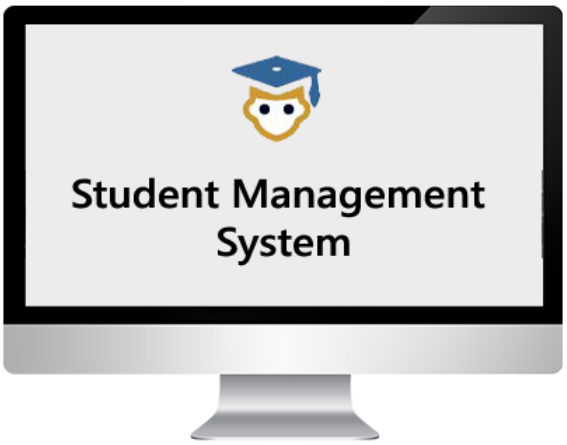
AIR FORCE SCHOOL

AGRA

Computer Science Project Report

Topic – Student Management System



Submitted to – Mr Nitin Sharma

Submitted by – Ankit Ambasta

CERTIFICATE

This is to certify that Ankit Ambasta of class XII , AirForceSchoolAgra has successfully completed his research on mentioned project under the guidance of MrNitinSharma (C.S Teacher) for the AISSCE practical evaluations for academic year 2021-22.

Signature
(subject teacher)

Signature
(student)

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AKNOWLEGEMENT

Through columns of this section of my project report I would like to thank my Computer science teacher Mr. Nitin Sharma whose valuable guidance has been the ones that helped me patch this project and make it full proof success, his suggestions and instruction has served as the major contribution towards the completion of this project.

Then I would like to thank my parents who financed my project and have helped me with their valuable suggestions and guidance has been very helpful in various phases of the completion of the project.

At end I would like to thank all who directly or indirectly supported me for this project.

Introduction toProject

Student's academic profile management system in python programming language is a simple console application system build without the use of graphics .

This project will let the users to draw student's academic profile .Student's details will be stored in sql database network.

Features

- Database will hold student's information such as his/her roll number, name ,.
- Database will also hold student's score in five subjects for instance physics , chemistry , math ,English and computer science .
- Software will automatically calculate the grand total (i.e. out of five hundred marks) , also assign percentage to student .
- User may read whole record at once or search for a particular student's record with help of inbuilt search option.

User may modify or delete record .

Objective

The primary aim of this project is to make a digital platform to store student's academic performance

The expected user for this project are School teachers who tends to waste their valuable time in making academic records and perform manual task, beneath maintaining a hard record has its own advantages but it is very difficult to store them, even more difficult to search for a particular record in ocean of hundreds of records .

This project will create a digital environment where teacher can store infinite number of records in very less digital space , manual calculating errors will be finished as grand total and percentage will be evaluated automatically .

In case of human error such as entering score it can be modified easily with the help of inbuilt tools .

In short this tool can act as boon for teachers.

Scope of Project

Project will alter a virtual database on sql database system The main window (the python console) will have five choices, namely

Enter record
View all record
Search record
Modify record
Delete record

Enter record , user can enter details of new student with help of this function.

View all record, all records will be displayed on user's screen.

Search record , display record of the particular student with help of rollno .

Modify record user can modify particular's record with the help of rollno.

Delete record user can permanently delete particular's record .

HardwareRequirements

- Basic hardware such as mouse , keyboard , monitor and CPU .
- Processors:Intel® Core™ i5 processor 4300M at 2.60 GHz or 2.59 GHz (1 socket, 2 cores, 2 threads per core), 8 GB of DRAMIntel® Xeon® processor E5-2698 v3 at 2.30 GHz (2 sockets, 16 cores each, 1 thread per core), 64 GB of DRAMIntel® Xeon Phi™ processor 7210 at 1.30 GHz (1 socket, 64 cores, 4 threads per core), 32 GB of DRAM, 16 GB of MCDRAM (flat mode enabled)
- Disk space: 2 to 3 GB

Software Requirements

Software used

Python (3.9)

(i)IDLE for python(3.9)

https://www.python.org/

(ii)Vs code

https://www.spyder-ide.org/ (iii)MySql

database service

https://www.mysql.com/

(iv)MS WORD 2019

Recommended System Requirements Processors:

Intel® Core™ i3 processor 4300M at 2.60 GHz.

Disk space: 2 to 4 GB.

Operating systems: Windows® 10, MACOS, and UBUNTU.

Python Versions: 3.X.X or Higher.

Minimum System Requirements Processors:

Intel Atom® processor or Intel® Core™ i3 processor.

Disk space: 1 GB.

Operating systems: Windows 7 or later, MACOS, and UBUNTU.

Python Versions: 2.7.X, 3.6.X

Prerequisites before installing MySQL Connector Python

You need root or administrator privileges to perform the installation process.

Python must be installed on your machine.

Note: – MySQL Connector Python requires python to be in the system's PATH. Installation fails if it doesn't find Python.

On Windows, If Python doesn't exist in the system's PATH, please manually add the directory containing python.exe yourself.

Code Snippet

```
print(
'''     STUDENTS ACADEMIC PROFILE
          MANAGEMENT SYSTEM
       -devloped by AnkitAmbasta''',"\n",'='*100)
#Connection statement
import mysql.connector
dataBase = mysql.connector.connect(
  host ="localhost",
  user ="root",
  passwd ="1234",
  database="csproject")
#Defining Connection Object
cursor=dataBase.cursor()
print(
'''Enter 1 New records
Enter 2 View all record
Enter 3 Search record
Enter 4 Modify record
Enter 5 Delete record
Enter 6 Exit
''')
#Add Function
def add():
    print('='*100)
    c1=int(input("How many record(s): "))
    for i in range(1,c1+1):
        print("Collecting details: ")
        roll=int(input("Roll_no. : "))
        name=input("Name : ")
        P=float(input("Physics_Score: "))
        C=float(input("Chemistry_Score: "))
        M=float(input("Maths_Score: "))
        E=float(input("English_Score: "))
        Cs=float(input("ComputerScience_Score: "))
```

```
        T=(P+C+M+E+Cs)
        p=(T/500)*100
        #sql
        insert="insert into report(RollNo,Name,Physics,Chemistry,Maths,English,CS,Total,Percentage) values(%s, %s,%s, %s,%s, %s,%s, %s,%s)"
        val = (roll,name,P,C,M,E,Cs,T,p)
        cursor.execute(insert, val)
        dataBase.commit()
        print("Successfully added: ",i," record(s)")
    print("BackToHomeScreen","."*20)
    print('='*100)
#View Function
def view():
    print('='*100)
    print("LoadingData","."*20)
    #sql
    cursor.execute("select * from report")
    data=cursor.fetchall()
    count=cursor.rowcount
    print("Total no. of rows retrieved: ",count)
    L1=['RollNo  ','Name    ','Physics  ','Chemistry ','Maths   ','English  ','C.S    ','Total   ','Percentage']
    for i in range(0,len(data)):
        print('='*100)
        for j in range(0,9):
            print(L1[j],' ',data[i][j])
    print("BackToHomeScreen","."*20)
    print('='*100)
#search Function
def search():
    print('='*100)
    roll=int(input("Enter rollno.: "))
    L1=['RollNo  ','Name    ','Physics  ','Chemistry ','Maths   ','English  ','C.S    ','Total   ','Percentage']
    c=0
    print("Searching","."*20)
    #sql
    cursor.execute("select * from report ")
    data=cursor.fetchall()
    print('='*100)
    for i in range(0,len(data)):
        if data[i][0]==roll:
            for j in range(0,9):
                print(L1[j],' ',data[i][j])
                c=c+1
```

```
    if c==0:
        print("No record found",'.'*20)
    print("BackToHomeScreen","."*20)
    print('='*100)
#Modify Function
def modify():
    print('='*100)
    roll1=int(input("Enter rollno.: "))
    print("Collecting details")
    roll=int(input("Roll_no. : "))
    name=input("Name : ")
    P=int(input("Physics_Score: "))
    C=int(input("Chemistry_Score: "))
    M=int(input("Maths_Score: "))
    E=int(input("English_Score: "))
    Cs=int(input("ComputerScience_Score: "))
    T=(P+C+M+E+Cs)
    p=(T/500)*100
    #sql
    sql="update report set RollNo=%s,Name=%s,Physics=%s,Chemistry=%s,Maths=%s,English=%s,CS=%s ,Total=%s,Percentage=%s where RollNo=%s"
    val = (roll,name,P,C,M,E,Cs,T,p,roll1)
    cursor.execute(sql,val)
    dataBase.commit()

    print("Successfuly Updated: ","."*20)
    print("BackToHomeScreen","."*20)
    print('='*100)
#Delete Function
def delete():
    print('='*100)
    roll=int(input("Enter rollno.: "))
    data=(roll,)
    #sql
    sql="delete from report where RollNo=%s"
    cursor.execute(sql,data)
    dataBase.commit()
    print("Successfully Deleted","."*20)
    print("BackToHomeScreen","."*20)
    print('='*100)
#____Main_____
while True :
    choice=int(input("Enter your choice: "))
```

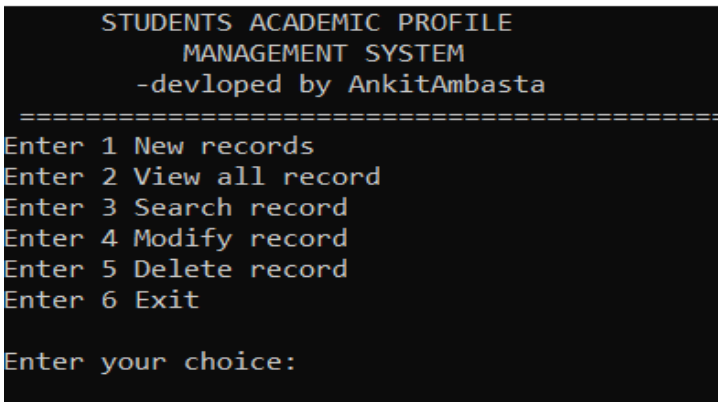
```
    if choice==1:
      add()
    elif choice==2:
       view()
    elif choice==3:
       search()
    elif choice==4:
       modify()
    elif choice==5:
       delete()
    elif choice==6:
       print("Thank You ! Visit Again")
       print("Terminating","."*20)
       exit()
    else :
       print("Please enter a valid choice: ")
#disconnectiing
dataBase.close()
```

Search browser for

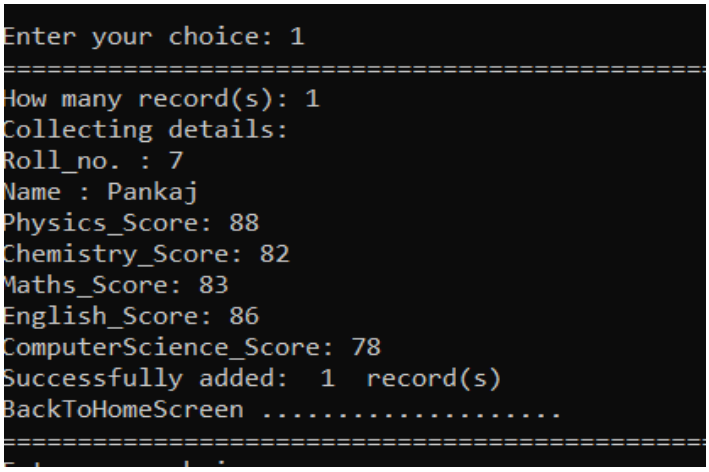
https://drive.google.com/drive/folders/1fr6LFAZbsTE_ekFNJZ0QdSl1a0cy8LjD?usp=sharing

OUTPUT

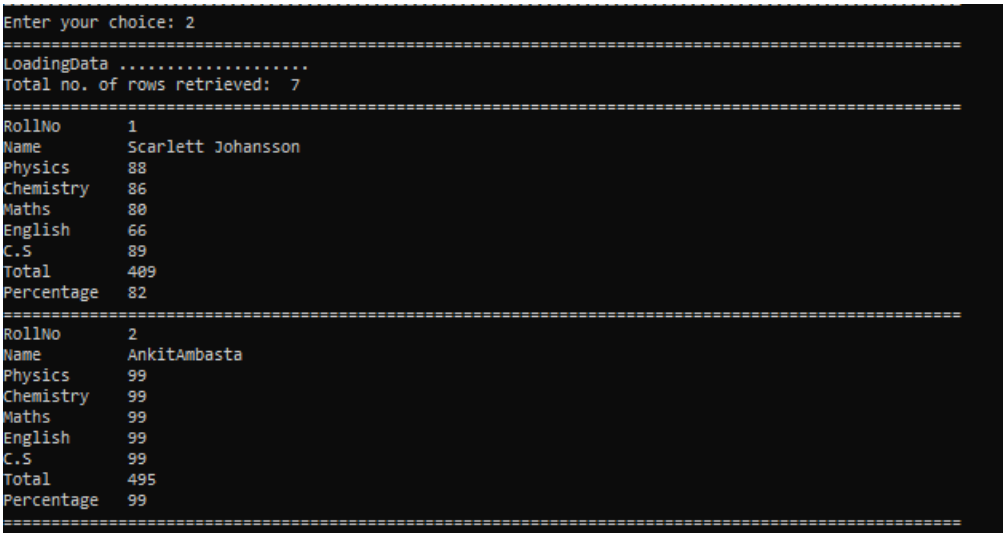
Home Screen



New records window



View all records window



```
RollNo        3
Name          Urvi Singh
Physics       88
Chemistry     84
Maths         83
English       89
C.S           90
Total         434
Percentage    87
==============================================================================
RollNo        4
Name          Urvashi
Physics       70
Chemistry     80
Maths         78
English       88
C.S           79
Total         395
Percentage    79
==============================================================================
RollNo        5
Name          Priyanka
Physics       80
Chemistry     78
Maths         29
English       28
C.S           56
Total         271
Percentage    54
==============================================================================
RollNo        6
Name          Yuvraj Singh
Physics       72
Chemistry     76
Maths         73
English       77
C.S           80
Total         378
Percentage    76
==============================================================================
RollNo        7
Name          Pankaj
Physics       88
Chemistry     82
Maths         83
English       86
```

Search record window

```
Enter rollno.: 3
Searching .....................
================================================
RollNo        3
Name          Urvi Singh
Physics       88
Chemistry     84
Maths         83
English       89
C.S           90
Total         434
Percentage    87
BackToHomeScreen .....................
================================================
```

Modify record window

```
Enter your choice: 4
================================================
Enter rollno.: 7
Collecting details
Roll_no. : 7
Name : Pankaj kumar
Physics_Score: 88
Chemistry_Score: 86
Maths_Score: 84
English_Score: 78
ComputerScience_Score: 83
Successfuly Updated:  .....................
BackToHomeScreen .....................
```

Delete record window

```
Enter your choice: 5
================================================
Enter rollno.: 6
Successfully Deleted .....................
BackToHomeScreen .....................
================================================
Enter your choice:
```

My Sql table

```
mysql> select * from report;
+--------+--------------------+---------+-----------+-------+---------+----+-------+------------+
| RollNo | Name               | Physics | Chemistry | Maths | English | CS | Total | Percentage |
+--------+--------------------+---------+-----------+-------+---------+----+-------+------------+
|      1 | Scarlett Johansson |      88 |        86 |    80 |      66 | 89 |   409 |         82 |
|      2 | AnkitAmbasta       |      99 |        99 |    99 |      99 | 99 |   495 |         99 |
|      3 | Urvi Singh         |      88 |        84 |    83 |      89 | 90 |   434 |         87 |
|      4 | Urvashi            |      70 |        80 |    78 |      88 | 79 |   395 |         79 |
|      5 | Priyanka           |      80 |        78 |    29 |      28 | 56 |   271 |         54 |
|      7 | Pankaj kumar       |      88 |        86 |    84 |      78 | 83 |   419 |         84 |
+--------+--------------------+---------+-----------+-------+---------+----+-------+------------+
6 rows in set (0.00 sec)
```

Conclusion

This software has its advantages and disadvantages but it can surely help with the record storage system. We don't have to worry about the misplacing of record which is a great clash while storing the record on separate files.

Limitations:

During testing phase of my software I encountered the following errors which I can’t able to fix and these are also limitations of my software

Console based application , made without the use of graphics ,not much user friendly

No role of mouse

Software will collapse if user enter any letter where a number is to be entered for eg user entered a string where roll no. is to be entered the software will collapse .

Further Scope

Tough I am not very clear about my profession in future but if I learn broader aspects of python programming I wanted to draw following modification in my project. First of all I wanted to , I will try to remove above underlined limitations of my software. Secondly , I will add a new feature to my software that is to assign predefined grades to student based on their score for example if student's score is between 90 to 100 in a subject than 'A' Grade will be assigned to him/her .I will integrate advanced Python tools and libraries that will surely expand scope of my project.

Reference and Credits

Reference

Sumitra Arora class 12 Website: https://in.linkedin.com/in/sumita-arora-73853367

Sumitra Arora

Computer Science with Python

The internet

Credits

Quora for system requirements under section of system requirements https://airforceschoolagra.edu.in/ for Logo on cover page .