

ACADEMIC YEAR : 2022-23

PROJECT REPORT ON

UNIVERSITY MANAGEMENT SYSTEM

ROLL NO. : 12227, 12225, 12222

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SHASHWAT YADAV

PRASHANT SINGH

CLASS : XII B

SUBJECT : COMPUTER SCIENCE

SUB CODE : 083

PROJECT GUIDE : Mrs.Divya PGT(COMP.SC)



**CERTIFICATE**

This is to certify that Cadet **SURAJ SHASHIDHAR, SHASHWAT YADAV, PRASHANT SINGH** Roll No: **12227,12225,12222** has successfully completed the project Work entitled **UNIVERSITY MANAGEMENT SYSTEM** in the subject Computer Science (083) laid down in the regulations of CBSE for the purpose of Practical Examination in Class XII to be held in Kendriya Vidiyalaya Jalahalli No.1 on\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**(Mrs. Divya)**

PGT Comp Sc

**Examiner:**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SER** | **TABLE OF CONTENTS [ T O C ]**  **DESCRIPTION** | | **PAGE NO** | |
| 01 | CERTIFICATE | | **02** | |
| 02 | ACKNOWLEDGEMENT | | **04** | |
| 03 | INTRODUCTION | | **05** | |
| 04 | OBJECTIVES OF THE PROJECT | | **05** | |
| 05 | THEORITICAL APPROACH | | **06** | |
| 06 | TABLE STRUCTURE | | **16** | |
| 07 | SOURCE CODE | | **18** | |
| 08 | | OUTPUT | | **27** | |
| 09 | | BIBLIOGRAPHY | | **32** | |

ACKNOWLEDGEMENT

Apart from the efforts of me, the success of any project depends largely on the encouragement and guidelines of many others. I take this opportunity to express my gratitude to the people who have been instrumental in the successful completion of this project.

I express deep sense of gratitude to almighty God for giving me strength for the successful completion of the project.

I express my heartfelt gratitude to my parents for constant encouragement while carrying out this project.

I gratefully acknowledge the contribution of the individuals who contributed in bringing this project up to this level, who continues to look after me despite my flaws,

I express my deep sense of gratitude to the luminary The Principal, Kendriya Vidyalaya Jalahalli No.1 who has been continuously motivating and extending their helping hand to us.

I express my sincere thanks to the academician The Vice Principal, Kendriya Vidyalaya Jalahalli No.1, for constant encouragement and the guidance provided during this project

I am overwhelmed to express my thanks to The Administrative Officer for providing me an infrastructure and moral support while carrying out this project in the school.

My sincere thanks to **Mrs. Divya**, Master In-charge, A guide, Mentor all the above a friend, who critically reviewed my project and helped in solving each and every problem, occurred during implementation of the project

The guidance and support received from all the members who contributed and who are contributing to this project, was vital for the success of the project. I am grateful for their constant support and help

INTRODUCTION

The University Management System (DMS) is basically a database based project done with help of python language. this project is very usefull for the shopkeepers to keep a count on what project they have and how much they sold. this project is multifield project ,so that it can be modified for various purpose.

The main aim of this project is to reduce manual work and paperwork and digitalise the admission process, check candidate details etc. in an educational institution.

**OBJECTIVES OF THE PROJECT**

The objective of this project is to let the students apply the programming knowledge into a real- world situation/problem and exposed the students how programming skills helps in developing a good software.

• Write programs utilizing modern software tools.

• Apply object oriented programming principles effectively when developing small to medium sized projects.

• Write effective procedural code to solve small to medium sized problems.

• Students will demonstrate a breadth of knowledge in computer science, as exemplified in the areas of systems, theory and software development.

• Students will demonstrate ability to conduct a research or applied Computer Science project, requiring writing and presentation skills which exemplify scholarly style in computer science.

THEORITICAL APPROACH

**What is Python?**

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse. The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms, and can be freely distributed.

Often, programmers fall in love with Python because of the increased productivity it provides. Since there is no compilation step, the edit-test-debug cycle is incredibly fast. Debugging Python programs is easy: a bug or bad input will never cause a segmentation fault. Instead, when the interpreter discovers an error, it raises an exception. When the program doesn't catch the exception, the interpreter prints a stack trace. A source level debugger allows inspection of local and global variables, evaluation of arbitrary expressions, setting breakpoints, stepping through the code a line at a time, and so on. The debugger is written in Python itself, testifying to Python's introspective power. On the other hand, often the quickest way to debug a program is to add a few print statements to the code.

**Features of Python:**

Python provides lots of features that are listed below.

1) Easy to Learn and Use

Python is easy to learn and use. It is developer-friendly and high-level programming language.

2) Expressive Language

Python language is more expressive means that it is more understandable and readable.

3) Interpreted Language

Python is an interpreted language i.e. interpreter executes the code line by line at a time. This makes debugging easy and thus suitable for beginners.

4) Cross-platform

Language Python can run equally on different platforms such as Windows, Linux, Unix and Macintosh etc. So, we can say that Python is a portable language.

5) Free and Open Source

Python language is freely available at official web address. The source-code is also available. Therefore, it is open source.

6) Object-Oriented Language

Python supports object-oriented language and concepts of classes and objects come into existence.

7) Extensible

It implies that other languages such as C/C++ can be used to compile the code and thus it can be used further in our python code.

8) Large Standard Library

Python has a large and broad library and provides rich set of module and functions for rapid application development.

9) GUI Programming Support

Graphical user interfaces can be developed using Python.

**What is Database?**

   Introduction and Concepts:

        A database is a collection of information related to a particular subject or purpose, such as tracking customer orders or maintaining a music collection. Using any RDBMS application software like MS SQL Server, MySQL, Oracle, Sybase etc., you can manage all your information from a single database file. Within the file, divide your data into separate storage containers called tables. You may and retrieve the data using queries.

A table is a collection of data about a specific topic, such as products or suppliers. Using a separate table for each topic means you can store that data only once, which makes your database more efficient and reduces data-entry errors. Table organises data into columns (called fields) and rows (called records).

        A Primary key is one or more fields whose value or values uniquely identify each record in a table. In a relationship, a primary key is used to refer to specific record in one table from another table. A primary key is called foreign key when it is referred to from another table.

Role of RDBMS Application Program:

      A computer database works as a electronic filing system, which has a large number of ways of cross-referencing, and this allows the user many different ways in which to re-organize and retrieve data. A database can handle business inventory, accounting and filing and use the information in its files to prepare summaries, estimates and other reports. The management of data in a database system is done by means of a general-purpose software package called a Database Management System (DBMS). Some commercially available DBMS are MS SQL Server, MS ACCESS, INGRES, ORACLE, and Sybase. A database management system, therefore, is a combination of hardware and software that can be used to set up and monitor a database, and can manage the updating and retrieval of database that has been stored in it

      The DBMS interprets and processes users' requests to retrieve information from a database. In most cases, a query request will have to penetrate several layers of software in the DBMS and operating system before the physical database can be accessed. The DBMS responds to a query by invoking the appropriate subprograms, each of which performs its special function to interpret the query, or to locate the desired data in the database and present it in the desired order.

**What is MySQL?**

      The management of data in a database system is done by means of a general-purpose software package called a Database Management System (DBMS). Some commercially available RDBMS are MS SQL Server, MS ACCESS, INGRES, ORACLE, and Sybase.

       MySQL, the most popular Open Source SQL database management system, is developed, distributed, and supported by Oracle Corporation. MySQL is named after co-founder Monty Widenius's daughter, Me. The name of the MySQL Dolphin (our logo) is “Sakila,”.

MySQL is a database management system.

     A database is a structured collection of data. It may be anything from a simple shopping list to picture gallery or the vast amounts of information in a corporate network. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. Since computers are very good at handling large amounts of data, database management systems play a central role in computing, as standalone utilities, or as parts of other applications.

MySQL is based on SQL.

      A relational database stores data in separate tables rather than putting all the data in one big storeroom. This adds speed and flexibility. The SQL part of “MySQL” stands for “Structured Query Language.” SQL is the most common standardized language used to access databases and is defined by the ANSI/ISO SQL Standard. The SQL standard has been evolving since 1986 and several versions exist. In this manual, “SQL-92” refers to the standard released in 1992, “SQL: 1999” refers to the standard released in 1999, and “SQL: 2003” refers to the current version of the standard.

MySQL software is Open Source.

     Open Source means that it is possible for anyone to use and modify the software. Anybody can download the MySQL software from the Internet and use it without paying anything. If you wish, you may study the source code and change it to suit your needs. The MySQL software uses the GPL (GNU General Public License),

The MySQL Database Server is very fast, reliable, and easy to use.

     If that is what you are looking for, you should give it a try. MySQL Server also has a practical set of features developed in close cooperation with our users. You can find a performance comparison of MySQL Server with other database managers on our benchmark page. MySQL Server was originally developed to handle large databases much faster than existing solutions and has been successfully used in highly demanding production environments for several years. Although under constant development, MySQL Server today offers a rich and useful set of functions. Its connectivity, speed, and security make MySQL Server highly suited for accessing databases on the Internet.

MySQL Server works in client/server or embedded systems.

     The MySQL Database Software is a client/server system that consists of a multi-threaded SQL server that supports different backends, several different client programs and libraries, administrative tools, and a wide range of application programming interfaces (APIs).

The Main Features of MySQL

* Written in C and C++.
* Works on many different platforms.
* Uses multi-layered server design with independent modules.
* Provides transactional and non-transactional storage engines.
* Designed to make it relatively easy to add other storage engines. This is useful if you want to provide an SQL interface for an in-house database.
* Uses a very fast thread-based memory allocation system.
* Executes very fast joins using an optimized nested-loop join.
* Implements SQL functions using a highly optimized class library that should be as fast as possible. Usually there is no memory allocation at all after query initialization.
* Provides the server as a separate program for use in a client/server networked environment, and as a library that can be embedded (linked) into standalone applications. Such applications can be used in isolation or in environments where no network is available.
* Password security by encryption of all password traffic when you connect to a server.

**THE HARDWARE USED:**

While developing the system, the used hardware is:

Text

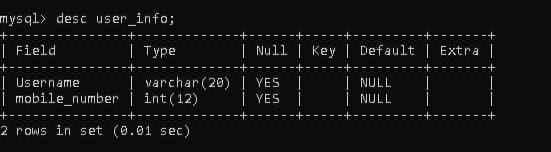
Description automatically generated

**THE SOFTWARE’S USED:**

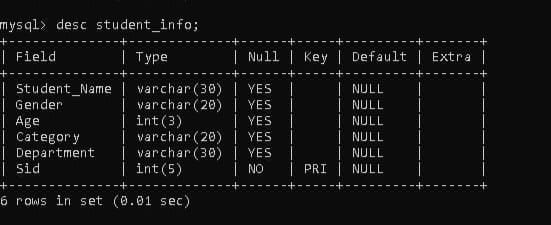
* Microsoft Windows® Home as Operating System.
* [Python 3.8.1](https://www.python.org/downloads/release/python-381/)as Front-end Development environment.
* MySQL as Back-end Sever with Database for Testing.
* MS-Word 2019 for documentation.
* Snipping tool for screenshot’s

**TABLE STRUCTURE**

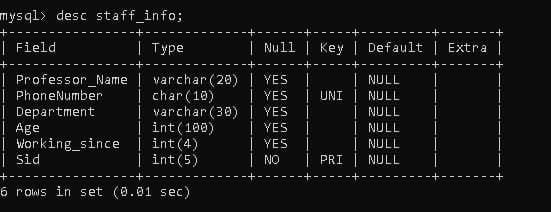
User\_Info



Student\_Info



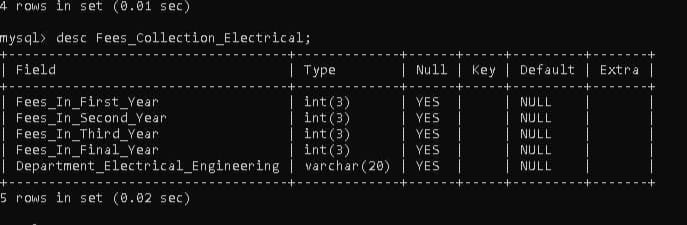
Staff\_Info



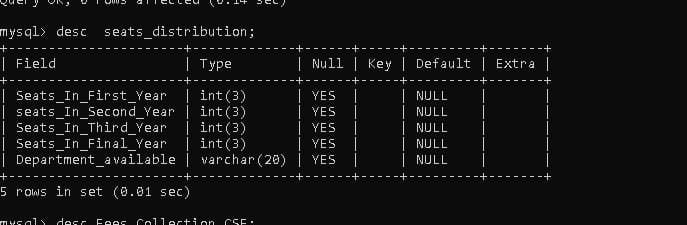
Fee\_Collection\_CSE



Fee\_Collection\_Electrical



Seat\_Distribution



SOURCE CODE

#CREATING DATABASE AND TABLE

import mysql.connector as con

mydb=con.connect(host="localhost", user="root", passwd="shashwat1234")

mycursor=mydb.cursor()

mycursor.execute("create database if not exists B\_Tech ")

mycursor.execute("use B\_Tech")

mycursor.execute('''create table if not exists User\_info

(

Username varchar(20),

mobile\_number int(13)

)''')

print("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*")

print("WELCOME TO THE University data management")

print("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*")

print("Please enter your Name and Phone number to begin:-")

username=input("USERNAME:")

mob=int(input("Phone number:"))

st="insert into User\_info values(%s,%s)"

val=(username,mob)

mycursor.execute(st,val)

mydb.commit()

print("")

print("""++++++++++++++++++++++++++LOGIN SUCCESSFULL++++++++++++++++++++++++++""")

print("""======================================================================

++++++++++++++++++++++++++ University Data Management +++++++++++++++++++++++++

==========================================================================""")

mycursor.execute('''create table if not exists Student\_info

(

Student\_Name varchar(30) ,

Gender varchar(20),

Age int(3),

Category varchar(20),

Department varchar(30),

Sid int(5) primary key

)''')

mycursor.execute('''create table if not exists Staff\_info

(

Professor\_Name varchar(20),

PhoneNumber char(10) unique key,

Department varchar(30),

Age int(100),

Joining\_Date date,

Sid int(5) primary key,

foreign key (Sid) references Student\_info (Sid)

)''')

mycursor.execute('''create table if not exists seats\_distribution

(

Seats\_In\_First\_Year int(3),

Seats\_In\_Second\_Year int(3),

Seats\_In\_Third\_Year int(3),

Seats\_In\_Final\_Year int(3),

Department\_available varchar(20)

)''')

#Fees for CSE

mycursor.execute('''create table if not exists Fees\_Collection\_CSE

(

Fees\_In\_First\_Year int(3),

Fees\_In\_Second\_Year int(3),

Fees\_In\_Third\_Year int(3),

Fees\_In\_Final\_Year int(3),

Department\_CSE varchar(20)

)''')

#Fees for Electrical Engineering

mycursor.execute('''create table if not exists Fees\_Collection\_Electrical

(

Fees\_In\_First\_Year int(3),

Fees\_In\_Second\_Year int(3),

Fees\_In\_Third\_Year int(3),

Fees\_In\_Final\_Year int(3),

Department\_Electrical\_Engineering varchar(20)

)''')

mydb.commit()

print("")

print("""

1:Add Student info

2:Delete Student info

3:Search Student info

4:Staff Details

5:Total Seats Distribution

6:Annual fees

7:Exit""")

print("")

a=int(input("Enter your choice:"))

print("")

#ADD STUDENT INFO

if a==1:

print("All information prompted are mandatory to be filled")

name=input("Enter Name:")

gender=input("Gender:")

age=int(input("Enter age:"))

Category=input("Enter Category GEN/OBC/SC-ST:")

department=input("Enter department:")

s\_id=int(input("enter student id"))

mycursor.execute("insert into Student\_info (Student\_Name,Gender,Age,Category,Department,Sid) values(%s,%s,%s,%s,%s,%s)",(name,gender,age,Category,department,s\_id))

print("")

mydb.commit()

print("""++++++++++++++++++++++

++DATA SUCCESSFULLY ADDED++

++++++++++++++++++++++""")

#DELETE BOOKS

elif a==2:

print("student id is compulsory")

print("")

name=input("Enter Name:")

department=input("Enter department:")

s\_id=int(input("enter student id"))

mycursor.execute("DELETE FROM Student\_info WHERE Sid=%s",(s\_id,))

print("")

print("""++++++++++++++++++++++

++DATA SUCCESSFULLY REMOVED++

++++++++++++++++++++++""")

#Searching Student Info

elif a==3:

print("search by :-")

print("")

print("""1:Search by name

2:Search by Student id """)

print("")

l=int(input("Search by?:"))

#BY Student NAME

print("")

if l==1:

o=input("Enter Name to search:")

mycursor.execute("select \* from Student\_info where Student\_Name='%s'",(o,))

tree=mycursor.fetchall()

print("")

if tree!=None:

print("""++++++++++++++++++++

++Student Info Is Avilable++

++++++++++++++++++++""")

else:

print("Student Info Is Not Avilable!!!!!!!")

elif l==2:

o=int(input("Enter student id to search:"))

mycursor.execute("select \* from Student\_info where Sid='%s'",(o,))

tree=mycursor.fetchone()

print("")

if tree!=None:

print("""++++++++++++++++++++

++Student Info Is Avilable++

++++++++++++++++++++""")

else:

print("Student Info Is Not Avilable!!!!!!!")

else:

print("Invalid Choice")

#staff details

elif a==4:

print("")

print("1:Print all Staff detail")

print("2:Print staff department vise ")

print("3:New staff entry")

print("4:Remove staff")

print("")

ch=int(input("Enter your choice:"))

print("")

if ch==1:

mycursor.execute("select \* from Staff\_info")

run=mycursor.fetchall()

print("")

for i in run:

print(i)

if ch==2:

mycursor.execute("select \* from Staff\_info GROUP BY Department ")

run=mycursor.fetchall()

print("")

for i in run:

print(i)

if ch==3:

ProfessorName=str(input("Enter Fullname:"))

phno=int(input("Staff phone no.:"))

Department =str(input("CSE/Electrical:"))

age=int(input("Age:"))

Joining\_Date=input("yyyy-mm-dd")

Sid= int(input("enter student id") )

mycursor.execute("insert into Staff\_info(Professor\_Name,PhoneNumber,Department,Age,Joining\_Date,Sid) values('"+ProfessorName+"','"+Department+"','"+str(age)+"','"+str(Joining\_Date)+"', "'+str(sid)+'");")

print("")

print("""+++++++++++++++++++++++++++++

+STAFF IS SUCCESSFULLY ADDED+

+++++++++++++++++++++++++++++""")

mydb.commit()

if ch==4:

nm=str(input("Enter staff name to remove:"))

mycursor.execute("select name from staff\_info where name='"+nm+"'")

toy=mycursor.fetchone()

if toy is not None:

mycursor.execute("delete from staff\_info where name='"+nm+"'")

print("")

print("""+++++++++++++++++++++++++++++++++

++STAFF IS SUCCESSFULLY REMOVED++

+++++++++++++++++++++++++++++++++""")

mydb.commit()

else:

print("")

print("STAFF DOESNOT EXIST!!!!!!")

#Total Seats Distribution

elif a==5:

print("1:Seats for CSE")

print("2:Seats for Electrical Engineering")

print("")

ch=int(input("Enter your choice:"))

print("")

if ch==1:

print("Seats available is CSE departments:")

print("")

mycursor.execute("select \* from seats\_distribution ")

run=mycursor.fetchall()

print("")

for i in run:

print(i)

if ch==2:

mycursor.execute("select \* from seats\_distribution where Department\_available=Electrical engineering")

run=mycursor.fetchall()

print("")

for i in run:

print(i)

#total fees for each year

elif a==6:

print("1:fees for CSE")

print("2:fees for electrical engineering")

print("")

ch=int(input("enter your choice:"))

print("")

if ch==1:

print("Fees FOR CSE DEpartment Annualy")

print("")

mycursor.execute("select \* from Fees\_Collection\_CSE")

run=mycursor.fetchall()

print("")

for i in run:

print(i)

if ch==2:

mycursor.execute("select \* FROM Fees\_Collection\_Electrical")

run=mycursor.fetchall()

print("")

for i in run:

print(i)

#EXIT

elif a==7:

print("""++++++++++++++++++++++++++THANKS FOR VISITING++++++++++++++++++++++++++""")

print("""======================================================================

++++++++++++++++++++++++++ University Data Management +++++++++++++++++++++++++

==========================================================================""")

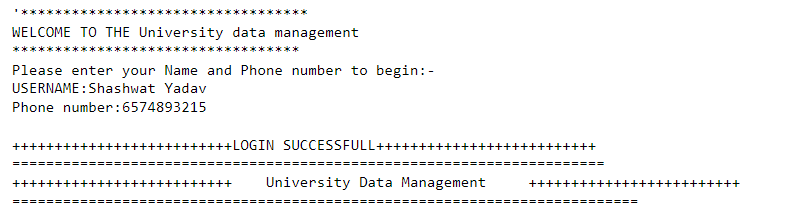
else:

print ("%%%%%%%%%%%%%%%%%% The service you have selected is not available%%%%%%%%%%%%%%%%%%")

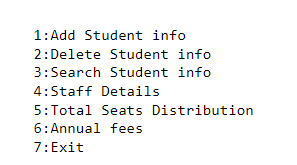
print("&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&")

**OUTPUT**

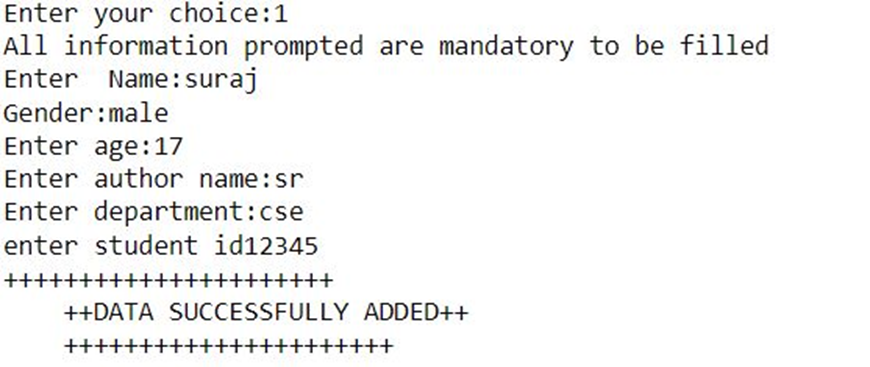
**WELCOME INTERFACE**



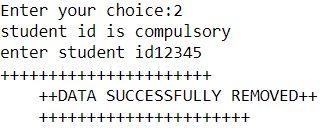
**Service AVAILABLE**



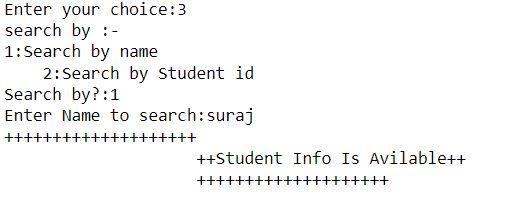
**If choice is 1:**

****

**If choice is 2:**

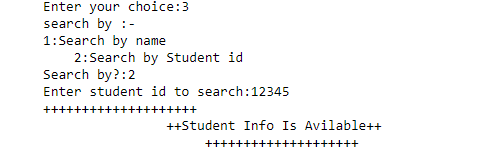


**If choice is 3:**

**If searching by name:** 

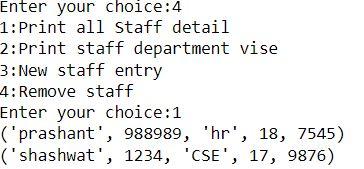
**If choice is 3:**

**If searching by student id**



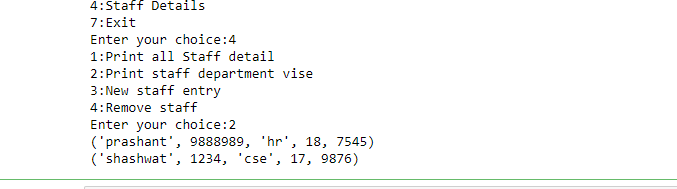
**If choice is 4:**

**And internal choice is 1;**



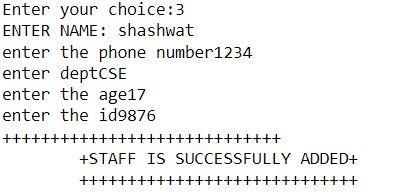
**If choice is 4:**

**And internal choice is 2:**



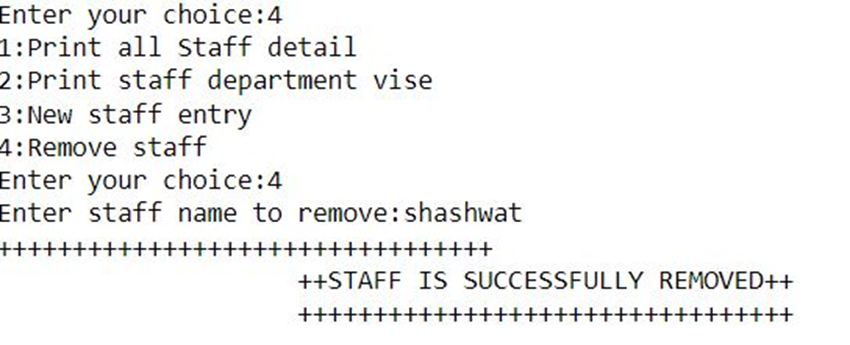
**If choice is 4:**

**And internal choice is 3:**

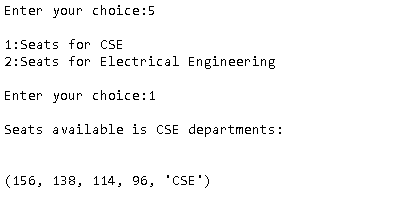


**If choice is 4:**

**And internal choice is 4**

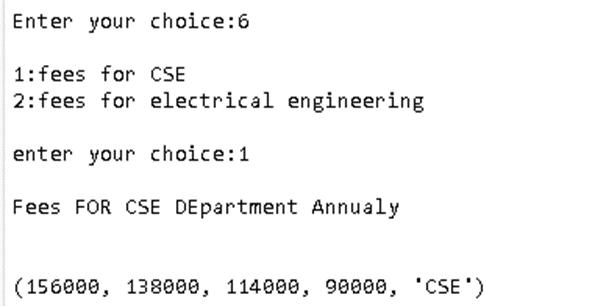
****

**If choice is 5:**



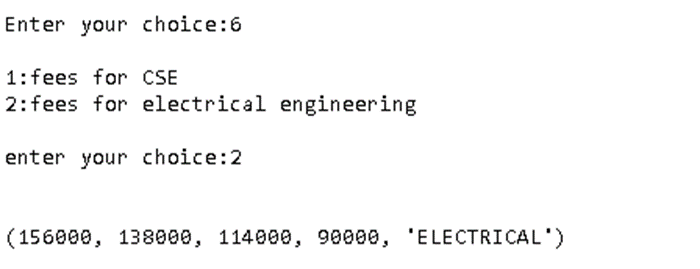
**If choice is 6:**

**And internal choice is 1:**

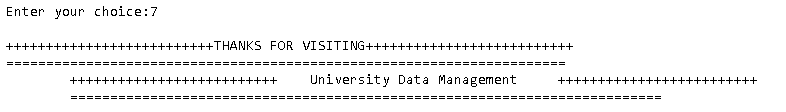
****

**If choice is 6:**

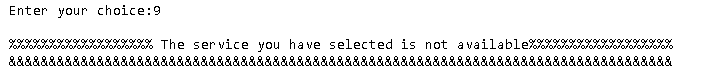
**And internal choice is 2:**

****

**If choice is 7(exit);**



**If choice is invalid:**



**BIBILOGRAPHY**

In order to work on this project titled – GROCERY STORE  
MANAGEMENT SYSTEM the following books and literature are  
referred by me during the various phases of development of the  
project.

1. NCERT Informatics Practices Class XII  
   2. On-line Help of python ®  
   3. computer science for class XII-by Sumita Arora  
   4. computer science for class XI-by Sumita Arora  
   5. <http://www.mysql.org/>  
   6. <http://www.python.org/>  
   7. <http://www.stackoverflow.com/>
2. Other than the above-mentioned books, the suggestions and  
   supervision of my teacher and my class experience also helped  
   me to develop this software project