“ *STUDENT MANAGEMENT SYSTEM*”

A MINI- PROJECT REPORT ON

Submitted in partial fulfillment of the requirements

For the degree of

Bachelor of Engineering

In

Information Technology

by

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(Affiliated to University of Mumbai)

(2020)

Ramrao Adik Institute of Technology

(Affiliated to the University of Mumbai)
Dr. D. Y. Patil Vidyanagar,Sector 7, Nerul, Navi Mumbai 400706.

CERTIFICATE

This is to certify that,Mini Project entitled

"STUDENT MANAGEMENT SYSTEM USING BASH SCRIPTING"

is a bonafide work done by

Student Names
1.BHAVESH SHINDE
2.SIDHESH VAITY
3.SHIVAM PANDEY

and is submitted in the partial fulfillment of the requirement for the degree of

Bachelorof Engineering
in
Information Technology
to the
University of Mumbai

Supervisor
Prof.Nilima M.Dongre

Project Guide
Nilima Dongre

Head of the department
Dr. Ashish Jadhav

Certificate of Approval by Examiners

This Mini Project report entitled " Student Management System " is a bonafide work done by Student Names under the supervision of Prof.Nilima Dongre approved for the award of Bacheor Degree in Information Technology, University of Mumbai.

Examiners :

1. . . . . .

2. . . . . .

Supervisors :

1. . . . . .

2. . . . . .

Principal :

. . . . . .

Date :

Place :

Ramrao Adik Institute of Technology

DECLARATION

We declare that this written submission represents our ideas in our own words and where others' ideas or words have been included, we have adequately cited and referenced the original sources. We also declare that we have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

Name and Roll No. of Students **Signature**

1. BHAVESH SHINDE(18IT1020)
2. SIDHESH VAITY(18IT2008)
3.SHIVAM PANDEY(18IT2033)

Date:

Place:

ACKNOWLEDGEMENT

The project “Student Management System” is creative work of many minds. A proper synchronization between individual is must for any project to be completed successfully. One cannot imagine the power of the force that guides us all and neither can we succeed without acknowledging it.
We take this opportunity to express my profound gratitude and deep regards to our Guide **Nilima Dongre**, Department of the Information Technology Engineering for her or her exemplary guidance, monitoring and constant encouragement throughout the completion of this mini project.

We would like to express our gratitude to **Dr. Ashish Jadhav,** Head of the department, Information Technology Engineering for encouraging and inspiring us to carry out the project in the department lab. We take this privilege to express my sincere thanksare thankful to **Dr. Mukesh D. Patil, Principal RAIT,** for his constant support and motivation.

We also would like to thank all the staff members Department of the Information Technology Engineering for providing us with the required facilities and support towards the completion of the project.

Last but not the least we are thankful to our parents and friends for their constant Inspiration, encouragement and well wishes by which we have made a challenging project.

STUDENT- BHAVESH B. SHINDE(18IT1020) Signature

PREFACE

We take great opportunity to present this Mini Project report on "**STUDENT MANAGEMENT SYSTEM"** and put before readers some useful information regarding our project.

We have made sincere attempts and taken every care to present this matter in precise and compact form, the language being as simple as possible. We are sure that the information contained in this volume certainly prove useful for better insight in the scope and dimension of this project in it true perspective.

The task of the completion of the project though being difficult was made quite simple, interesting and successful due to deep involvement and complete dedication of our group members.

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ABSTRACT

Our mini-project that we present here today is 'Student Management System'. But the question that comes to our mind is what is exactlys is a 'Student Management System?

- WHAT IS STUDENT MANAGEMENT SYSTEM?

The following mini-project is a system that alllows employees and the designated authorities of an educational institution to enter ,store and manipulate records and information of all students studying various courses in the respective institution. As mentioned above students may undertake any course in an institute like college or school, this project will focus on the students that are studying in an engineering college regardless of the department since in majority of colleges the department to which a student belongs can be identified on the basis of his or her Roll NO.

For any educational establishment , the need of an efficient student management system or database is necessary to store the credentials of their students helping them to keep a track of their students. But at the same time it becomes essential that the people involved with the use of this system can easily use this system . Keeping this in mind a user-friendly system that is easily accessible when it comes to entering, updating , viewing as well as deleting any records or information of a student

CHAPTER -1

INTRODUCTION

INTRODUCTION

1.1 INTRODUCTION TO SCRIPTING LANGUAGES

Usually shells are interactive that mean, they accept command as input from users and execute them. However some time we want to execute a bunch of commands routinely, so we have type in all commands each time in terminal. Shell scripts are similar to the batch file in MS-DOS. Each shell script is saved with .sh file extension eg . myscript.sh A shell script have syntax just like any other programming language. If you have any prior experience with any programming language like Python, C/C++ etc. it would be very easy to get started with it.

1.2 WHY PARTICULAR SCRIPTING LANGUAGE

- There are many reasons to write shell scripts –
- To avoid repetitive work and automation
- System admins use shell scripting for routine backups
- System monitoring
- Adding new functionality to the shell etc.

1.3 PROBLEM STATEMENT

- Prone to costly errors, a single mistake can change the command which might be harmful
- Slow execution speed
- Design flaws within the language syntax or implementation
- Not well suited for large and complex task

1.4 OBJECTIVES

- The command and syntax are exactly the same as those directly entered in
- command line, so programmer do not need to switch to entirely different
- syntax: Writing shell scripts are much quicker
- Quick start

CHAPTER -2

LITERATURE SURVEY

2.1 MOTIVATION

With rising number of student is different educational establishments it is more important than ever before that a user friendly, efficient student credential storing and management system to work at its optimum state

1. It is essential for long term storage of the information of student even after they have passed out of the institute making student management system more and more important.

2. It assists teachers and faculty to keep a track of students and their need to help them in the best possible manner

3. Student management system ensures easy access for the students and officials for information

4.Manipulation of data and records of the student as per the requirements making the system more and more flexible that will increase the efficiency of the structure involved in managing the records and credentials of the students

5. Keeping the text involved clear and simple to overcome the language barrier for several employees

6.If any new parameter or field is to be added it can be done easily since the program has been developed with the help of bash shell scripting language known for being very easy to understand ,modify and is very flexible

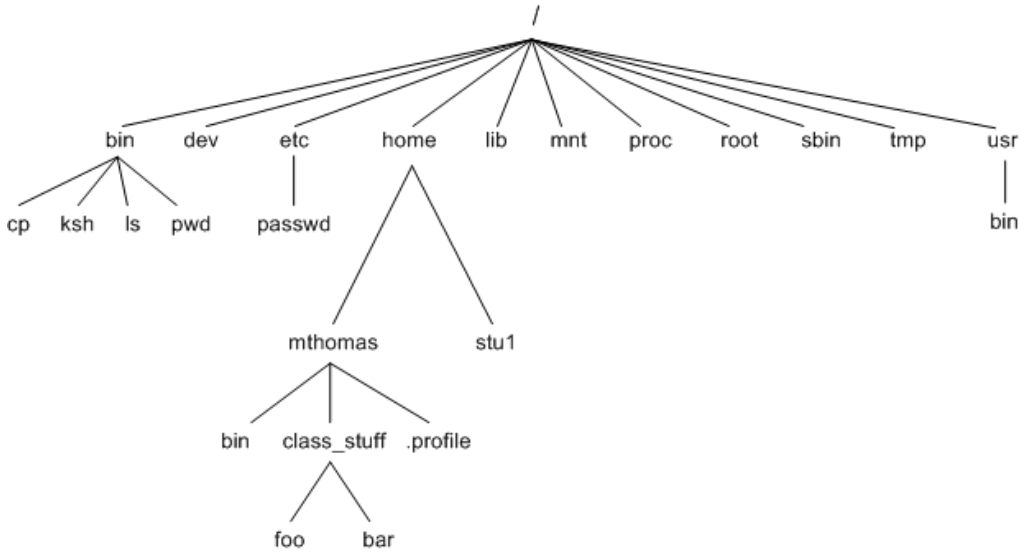
7.Student Management System replacing the traditional record storage and book keeping will also become economically more feasible

.

CHAPTER -3

PROPOSED SYSTEM

3.1 INTRODUCTION OF PROPOSED SYSTEM AND ARCHITECTURE



The File Operations are performed over the ubuntu operating system and there are various types of directories present in this system.

The main components here are:

1. /boot : Contains the boot loader

2. /home : Contains the home directories of users.

3. /bin : All the executable binaries and commands used by all the users on the system are located here.
4. /sbin : This contains the system executable binaries typically used by system administrators.

5. /lib : Contains the system libraries that support the binaries in /bin and /sbin.

6. /etc : Contains the configuration files for network, boot-time, etc.

7. /dev : This has the device files i.e. usb, terminal device or any other device attached to system are shown here.

8. /proc : Contains information about the process running.

9. /tmp : This is the temporary directory where many processes create the temporary files . required. This is purged each time the machine is booted.

3.2 HARDWARE AND SOFTWARE REQUIREMENTS

The following mini-project of Student Management system programmed using bash shell scripting language does not involve a conventional graphical user interface and thus it's specific requirements with their corresponding information is mentioned below

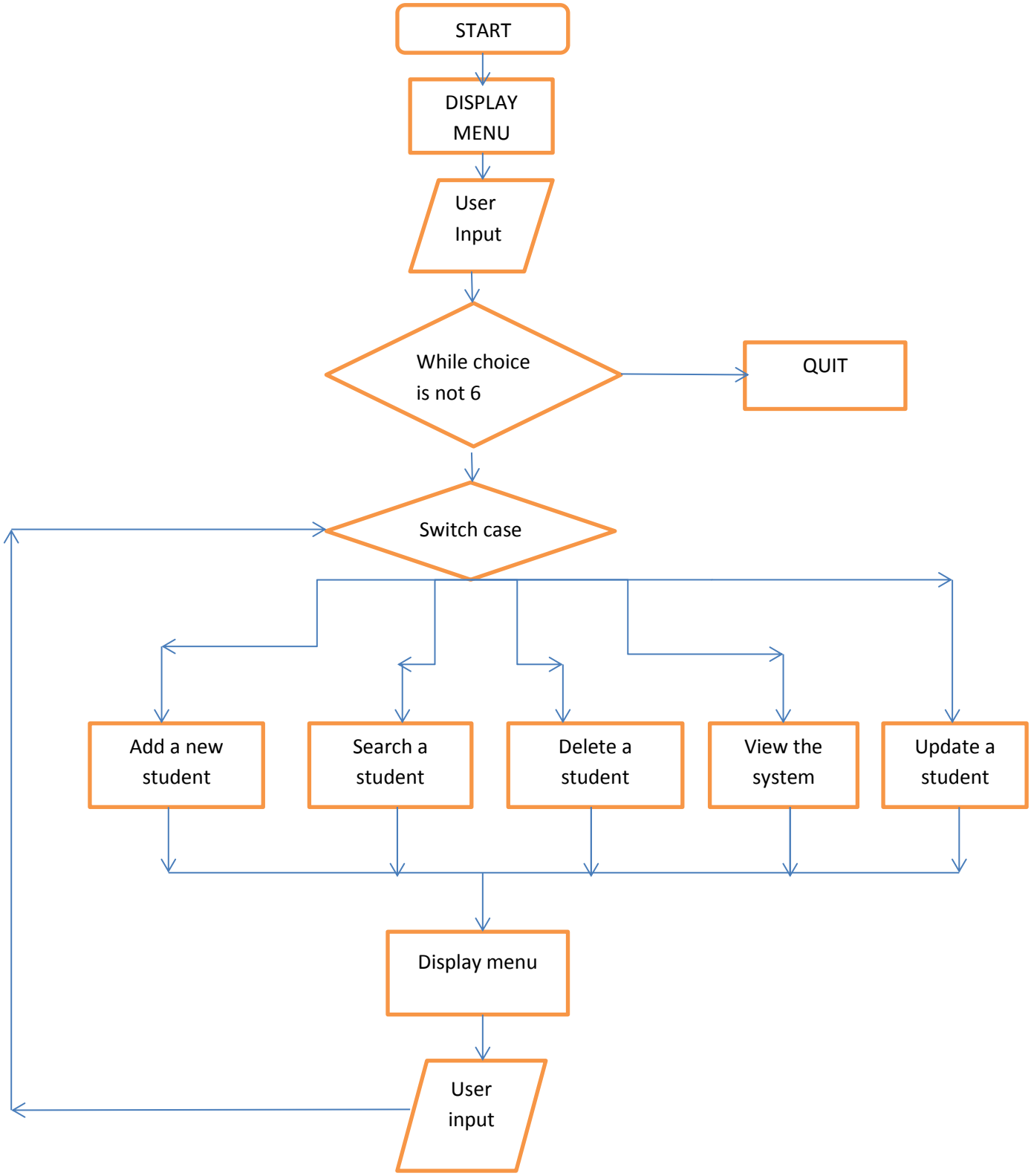
- Shell can be accessed by user using a command line interface. A special program called Terminal in linux/macOS or Command Prompt in Windows OS is provided to type in the human readable commands such as “cat”, “ls” etc. and then it is being execute. The result is then displayed on the terminal to the user. It will list all the files in current working directory in long listing format. Working with command line shell is bit difficult for the beginners because it’s hard to memorize so many commands. It is very powerful, it allows user to store commands in a file and execute them together. This way any repetitive task can be easily automated. These files are usually called batch files in Windows and Shell Scripts in Linux/macOS systems

•A command-line interface (CLI) is an operating system shell that uses alphanumeric characters typed on a keyboard to provide instructions and data to the operating system, interactively. For example, a teletypewriter can send codes representing keystrokes to a command interpreter program running on the computer; the command interpreter parses the sequence of keystrokes and responds with an error message if it cannot recognize the sequence of characters, or it may carry out some other program action such as loading an application program, listing files, logging in a user and many others. Operating systems such as UNIX have a large variety of shell programs with different commands, syntax and capabilities. Some operating systems had only a single style of command interface; commodity operating systems such as MS-DOS came with a standard command interface but third-party interfaces were also often available, providing additional features or functions such as menuing or remote program execution.

CHAPTER –4

IMPLEMENTATION

4.1 SYSTEM BLOCK DIAGRAM



4.2 MODULE DESCRIPTION

Because of easy-to-use approach an employee or authority can easily access the system.After the system code is executed using the ./<filename.sh> statement a 6-optioned menu will appear in the screen . User can slect any option by entering the gven number in the required field the 6 options of the menu are as follows

"1. ADD A STUDENT'S INFORMATION TO THE SYSTEM."

"2. SEARCH A STUDENT'S INFORMATION"

"3. DELETE A STUDENT'S INFORMATION."

"4. VIEW ALL THE STORED STUDENTS AND RESPECTIVE INFORMATION "

"5. UPDATE A STUDENT'S INFORMATION"

"6. QUIT "

"ENTER YOU CHOICE:-"

the menu's options and the subsequent description one by one are given below

1) ADD A STUDENT'S INFORMATION TO THE SYSTEM.:

Under this option of the menu user, will be able to add a new student to an existing system or can create a new system that never existed before by making a first entry this option makes use of the simple "read " command to accept the information of the student. the information contains student's name,roll no., date of birth, department,avg cgpa and address

After giving the confirmation the data is stored and a simple view of the stored information is given

eg. NAME- JAKE CAHILL, ROLL NO. - 1001

to the user to check whether any mistake or error has been made that can be rectified using the update command then the system will ask user to hit enter to return to the menu again or will ask if the user wants to quit ,to hit the number in the menu for the quit command that is 6

2) SEARCH A STUDENT'S INFORMATION:

With the help of this option the user will be able to view information of a certain student as per the need. For this the user has to enter the RollNo. of the student to be searched(case sensitivity is not necessary), the information of the required student is then displayed. This option is selected by entering '2'. Here we make use of a simple command known as “grep” that will find the required student with the entered RollNo.

3) DELETE A STUDENT'S INFORMATION:

Through the use of this option the user will be able to delete information of the student one at a time, multiple decisions are excluded in this process. Keeping the case sensitivity in mind the system will accept the RollNo. of the student to be deleted from the user. After the user enters the RollNo. the student ,it's information will deleted and a message that the information has been deleted will be displayed on the screen. Then the system will ask user to hit enter to return to the menu again or will ask if the user wants to quit ,to hit the number in the menu for the quit command that is 6

4) VIEW ALL THE STORED STUDENTS AND RESPECTIVE INFORMATION:

This option is used to display all the information that is stored at that particular moment in the system. For this we make the use of “cat” command and it will display the information of the student in the order in which they were entered the system . To view the records the user can choose that option by entering ‘4’

5) UPDATE A STUDENT'S INFORMATION:

With the help of this option of the menu the user can manipulate and make any changes to the data entered for any student and rectify their mistake . This is done by entering the RollNo. Of the student whose data is to be updated . Then the system will display the information of the student that will help the user to check the data. This is done since the update function worls such that the user has to enter the wrong data in the field asked and then has to enter the data with which it is to be replaced . This is done by using the “sed” command. If any record is not to be updated then the user can skip it by hitting the enter key

6) QUIT:

This option is used by the user to quit from the given system. This option has been designed in such a way that it will clear the entrie command line interface once this option is selected.

4.3 CODE

```
#!/bin/bash

while :
do
clear
echo "WELCOME TO THE STUDENT MANAGEMENT SYSTEM."
echo "1. ADD A STUDENT'S INFORMATION TO THE SYSTEM."
echo "2. SEARCH A STUDENT'S INFORMATION"
echo "3. DELETE A STUDENT'S INFORMATION."
echo "4. VIEW ALL THE STORED STUDENTS AND RESPECTIVE INFORMATION "
echo "5. UPDATE A STUDENT'S INFORMATION"
echo "6. QUIT"
read -p "ENTER YOU CHOICE:-" usr_cmd
clear

case $usr_cmd in
1)echo "ADD NEW STUDENT INFORMATION"
 read -p "ENTER STUDENT NAME:-" name
 read -p "ENTER STUDENT ROLL NO. :-" rno
 read -p "ENTER STUDENT DEPARTMENT. :-" dept
 read -p "ENTER STUDENT D.O.B. :-" dob
 read -p "ENTER AVERAGE CGPA :-" cgpa
 read -p "ENTER THE ADDRESS OF THE STUDENT :-" adde
 clear
 echo "NEW STUDENT INFO"
 echo " -> NAME: $name. -> ROLLNO.: $rno. -> DEPARTMENT : $dept -> DOB:
$dob -> CGPA: $cgpa -> ADDRESS : $adde "
 echo " $name: $rno : $dept :  $dob : $cgpa : $adde" >> proto1.log
 echo "INFORMATION SAVED SUCCESSFULLY"
;;
2)echo "SEARCH STUDENT INFORMATION"
  read -p "ENTER THE ROLL NO. OF THE STUDENT TO BE SEARCHED:-"
search_query
  clear
  echo "SEARCH RESULTS ARE"
  grep -i $search_query proto1.log
;;
3)echo "DELETE THE STUDENT INFO"
  read -p "ENTER THE ROlL NO. OF THE STUDENT WHOSE INFO IS TO BE
DELETED(case sensitive):-" delete_string
  sed -i -e "/$delete_string/d" proto1.log
  echo "STUDENT INFORMATION HAS BEEN SUCCESSFULLY DELETED"
;;
4)echo "STUDENT INFORMATION STORAGE SYSTEM"
```

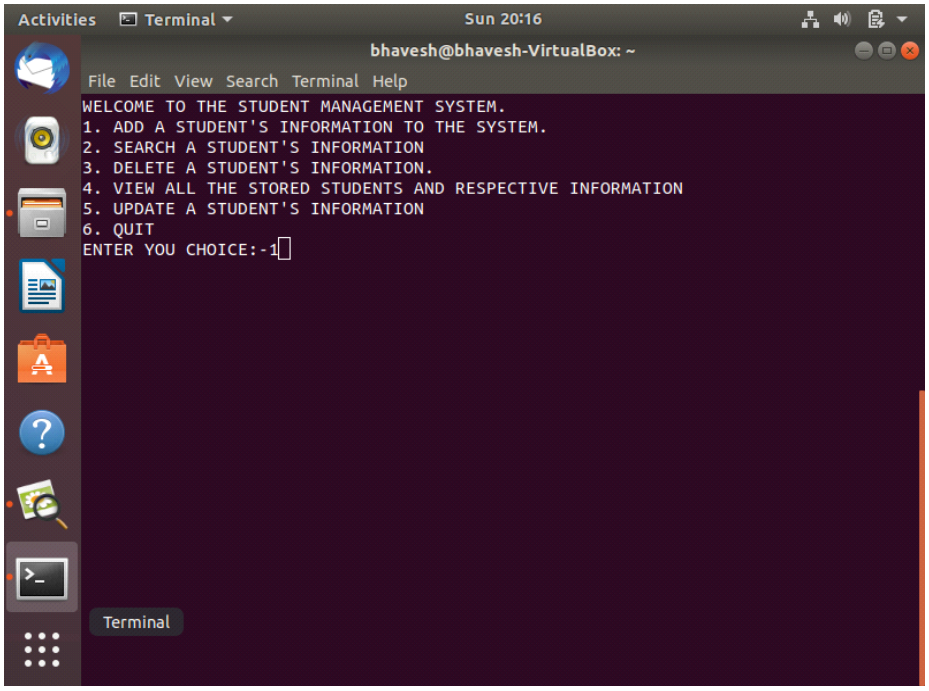
```
  echo ""
  cat proto1.log
;;
5)echo "UPDATE "
  echo "NOTE: IF A PARTICULAR FIELD IS NOT TO BE UPDATED HIT THE ENTER KEY
TO SKIP"
  read -p "ENTER THE ROlL NO. OF THE STUDENT WHOSE INFORMATION IS TO BE
UPDATED: " sr_query
  grep -i $sr_query proto1.log
  read -p "ENTER THE WRONG NAME IF NAME IS TO BE UPDATED:- " up_string
  read -p " ENTER THE NEW NAME OF THE STUDENT:- " name1
   sed -i "s/$up_string/$name1/" proto1.log
  read -p "ENTER THE OLD DEPARTMENT IF CHANGED:- " dept_string
  read -p " ENTER THE NEW DEPARTMENT OF THE STUDENT:- " dept1
   sed -i "s/$dept_string/$dept1/" proto1.log
   read -p "ENTER THE WRONG DOB IF TO BE UPDATED:- " dd_string
  read -p " ENTER THE NEW NAME OF THE STUDENT:- " dob1
   sed -i "s/$dd_string/$dob1/" proto1.log
  read -p "ENTER THE WRONG AVG CGPA IF TO BE UPDATED:- " cg_string
  read -p " ENTER THE NEW CGPA OF THE STUDENT:- " cg1
   sed -i "s/$cg_string/$cg1/" proto1.log
  read -p "ENTER THE WRONG ADDRESS IF TO BE UPDATED:- " adde_string
  read -p " ENTER THE NEW ADDRESS OF THE STUDENT:- " adde1
   sed -i "s/$adde_string/$adde1/" proto1.log
;;
6)break;;
*)echo "INVALID OPTION";;
esac;

read -p "Press 5 to Quit OR Hit Enter to Return to Main Menu:   "
confirm_exit
if [$confirm_exit -eq 6]
then break
fi
done
```

CHAPTER –5

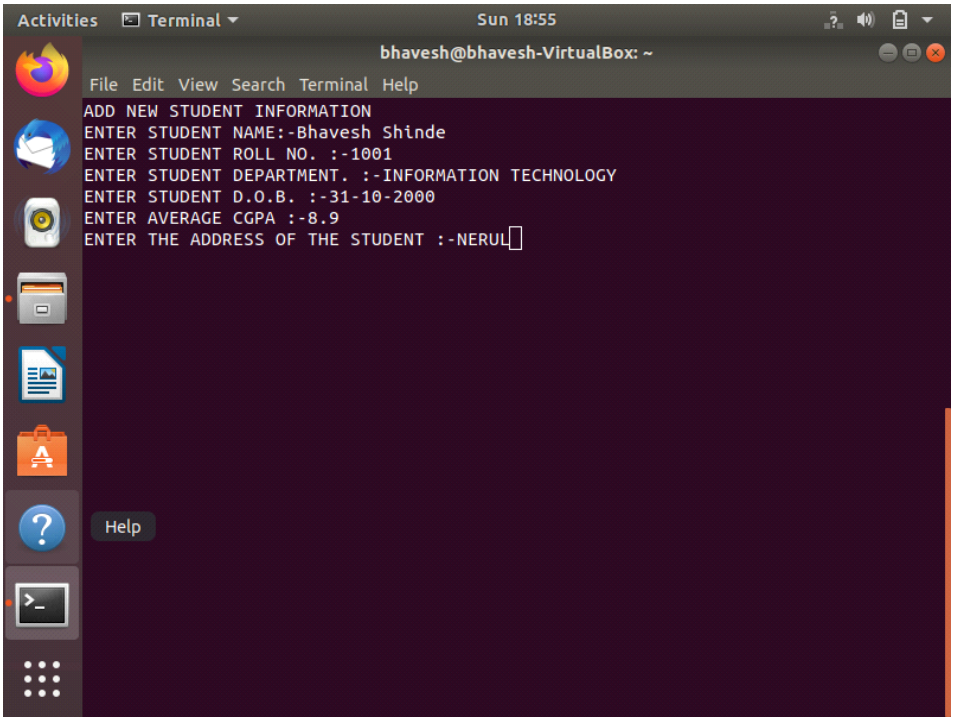
RESULT

5.1.1 OUTPUT SNAPSHOTS

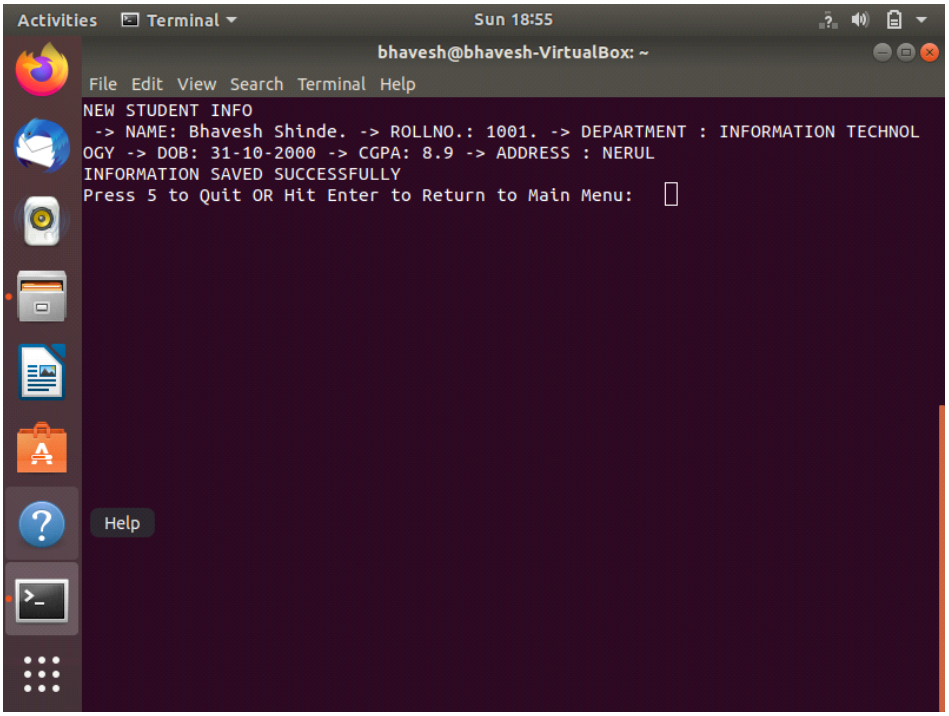
1.



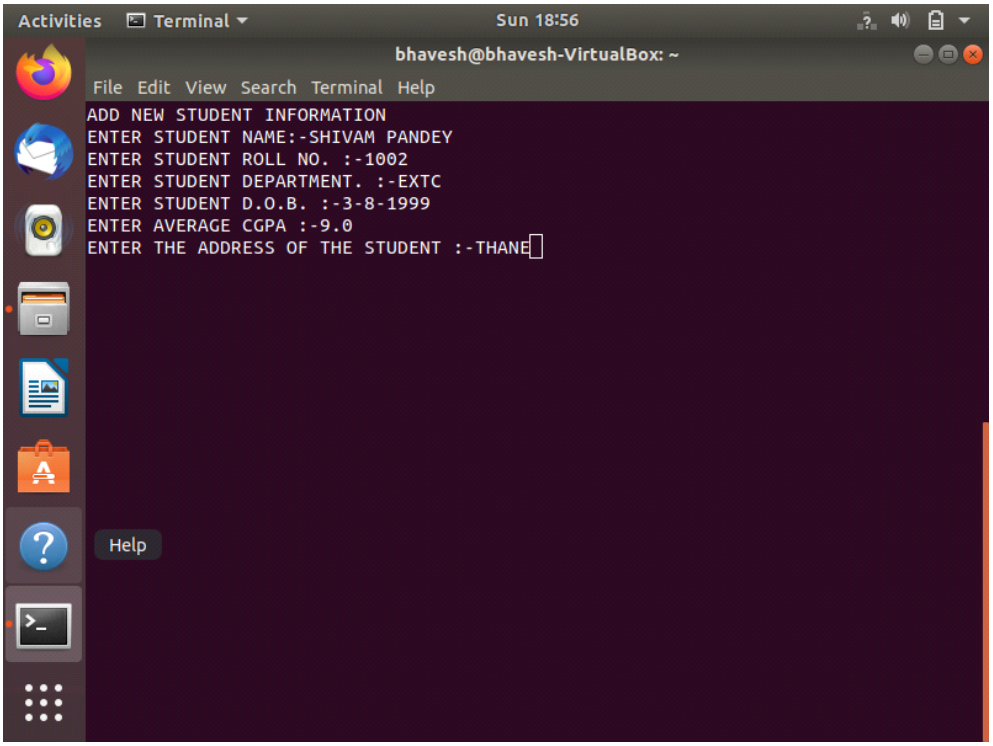
2.



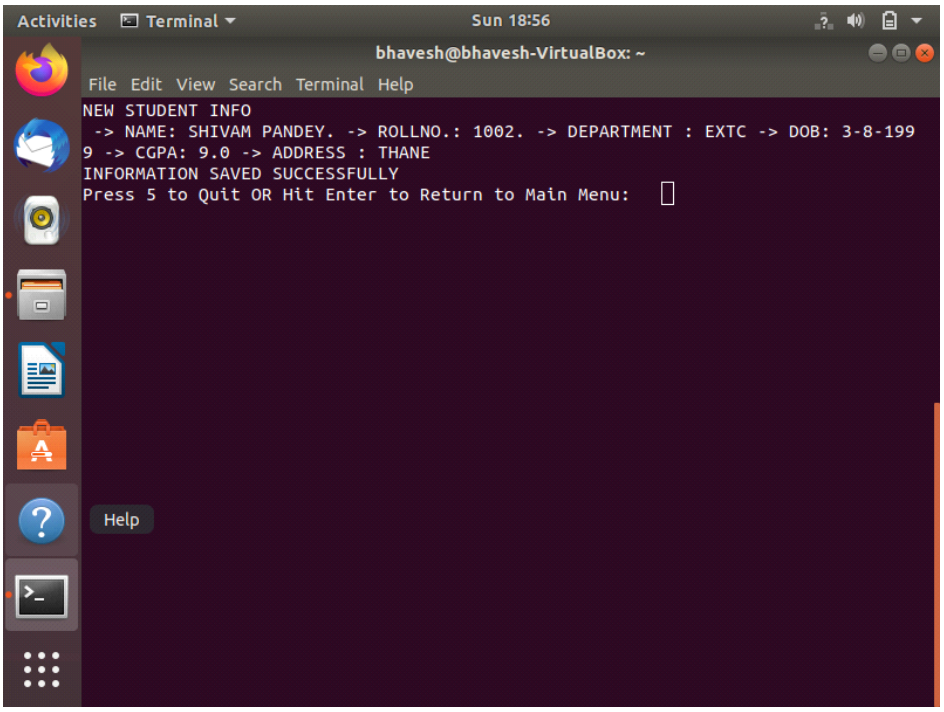
3.


Activities
Terminal
Sun 18:55
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
NEW STUDENT INFO
-> NAME: Bhavesh Shinde. -> ROLLNO.: 1001. -> DEPARTMENT : INFORMATION TECHNOL
OGY -> DOB: 31-10-2000 -> CGPA: 8.9 -> ADDRESS : NERUL
INFORMATION SAVED SUCCESSFULLY
Press 5 to Quit OR Hit Enter to Return to Main Menu:
Help

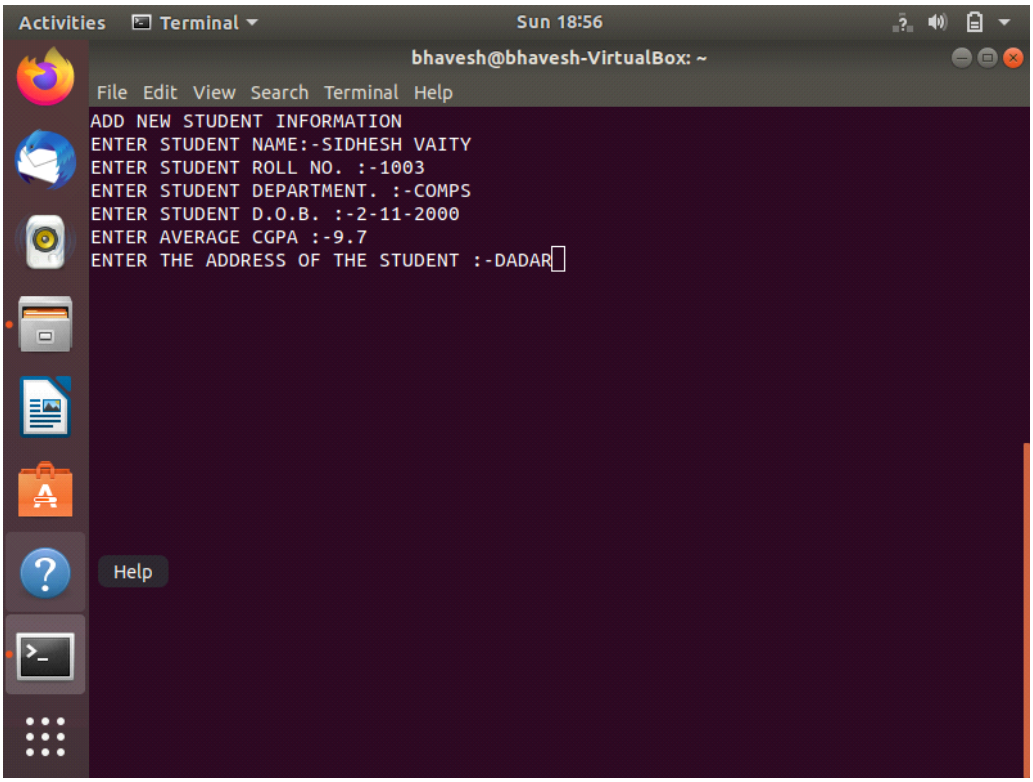
4.


Activities
Terminal
Sun 18:56
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
ADD NEW STUDENT INFORMATION
ENTER STUDENT NAME:-SHIVAM PANDEY
ENTER STUDENT ROLL NO. :-1002
ENTER STUDENT DEPARTMENT. :-EXTC
ENTER STUDENT D.O.B. :-3-8-1999
ENTER AVERAGE CGPA :-9.0
ENTER THE ADDRESS OF THE STUDENT :-THANE
Help

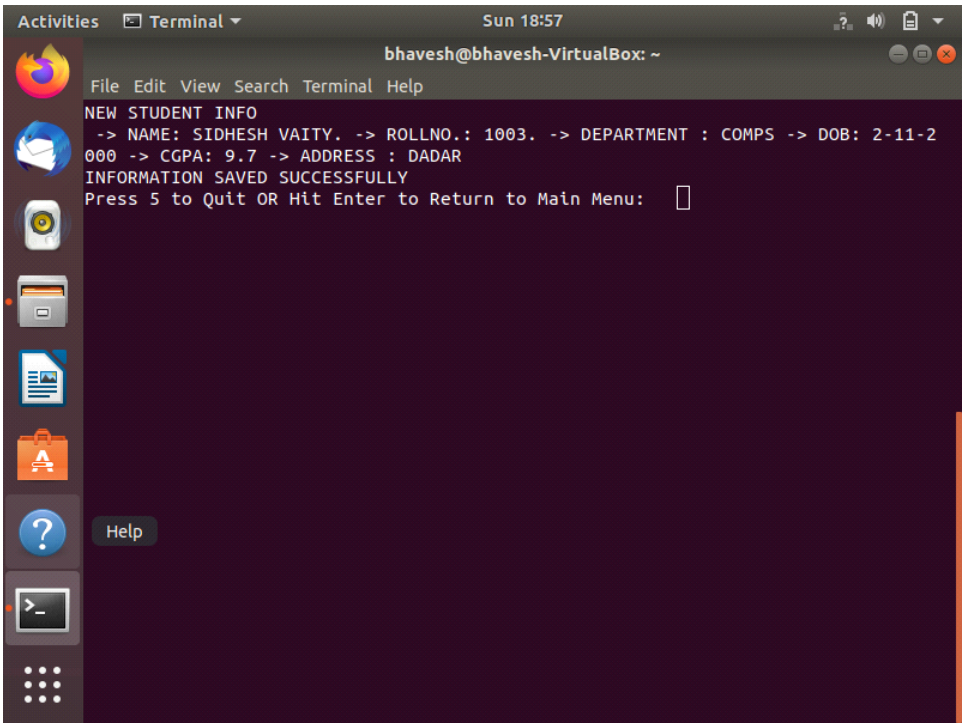
5.


Activities
Terminal
Sun 18:56
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
NEW STUDENT INFO
-> NAME: SHIVAM PANDEY. -> ROLLNO.: 1002. -> DEPARTMENT : EXTC -> DOB: 3-8-199
9 -> CGPA: 9.0 -> ADDRESS : THANE
INFORMATION SAVED SUCCESSFULLY
Press 5 to Quit OR Hit Enter to Return to Main Menu:
Help

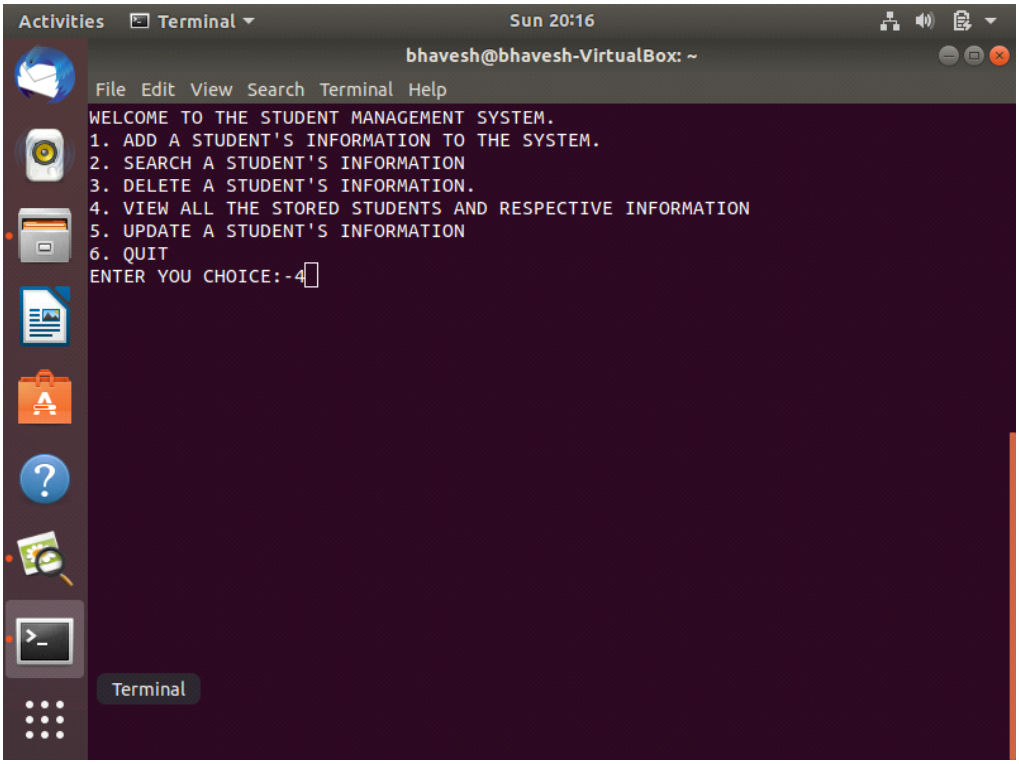
6.


Activities
Terminal
Sun 18:56
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
ADD NEW STUDENT INFORMATION
ENTER STUDENT NAME:-SIDHESH VAITY
ENTER STUDENT ROLL NO. :-1003
ENTER STUDENT DEPARTMENT. :-COMPS
ENTER STUDENT D.O.B. :-2-11-2000
ENTER AVERAGE CGPA :-9.7
ENTER THE ADDRESS OF THE STUDENT :-DADAR
Help

7.


Activities
Terminal
Sun 18:57
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
NEW STUDENT INFO
-> NAME: SIDHESH VAITY. -> ROLLNO.: 1003. -> DEPARTMENT : COMPS -> DOB: 2-11-2
000 -> CGPA: 9.7 -> ADDRESS : DADAR
INFORMATION SAVED SUCCESSFULLY
Press 5 to Quit OR Hit Enter to Return to Main Menu:
Help

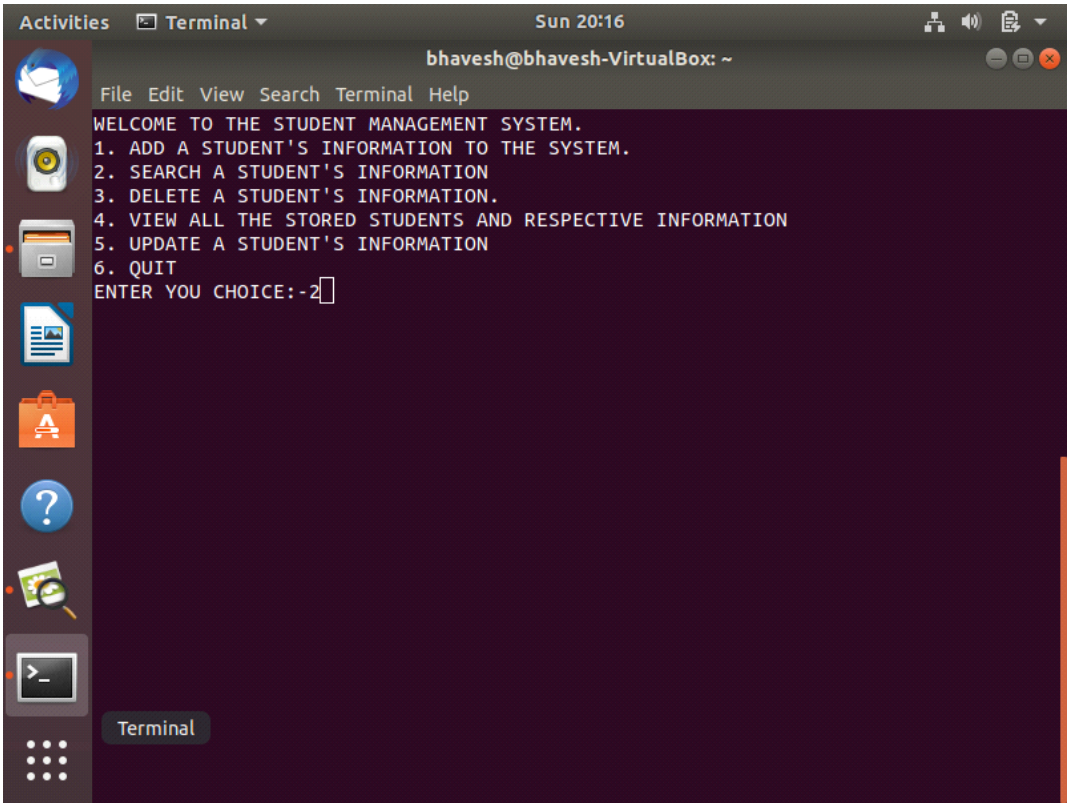
8.


Activities
Terminal
Sun 20:16
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
WELCOME TO THE STUDENT MANAGEMENT SYSTEM.
1. ADD A STUDENT'S INFORMATION TO THE SYSTEM.
2. SEARCH A STUDENT'S INFORMATION
3. DELETE A STUDENT'S INFORMATION.
4. VIEW ALL THE STORED STUDENTS AND RESPECTIVE INFORMATION
5. UPDATE A STUDENT'S INFORMATION
6. QUIT
ENTER YOU CHOICE:-4
Terminal

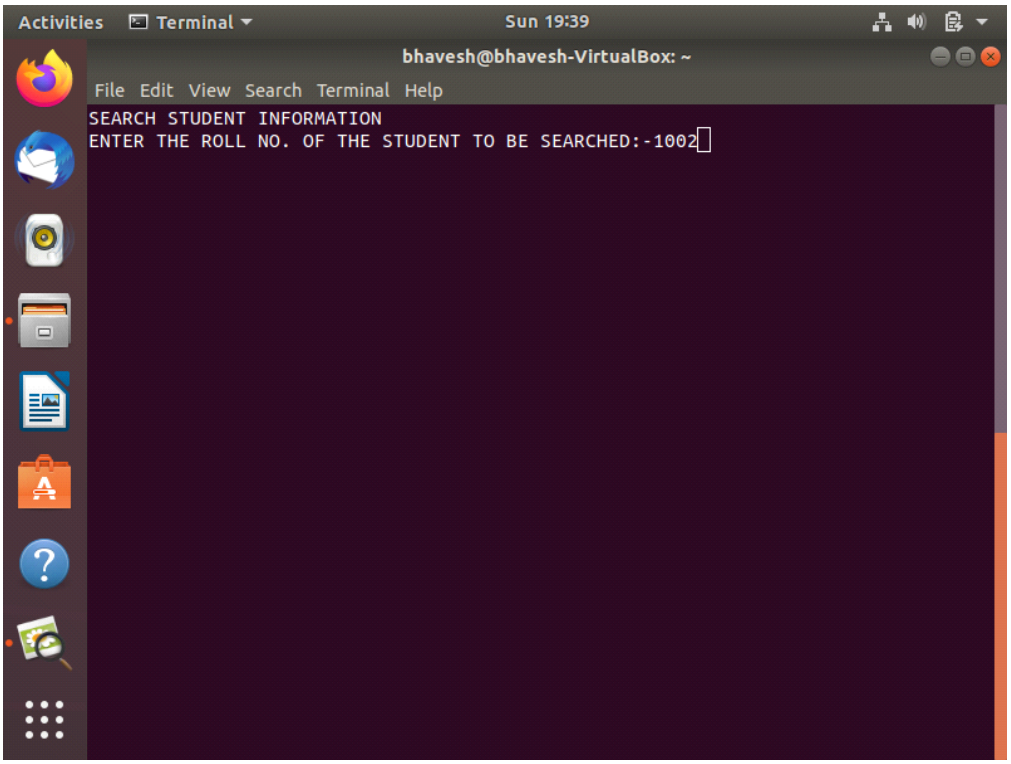
9.

```
 Bhavesh Shinde: 1001 : I.T. :  3-10-2000 : 9.0 : BANDRA
 SHIVAM PANDEY: 1002 : EXTC :  3-8-1999 : 9.0 : THANE
 SIDHESH VAITY: 1003 : COMPS :  2-11-2000 : 9.7 : DADAR
Press 5 to Quit OR Hit Enter to Return to Main Menu:
```

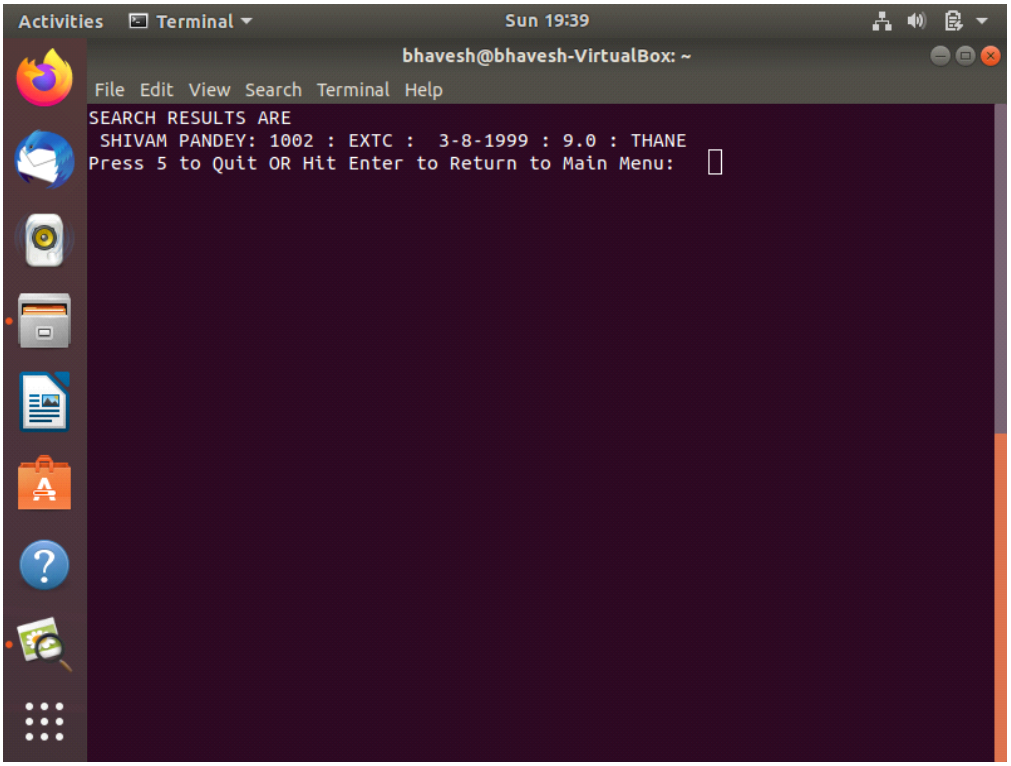
10.



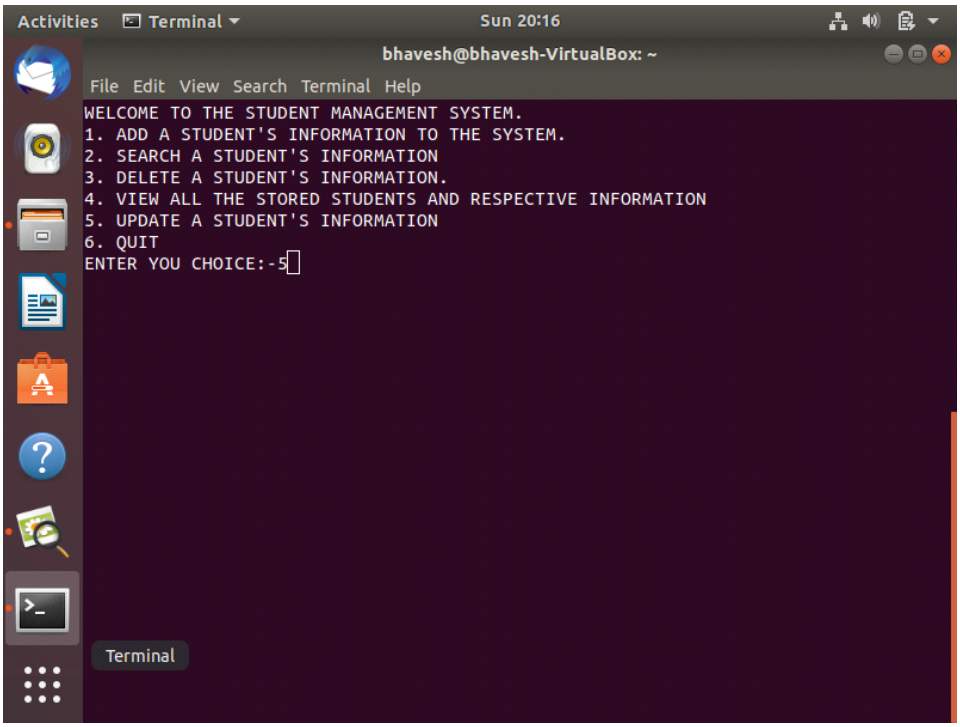
11.


Activities
Terminal
Sun 19:39
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
SEARCH STUDENT INFORMATION
ENTER THE ROLL NO. OF THE STUDENT TO BE SEARCHED:-1002

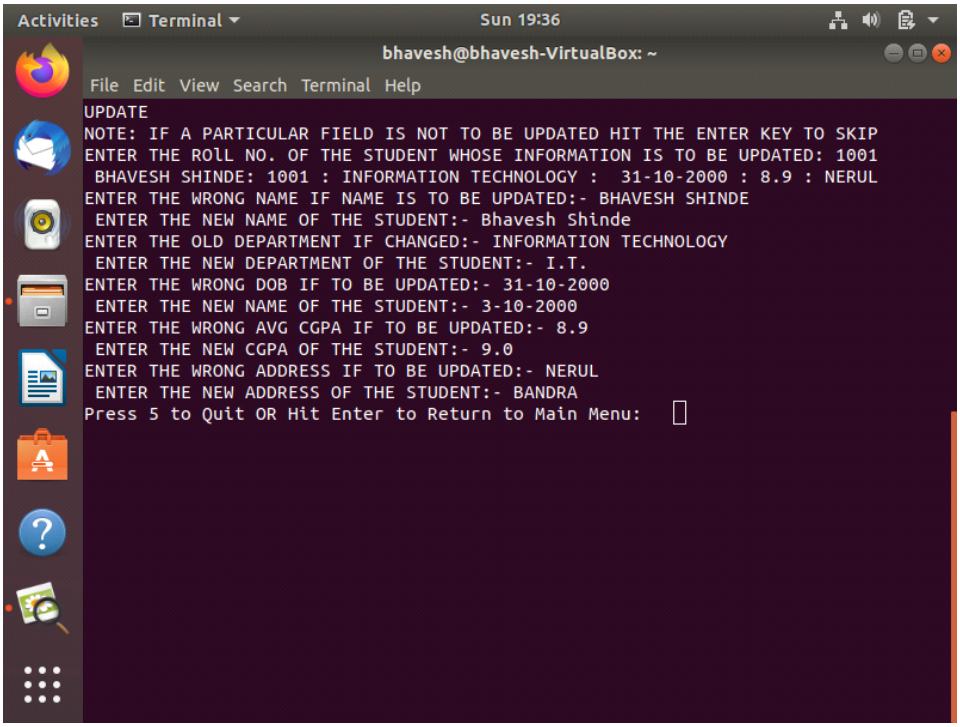
12.


Activities
Terminal
Sun 19:39
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
SEARCH RESULTS ARE
SHIVAM PANDEY: 1002 : EXTC : 3-8-1999 : 9.0 : THANE
Press 5 to Quit OR Hit Enter to Return to Main Menu:

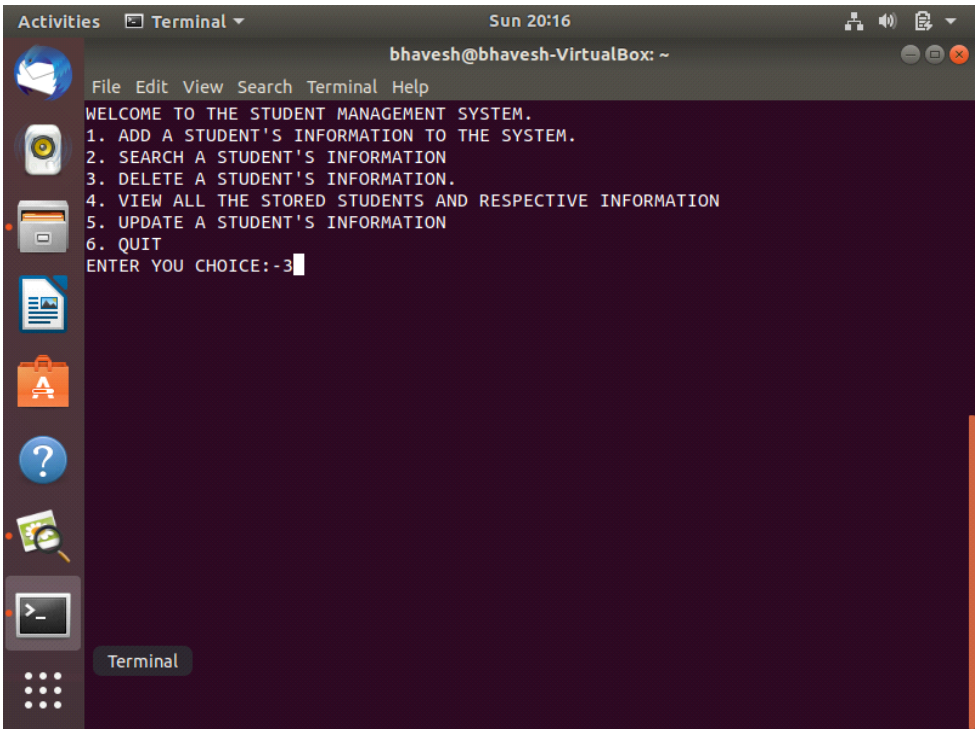
13.


Activities
Terminal
Sun 20:16
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
WELCOME TO THE STUDENT MANAGEMENT SYSTEM.
1. ADD A STUDENT'S INFORMATION TO THE SYSTEM.
2. SEARCH A STUDENT'S INFORMATION
3. DELETE A STUDENT'S INFORMATION.
4. VIEW ALL THE STORED STUDENTS AND RESPECTIVE INFORMATION
5. UPDATE A STUDENT'S INFORMATION
6. QUIT
ENTER YOU CHOICE:-5
Terminal

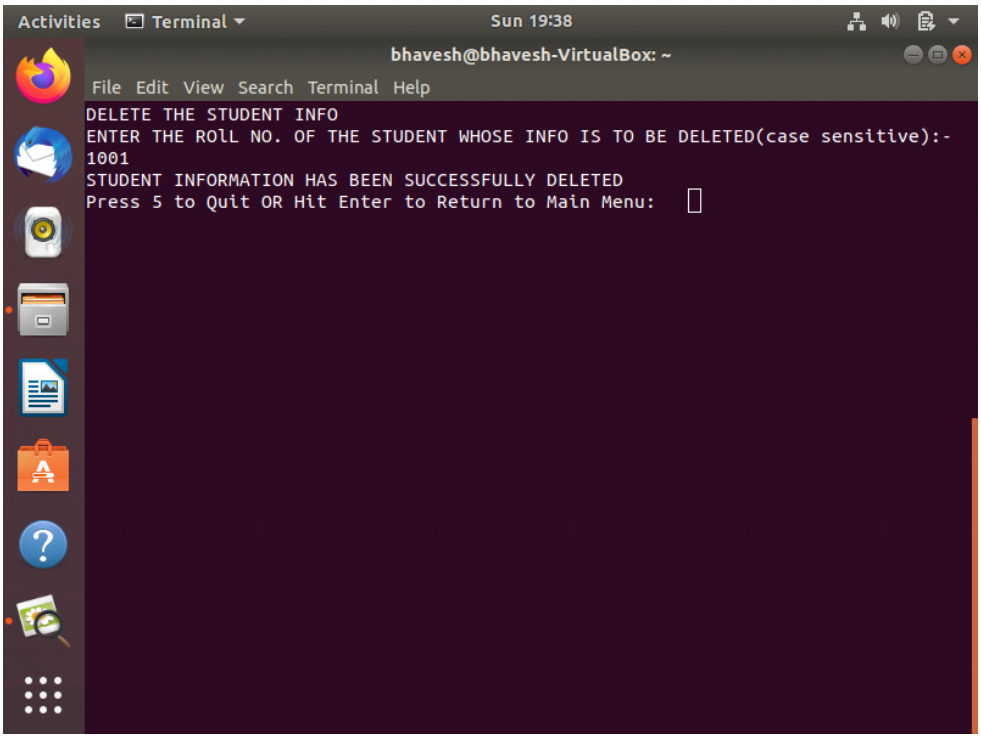
14.


Activities
Terminal
Sun 19:36
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
UPDATE
NOTE: IF A PARTICULAR FIELD IS NOT TO BE UPDATED HIT THE ENTER KEY TO SKIP
ENTER THE ROLL NO. OF THE STUDENT WHOSE INFORMATION IS TO BE UPDATED: 1001
BHAVESH SHINDE: 1001 : INFORMATION TECHNOLOGY : 31-10-2000 : 8.9 : NERUL
ENTER THE WRONG NAME IF NAME IS TO BE UPDATED:- BHAVESH SHINDE
ENTER THE NEW NAME OF THE STUDENT:- Bhavesh Shinde
ENTER THE OLD DEPARTMENT IF CHANGED:- INFORMATION TECHNOLOGY
ENTER THE NEW DEPARTMENT OF THE STUDENT:- I.T.
ENTER THE WRONG DOB IF TO BE UPDATED:- 31-10-2000
ENTER THE NEW NAME OF THE STUDENT:- 3-10-2000
ENTER THE WRONG AVG CGPA IF TO BE UPDATED:- 8.9
ENTER THE NEW CGPA OF THE STUDENT:- 9.0
ENTER THE WRONG ADDRESS IF TO BE UPDATED:- NERUL
ENTER THE NEW ADDRESS OF THE STUDENT:- BANDRA
Press 5 to Quit OR Hit Enter to Return to Main Menu:

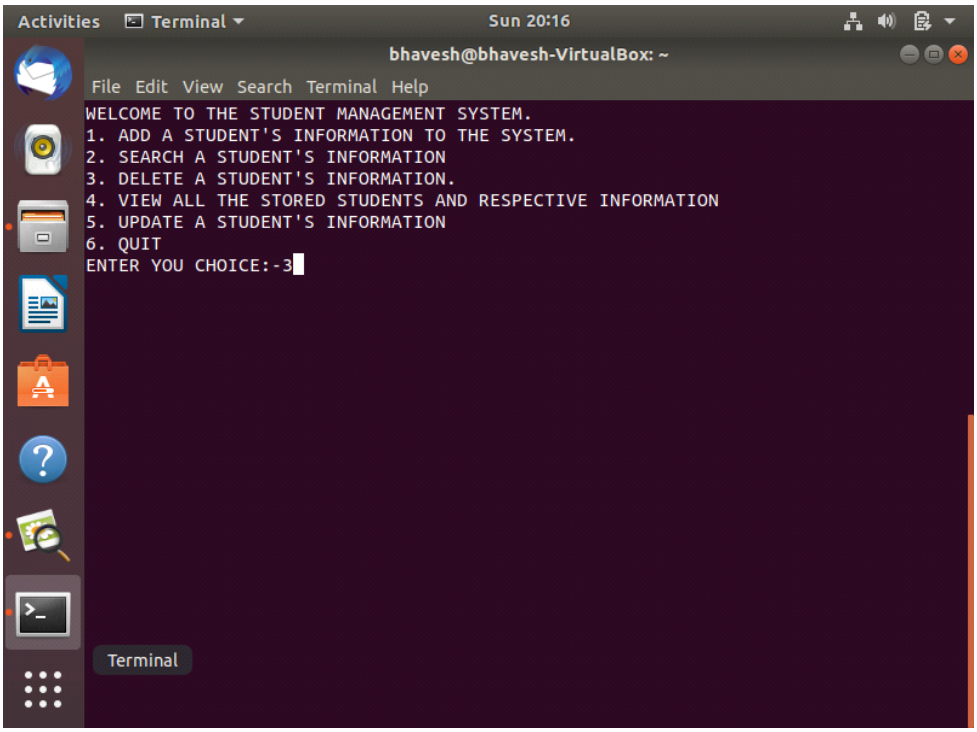
15.


Activities
Terminal
Sun 20:16
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
WELCOME TO THE STUDENT MANAGEMENT SYSTEM.
1. ADD A STUDENT'S INFORMATION TO THE SYSTEM.
2. SEARCH A STUDENT'S INFORMATION
3. DELETE A STUDENT'S INFORMATION.
4. VIEW ALL THE STORED STUDENTS AND RESPECTIVE INFORMATION
5. UPDATE A STUDENT'S INFORMATION
6. QUIT
ENTER YOU CHOICE:-3
Terminal

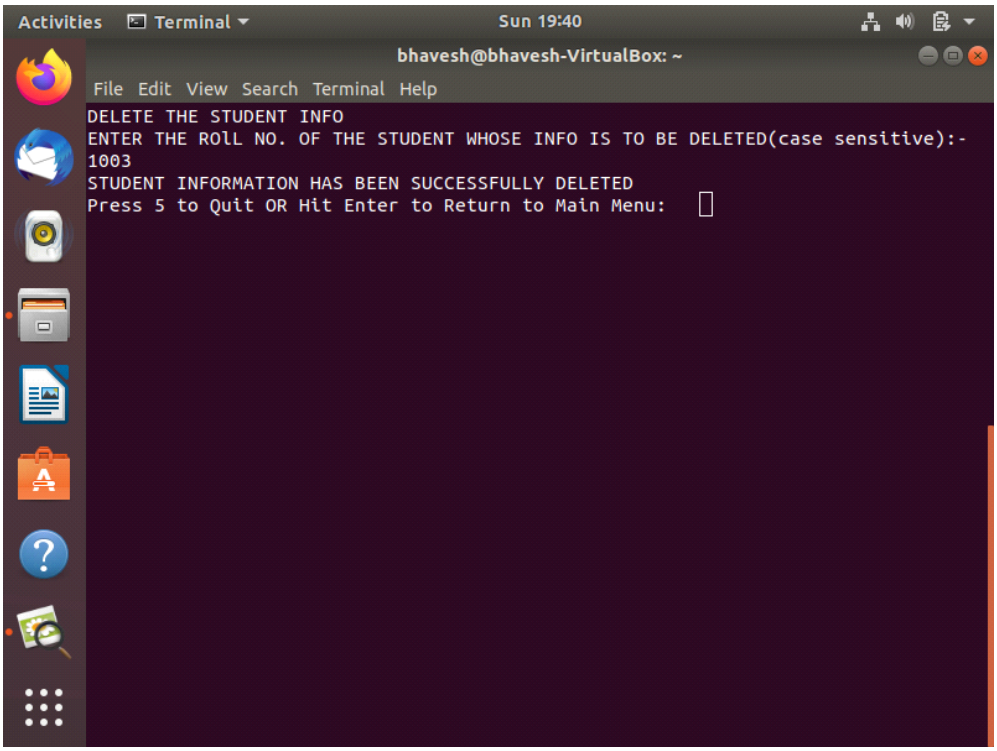
16.


Activities
Terminal
Sun 19:38
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
DELETE THE STUDENT INFO
ENTER THE ROll NO. OF THE STUDENT WHOSE INFO IS TO BE DELETED(case sensitive):-
1001
STUDENT INFORMATION HAS BEEN SUCCESSFULLY DELETED
Press 5 to Quit OR Hit Enter to Return to Main Menu:

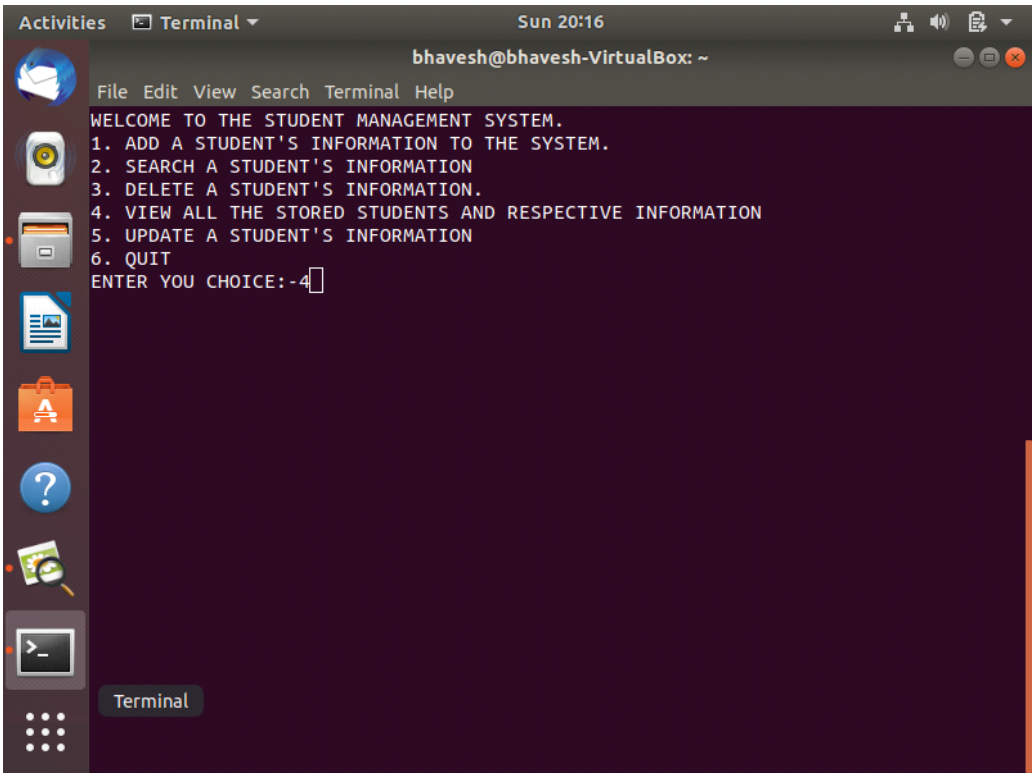
17.


Activities
Terminal
Sun 20:16
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
WELCOME TO THE STUDENT MANAGEMENT SYSTEM.
1. ADD A STUDENT'S INFORMATION TO THE SYSTEM.
2. SEARCH A STUDENT'S INFORMATION
3. DELETE A STUDENT'S INFORMATION.
4. VIEW ALL THE STORED STUDENTS AND RESPECTIVE INFORMATION
5. UPDATE A STUDENT'S INFORMATION
6. QUIT
ENTER YOU CHOICE:-3
Terminal

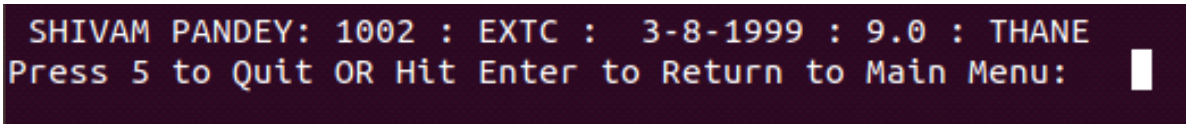
18.


Activities
Terminal
Sun 19:40
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
DELETE THE STUDENT INFO
ENTER THE ROll NO. OF THE STUDENT WHOSE INFO IS TO BE DELETED(case sensitive):-
1003
STUDENT INFORMATION HAS BEEN SUCCESSFULLY DELETED
Press 5 to Quit OR Hit Enter to Return to Main Menu:

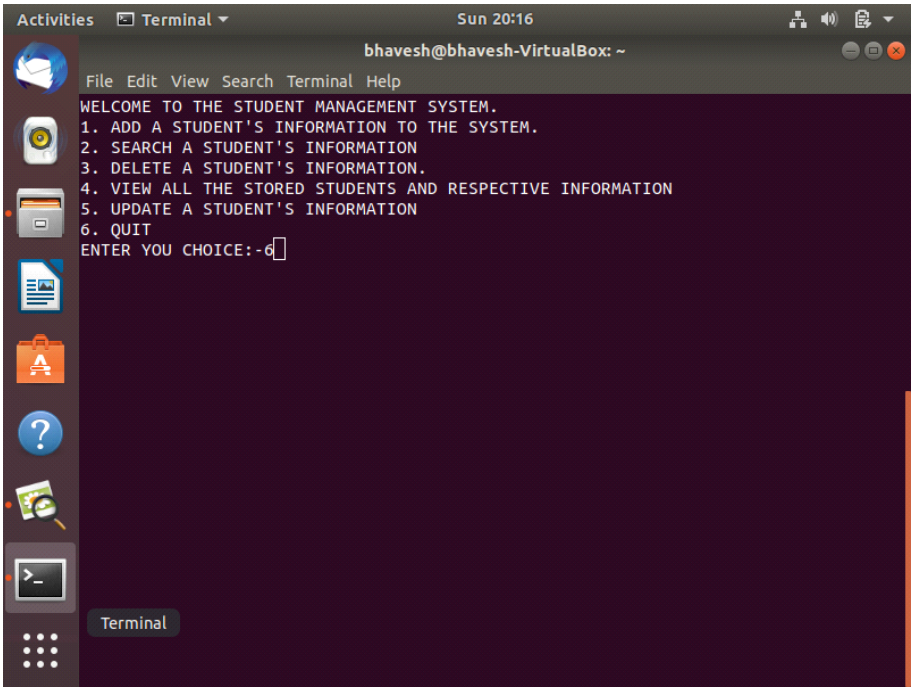
19.


Activities
Terminal
Sun 20:16
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
WELCOME TO THE STUDENT MANAGEMENT SYSTEM.
1. ADD A STUDENT'S INFORMATION TO THE SYSTEM.
2. SEARCH A STUDENT'S INFORMATION
3. DELETE A STUDENT'S INFORMATION.
4. VIEW ALL THE STORED STUDENTS AND RESPECTIVE INFORMATION
5. UPDATE A STUDENT'S INFORMATION
6. QUIT
ENTER YOU CHOICE:-4
Terminal

20.


SHIVAM PANDEY: 1002 : EXTC : 3-8-1999 : 9.0 : THANE
Press 5 to Quit OR Hit Enter to Return to Main Menu:

21.


Activities
Terminal
Sun 20:16
bhavesh@bhavesh-VirtualBox: ~
File Edit View Search Terminal Help
WELCOME TO THE STUDENT MANAGEMENT SYSTEM.
1. ADD A STUDENT'S INFORMATION TO THE SYSTEM.
2. SEARCH A STUDENT'S INFORMATION
3. DELETE A STUDENT'S INFORMATION.
4. VIEW ALL THE STORED STUDENTS AND RESPECTIVE INFORMATION
5. UPDATE A STUDENT'S INFORMATION
6. QUIT
ENTER YOU CHOICE:-6
Terminal

5.2 Testing and validation

Testing Details

Testing is a verification process for quality assessment and improvement. Testing is basically done to find errors, faults in the system. The basic goal of software development process is to produce the software that has very few or no errors
In an effort to detect errors soon after they are introduced each phase ends with verification activity such as reviews. However most of these verification activities in the early phase of the software development are based on human evaluation and cannot detect all the errors. Testing plays an important role in quality assurance for the software. It is a dynamic method for the verification and validation, where the system to be tested is executed and the behavior of the system is observed.

5.2.1 Black Box Testing

Black Box Testing is also known as Behavioral Testing, is a software testing method in which the internal structure/ design/ implementation of the item being tested is not known to the tester. These tests can be functional or non-functional, though usually functional. This method is named so because the software program, in the eyes of the tester, is like a black box; inside which one cannot see. Ramrao Adik Institute of Technology

5.2.2 White Box Testing

White Box Testing (also known as Clear Box Testing, Open Box Testing, Glass Box Testing, Transparent Box Testing, Code-Based Testing or Structural Testing) is a software testing method in which the internal structure/design/implementation of the item being tested is known to the tester. The tester chooses inputs to exercise paths through the code and determines the appropriate outputs. Programming know-how and the implementation knowledge is essential. White box testing is testing beyond the user interface and into the nitty-gritty of a system.

5.2.3 Unit Testing Unit

Testing is a level of the software testing process where individual units/components of a software/system are tested. The purpose is to validate that each unit of the software performs as designed. A unit is the smallest testable part of software. It usually has one or a few inputs and usually a single output. In procedural programming a unit may be an individual program, function, procedure, etc. In object-oriented programming, the smallest unit is a method, which may belong to a base/super class, abstract class or derived/child class.

5.2.4 Integration Testing

Integration is the process by which components are aggregated to create larger components. Testing

the data flow or interface between two features is known as integration testing. Testing that occurs at lowest level is called unit/ module testing. As the units are tested and low level bugs are found and fixed, they are integrated and integration testing is performed against groups of modules. Integration Testing is also called as Structural Testing.

5.2.5 System Testing :

In system testing the behavior of whole system/product is tested as defined by the scope of the development project or product. It may include tests based on risks and/or requirement specifications, business process, use cases, or other high level descriptions of system behavior, interactions with the operating systems, and system resources. System testing is most often the final test to verify that the system to be delivered meets the specification and its purpose. System testing is carried out by specialist's testers or independent testers. System testing should investigate both functional and non-functional requirements of the testing.

5.2.6 Alpha Testing:

Alpha testing is one of the most common software testing strategy used in software development. It's specially used by product development organizations. This test takes place at the developer's site. Developers observe the users and note problems. Alpha testing is typically performed by a group that is independent of the design team, but still within the company, e.g. in-house software test engineers, or software QA engineers. Alpha testing is final testing before the software is released to the general public. It has two phases:

1. In the first phase of alpha testing, the software is tested by in-house developers. They use either debugger software, or hardware-assisted debuggers.The goal is to catch bugs quickly.
2. In the second phase of alpha testing, the software is handed over to the software QA staff, for additional testing in an environment that is similar to the intended use

CHAPTER –6

CONCLUSION AND FUTURE SCOPE

6.1 CONCLUSION

In the end we would like to conclude that our aim was to make 'Student Management System' using bash script. The Student Management System can handle all the details about a student . The details may include college, course , student's personal as well as academic details that would be beneficial for the officials involved in this record maintaining process making it more efficient and less time consuming

6.2 FUTURE SCOPE

After certain tweaks in the mini project it can be made more visually appealing at the same time it would have immense potential if taken online where the student and officials will be able to print or store the required information on a device independent of the school network

6.3 REFERENCES

- www.google.com
- www.wikipedia.org
- www.studycircle.org
- www.tutorialpoint.com
- www.w3schools.com
- www.youtube.com
- www.academia.edu