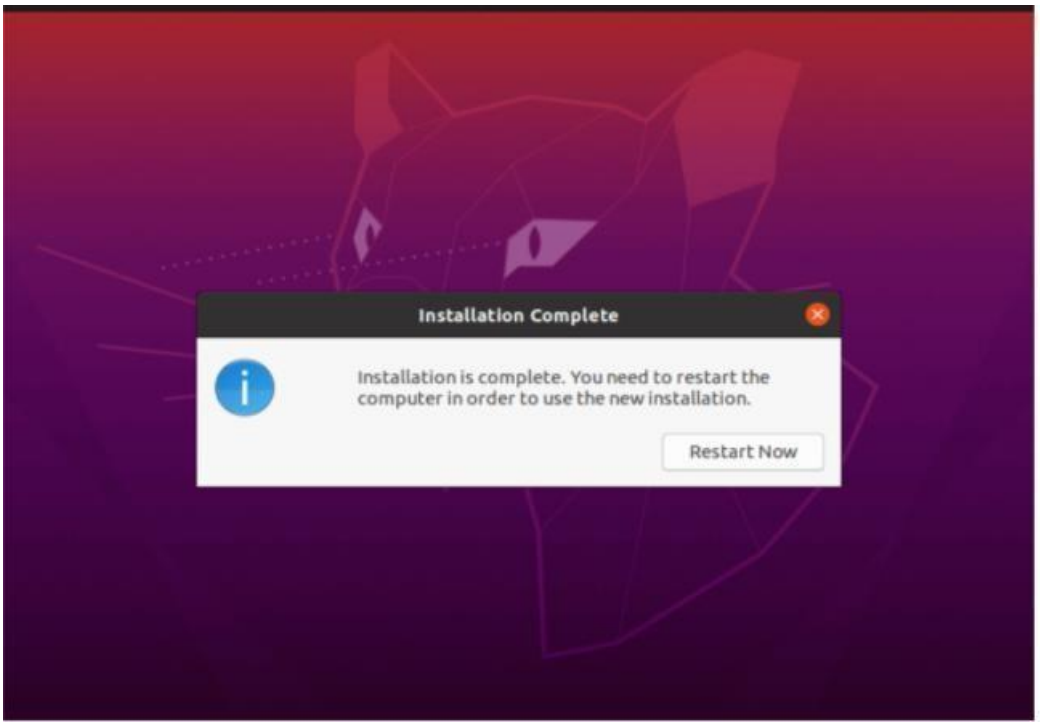
Name: Parth Dali
Class: IT A
Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b

STEP9: Ubuntu 20.04 – Installation Ubuntu installation will start now. The installation will take 20-30 minutes. You will see the following screens.



Name: Parth Dali
Class: IT A
Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b

STEP10: Installation Complete



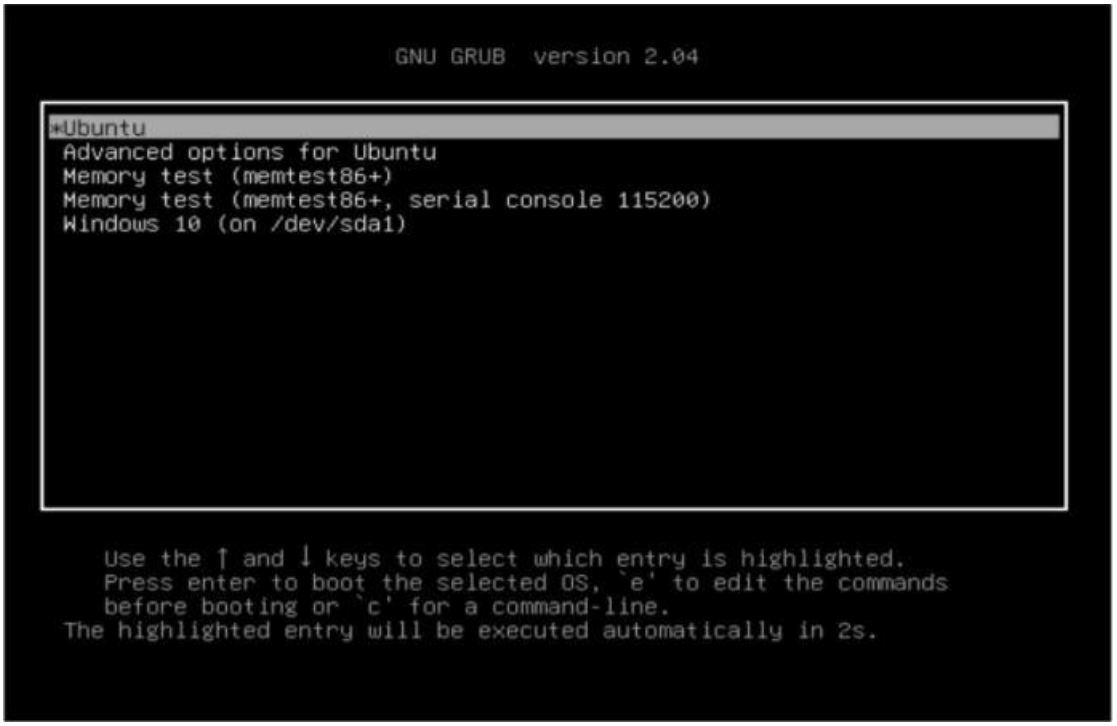
Name: Parth Dali
Class: IT A
Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b

STEP 11: Removing the installation drive.

Remove the bootable pendrive immediately after the computer is shut down. Wait for the computer to restart.

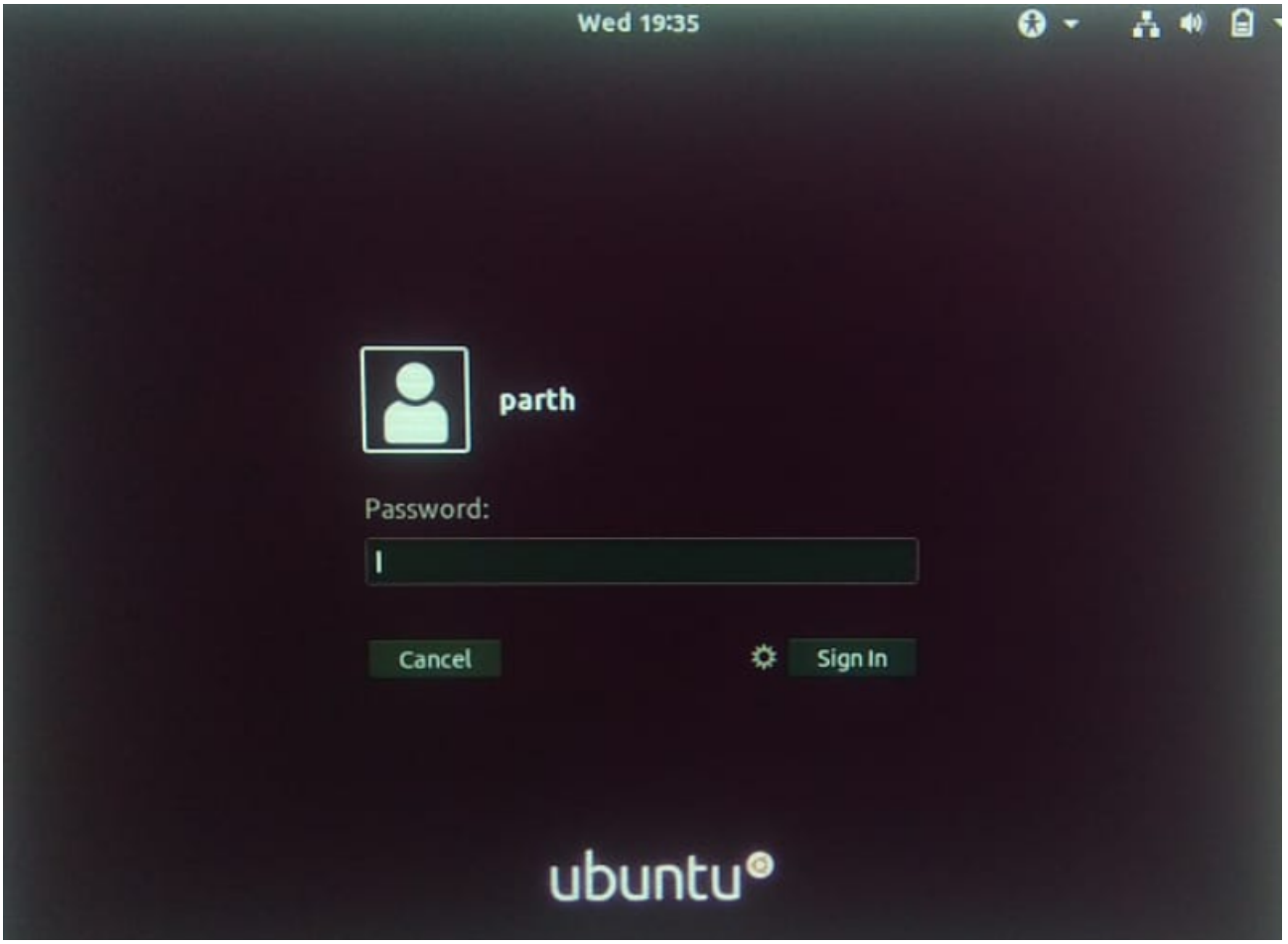
STEP 12: Booting into Ubuntu 20.04

After restarting the computer, the GRUB loader will appear. It will ask you to select the operating system which you want to load. Select Ubuntu with the help of arrow keys. Press Enter.



Name: Parth Dali
Class: IT A
Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b

STEP 13: Logging in Log in with your credentials to get the desktop screen.



STEP 14: Post Installation

On successful login, you will get the welcome to Ubuntu wizard that would ask you to do a post-installation setup.

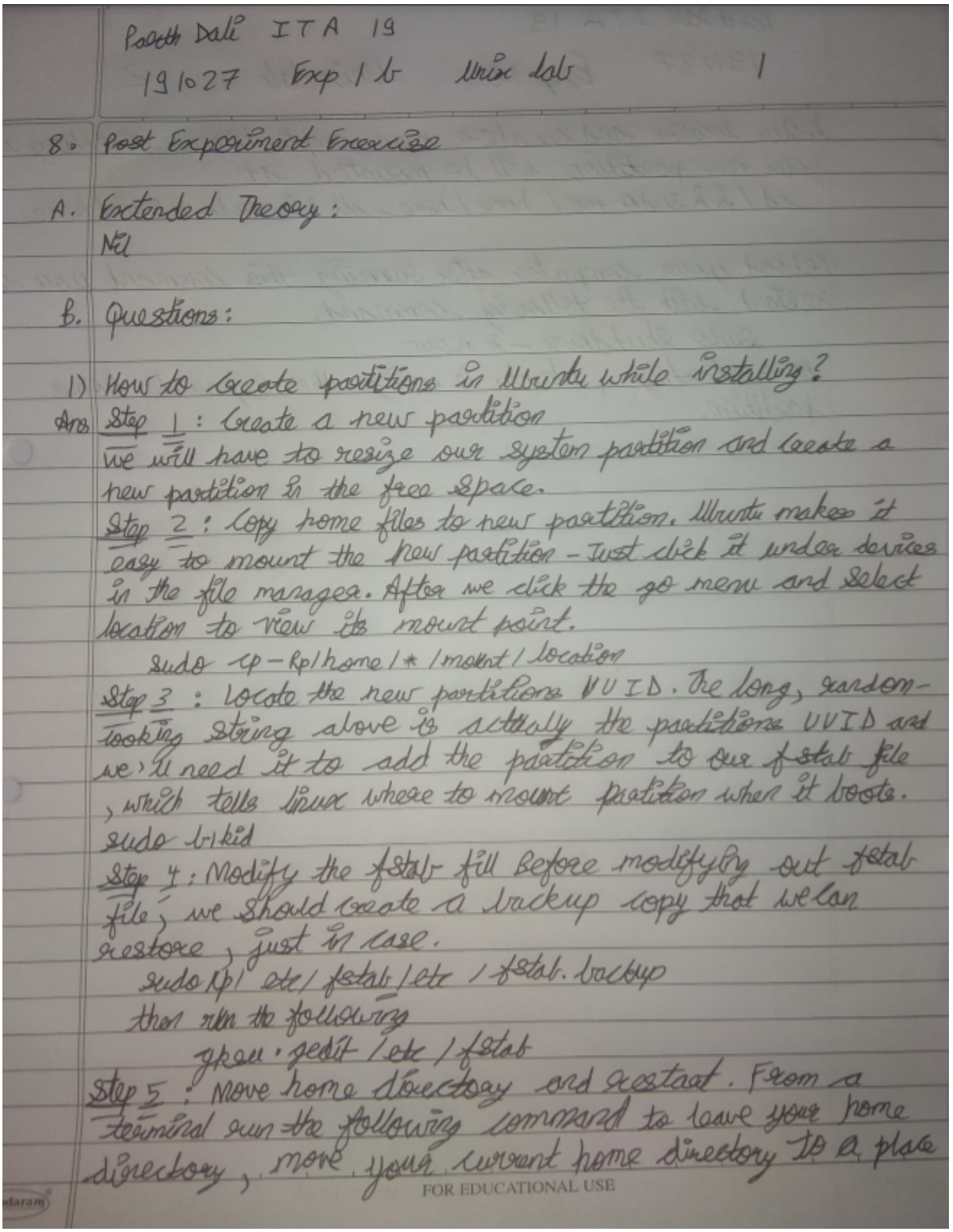
Name: Parth Dali
Class: IT A
Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b
8. Post-Experiments Exercise

A. Extended Theory: Nil.

B. Questions:

1. How to create partitions in Ubuntu while installing?

Ans:



Parth Dali IT A 19
191027 Exp 1 b Unix Lab 1

8. Post Experiment Exercise

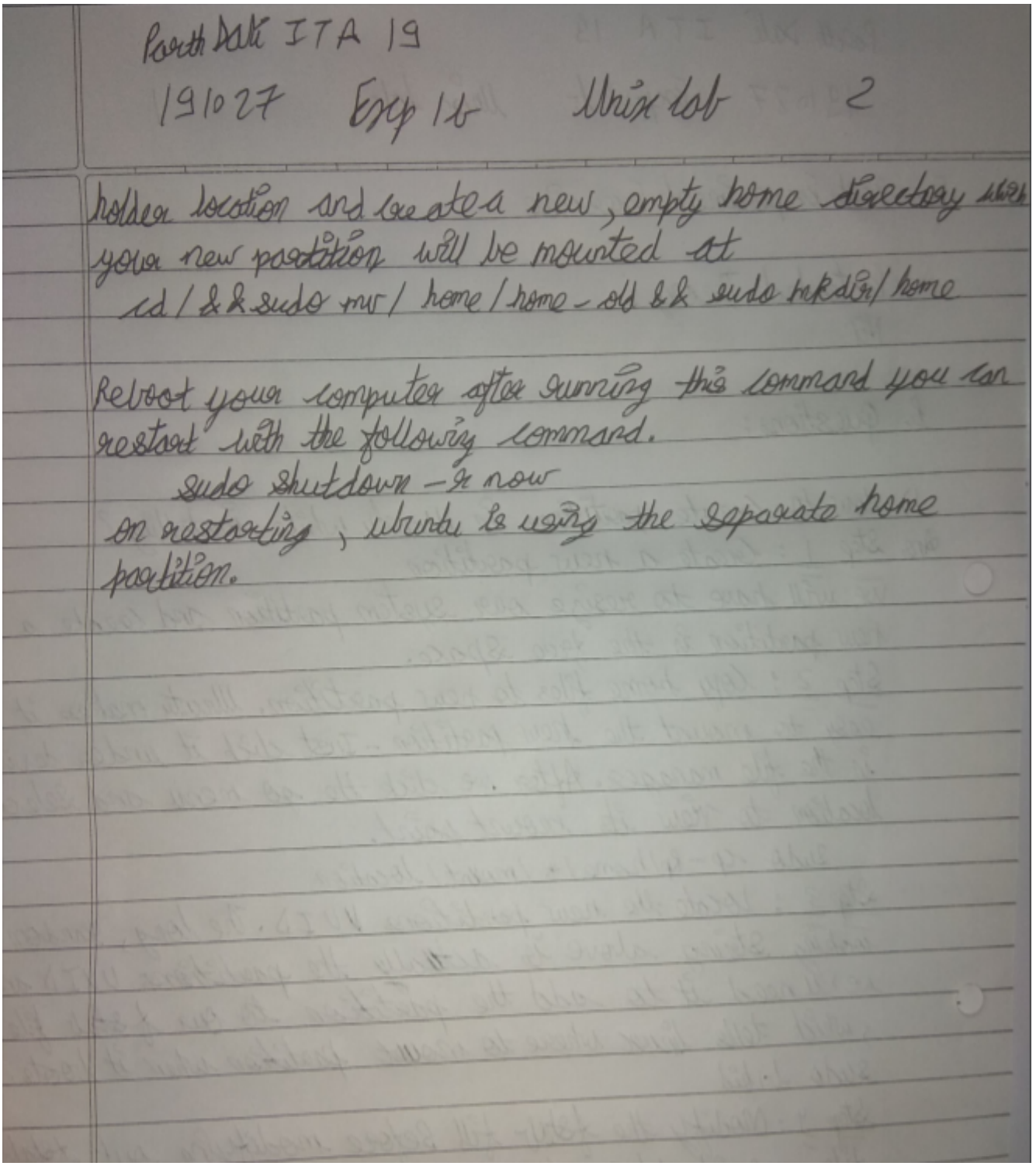
A. Extended Theory:
Nil

B. Questions:

1) How to create partitions in Ubuntu while installing?

Ans Step 1: Create a new partition
We will have to resize our system partition and create a new partition in the free space.
Step 2: Copy home files to new partition. Ubuntu makes it easy to mount the new partition - Just click it under devices in the file manager. After we click the go menu and select location to view its mount point.
sudo cp -Rp /home/* /mount/location
Step 3: Locate the new partitions UUID. The long, random-looking string above is actually the partitions UUID and we'll need it to add the partition to our fstab file, which tells linux where to mount partition when it boots.
sudo blkid
Step 4: Modify the fstab file Before modifying out fstab file, we should create a backup copy that we can restore, just in case.
sudo cp /etc/fstab /etc/fstab.backup
then run the following
gksu gedit /etc/fstab
Step 5: Move home directory and restart. From a terminal run the following command to leave your home directory, move your current home directory to a place

Name: Parth Dali
Class: IT A
Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b



Parth Dali IT A 19
191027 Exp 1b Unix Lab 2

holder location and create a new, empty home directory where your new partition will be mounted at
cd / && sudo mv / home / home - old && sudo mkdir / home

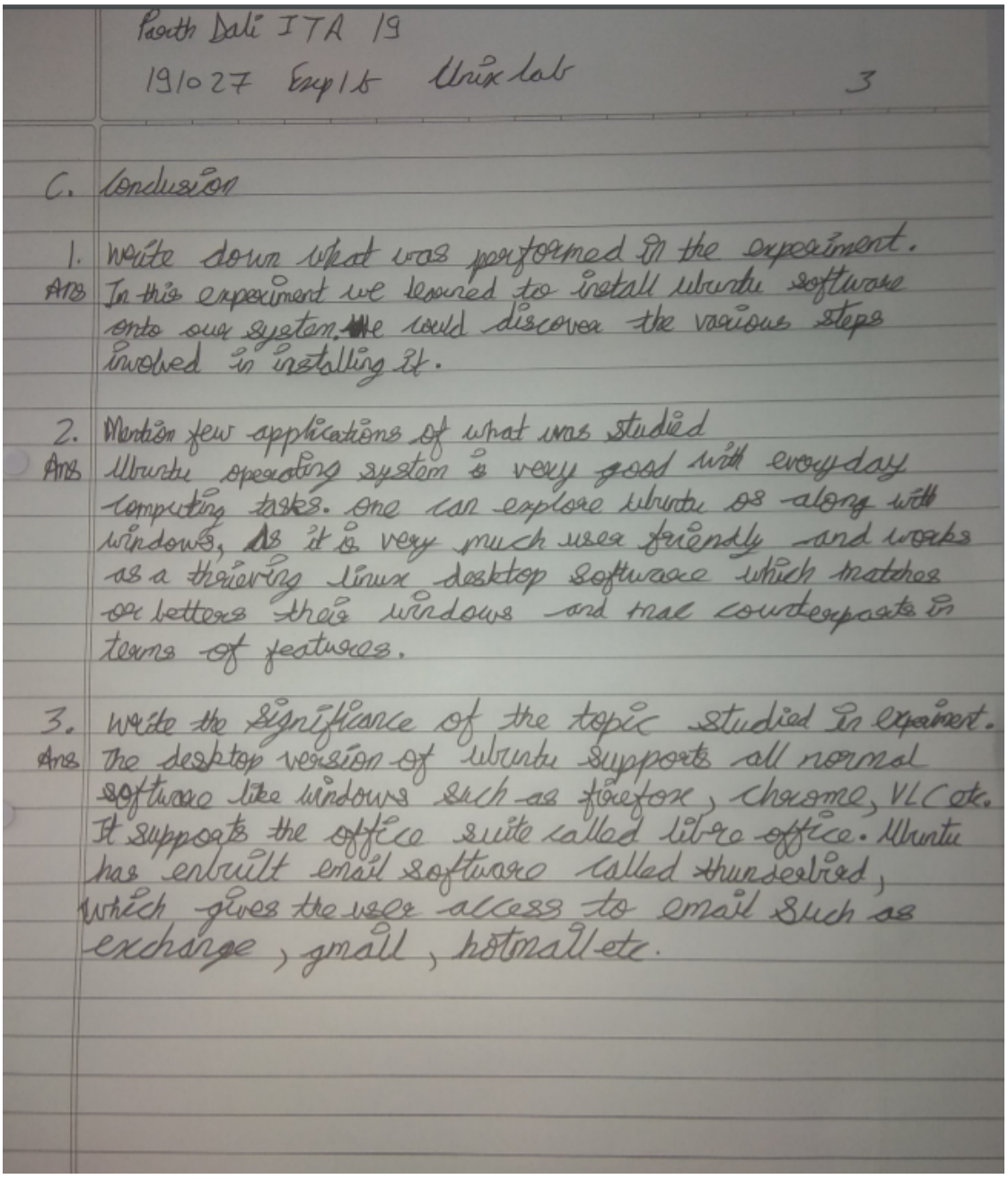
Reboot your computer after running this command you can restart with the following command.
sudo shutdown -r now
on restarting, ubuntu is using the separate home partition.

Name: Parth Dali
Class: IT A
Roll No: 19
Pid: 191027
Subject: Unix Lab
Exp 1 b

C. Conclusion:

1. Write what was performed in the experiment.
2. Mention a few applications of what was studied.
3. Write the significance of the topic studied in the experiment.

Ans:



Parth Dali IT A 19
191027 Exp 1b Unix lab 3

C. Conclusion

1. Write down what was performed in the experiment.
Ans In this experiment we learned to install ubuntu software onto our system. We could discover the various steps involved in installing it.

2. Mention few applications of what was studied
Ans Ubuntu operating system is very good with everyday computing tasks. One can explore ubuntu os along with windows, as it is very much user friendly and works as a thriving linux desktop software which matches or betters their windows and mac counterparts in terms of features.

3. Write the significance of the topic studied in expriment.
Ans The desktop version of ubuntu supports all normal software like windows such as firefox, chrome, VLC etc. It supports the office suite called libre office. Ubuntu has enbuilt email software called thunderbird, which gives the user access to email such as exchange, gmail, hotmail etc.

D. References:

1. https://www.geeksforgeeks.org/introduction-to-unix-system/.

2. https://tutorials.ubuntu.com/tutorial/tutorial-install-ubuntu-desktop#