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BAGESHWARI ROAD, GAYA

A Project Report On

STUDENT MANAGEMENT SYSTEM USING PYTHON

FOR AISSCE 2021

As a part of the CompUter Science Course (083)

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PGT (Computer Science)



CERTIFICATE

Management system" is a bona-fide work done by *Shivam Agrawal,Roll no.* 22627831 of class XII B of academic session 2020-21 in partial fulfillment of CBSE's AISSC Examination 2021 and has been carried out under my direct supervision and guidance. This Report or a similar report on this topic has not been submitted for any other examination and does not form a part of any other course undergone by the candidate.

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Signature Of Examiner	Principal

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Shivam Agrawal

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INTRODUCTION

The project titled "Student Management System Using Python" is a program for monitoring and controlling the records of a Student. This project is designed & coded in Python 3 and database management is handled by MYSQL.

This program mainly focuses on basic operations like creating a profile for new student, searching details and marks of a student and updating records/details of a student, The Student Management System is a Python program written on 64 bits, windows 10, designed to help school management to maintain and organize a student's detail with ease.

This programme is easy to use for both beginners and advanced users. It features a familiar and simple, user interface, combined with strong searching, insertion and reporting capabilities. The report generation facility helps to get a good idea of which.

OBJECTIVES

- i. To reduce time for the Institution
- ii. To increase efficiency and accuracy of the system
- iii. To reduce pressure on the management and relieving man power from repetitive and dull job
- iv. To make the retrieval of information faster
- v. To make the system more feasible
- vi. To reduce large amount of paper work
- vii. To make the system more reliable to avoid any ambiguity.
- viii. To make the system more flexible.



About PYTHON

Python is an easy to learn, powerful programming language. It has efficient high-level data structures and a simple but effective approach to object-oriented programming. Python's elegant syntax and dynamic typing, together with its interpreted nature, makes it an ideal language for scripting and rapid application development in many areas on most platforms.

Features of Python:

- i. Simple
- ii. Easy to Learn
- iii. Free and Open Source
- iv. Object Oriented
- v. Extensive Libraries
- vi. Embeddable



- **MySQL** is a freely available open source Relational Database Management System (RDBMS) that uses Structured Query Language (SQL). SQL is the most popular language for adding, accessing and managing content in a database. It is most noted for its quick processing, proven reliability, ease and flexibility of **use**.
- It offers advanced features and reliability far beyond a typical freeware project.
 Successful companies such as Verizon, Netflix, and Twitter rely on MySQL databases to power their businesses. In addition to being free, another very appealing aspect of MySQL is its open source nature.
- **MySQL** is a relational database management system (RDBMS) based on the SQL (Structured Query Language) queries. It is one of the most popular languages for accessing and managing the records in the table. **MySQL** is open-source and free software under the GNU license.

MODULES USED

The following modules were used in making of this program:

• mysql.connector

mysql.connector – It is a module of python which helps in the connection of Python with My SQL. It is not an inbuilt module.

SQL Tables

П MySQL 5.5 Command Line Client result rows in set (0.00 sec) nysql> desc details; | Null | Key | Default | Extra | varchar(20) | YES varchar(20) | YES varchar(20) | YES mother_name | father_name NULL d_o_b roll char(20) NULL rows in set (0.00 sec) mysql> desc marks; Field | Type | Null | Key | Default | Extra | | int(11) | YES | NULL | int(11) | YES | MUL | NULL | YES | MUL english hindi maths computer roll rows in set (0.00 sec) mysql> desc result;; | char(20) | YES | int(11) | YES | int(11) | YES | char(20) | YES percentage NULL roll status NULL rows in set (0.00 sec)

SYSTEM REQUIREMENTS

HARDWARE REQUIRED:

- Computer
 - a)Ram-at least 1gb
 - b)Processor-Intel Atom/I3 or above
 - c) HDD-20Gb+
- Printer
- Compact Disk

SOFTWARE REQUIRED:

- Operating System: Windows 7 or later
- Python 3 or above
- Ms Word
- MySQL



Source Code

```
print()
print()
print("
          STUDENT REPORT CARD MANAGEMENT SYSTEM
print()
#======= sql connection
import mysql.connector as mc
connect="
try:
  db=mc.connect(host="localhost",user
="root",password="jaihind",database="result")
  cur=db.cursor()
  connect='ok'
except:
  print('====connection to sql failed====')
  print('...Program not connected to sql please check program and
database....')
if connect=='ok':
  cur.execute('show tables')
  rec=cur.fetchall()
  table="
  if ('details',) in rec:
    if ('marks',) in rec:
      if ('result',) in rec:
         table='ok'
  else:
    print('Tables not found in my sql please check correctly')
                     ======= functions
def insert details():
  roll=int(input('Enter roll no of student;'))
  sql='select * from details where roll=%s'
```

```
data=(roll,)
  cur.execute(sql,data)
  record=cur.fetchall()
  if len(record)!=0:
     print('Record already exist for this roll no;')
  else:
     while True:
       name=input('Enter name of student;')
       mot=input('Enter mother\'s name;')
       ft=input('Enter father\'s name;')
       dob=input('Enter date of birth;')
       sql1='insert into details values(%s,%s,%s,%s,%s)'
       data1=(mot,ft,dob,roll,name)
       cur.execute(sql1,data1)
       db.commit()
       ch=input('Do you want to enter more record say(y/n)')
       if ch=='y' or ch=='Y':
          continue
       elif ch=='n' or ch=='N':
          print('Record sucessfully inserted...')
          break
       else:
          print('Enter right choice.....')
def display_details():
  roll=int(input('Enter roll no of student for display details;'))
  sql='select * from details where roll=%s'
  data=(roll,)
  cur.execute(sql,data)
  record=cur.fetchall()
  if len(record)==0:
     print('NO record found for this roll no;')
  else:
     print('[Mother\'s name,Father\'s name,DOB,Roll no,Name]')
     print(record)
def modify_details():
```

```
roll=int(input('Enter roll no of student for modify/delete details;'))
  sql='select * from details where roll=%s'
  data=(roll,)
  cur.execute(sql,data)
  record=cur.fetchall()
  if len(record)==0:
     print('NO record found for this roll no;')
  else:
     cho=input('Do you want to delete or modify record;')
     if cho=='delete' or cho=='Delete':
       sql='delete from details where roll=%s'
       data=(roll,)
       cur.execute(sql,data)
       db.commit()
       print('Record sucessfully deleted.....')
     elif cho=='modify' or cho=='Modify':
       chi=input('what you want to modify-\n1.Name\n2.Mother\'s
name\n3.Father\'s name\n4.D.O.B\n')
       if chi=='1':
          name=input('Enter new name of student ;')
          sql='update details set name=%s where roll=%s'
          data=(name,roll)
          cur.execute(sql,data)
          db.commit()
          print('Record sucessfully modify.....')
       elif chi=='2':
          mot=input('Enter new mother\'s name;')
          sql='update details set mother_name=%s where roll=%s'
          data=(mot,roll)
          cur.execute(sql,data)
          db.commit()
          print('Record sucessfully modify.....')
       elif chi=='3':
          ft=input('Enter new father\'s name;')
          sql='update details set father_name=%s where roll=%s'
```

```
data=(ft,roll)
          cur.execute(sql,data)
          db.commit()
          print('Record sucessfully modify....')
       elif chi=='4':
          dob=input('Enter new date of birth;')
          sql='update details set d_o_b=%s where roll=%s'
          data=(dob,roll)
          cur.execute(sql,data)
          db.commit()
          print('Record sucessfully modify.....')
       else:
          print('Enter right choice....')
     else:
       print('Enter right choice....')
def insert marks():
  roll=int(input('Enter roll no of student for insert marks;'))
  sql='select * from details where roll=%s'
  data=(roll,)
  cur.execute(sql,data)
  record=cur.fetchall()
  if len(record)==0:
     print('NO record found for this roll no;')
  else:
     ms1=int(input('Enter marks of English;'))
     ms2=int(input('Enter marks of Hindi;'))
     ms3=int(input('Enter marks of Math;'))
     ms4=int(input('Enter marks of Science;'))
     ms5=int(input('Enter marks of Social Science;'))
     ms6=int(input('Enter marks of computer;'))
     sql1='insert into marks values(%s,%s,%s,%s,%s,%s,%s,%s)'
     data1=(ms1,ms2,ms3,ms4,ms5,ms6,roll)
     cur.execute(sql1,data1)
     db.commit()
     print('Record sucessfully inserted....')
```

```
def display_marks():
  roll=int(input('Enter roll no of student for display marks;'))
  sql='select * from marks where roll=%s'
  data=(roll,)
  cur.execute(sql,data)
  record=cur.fetchall()
  if len(record)==0:
     print('NO record found for this roll no;')
  else:
     print('[English,Hindi,Math,Science,social,computer]')
     print(record)
def modify_marks():
  roll=int(input('Enter roll no of student for modify/delete marks;'))
  sql='select * from marks where roll=%s'
  data=(roll,)
  cur.execute(sql,data)
  record=cur.fetchall()
  if len(record)==0:
     print('NO record found for this roll no;')
  else:
     cho=input('Do you want to delete or modify marks;')
     if cho=='delete' or cho=='Delete':
       sql='delete from marks where roll=%s'
       data=(roll,)
       cur.execute(sql,data)
       db.commit()
       print('Record sucessfully delete....')
     elif cho=='modify' or cho=='Modify':
       chi=input('what you want to modify marks of -
\n1.English\n2.Hindi\n3.Maths4.Science\n5.Social\n6.Computer\nEnter-
')
       if chi=='1':
          ms1=int(input('Enter marks of English;'))
          sql='update marks set english=%s where roll=%s'
```

```
data=(ms1,roll)
  cur.execute(sql,data)
  db.commit()
  print('Record sucessfully modify.....')
elif chi=='2':
  ms2=int(input('Enter marks of Hindi;'))
  sql='update marks set hindi=%s where roll=%s'
  data=(ms2,roll)
  cur.execute(sql,data)
  db.commit()
  print('Record sucessfully modify....')
elif chi=='3':
  ms3=int(input('Enter marks of Math;'))
  sql='update marks set maths=%s where roll=%s'
  data=(ms3,roll)
  cur.execute(sql,data)
  db.commit()
  print('Record sucessfully modify....')
elif chi=='4':
  ms4=int(input('Enter marks of Science;'))
  sql='update marks set science=%s where roll=%s'
  data=(ms4,roll)
  cur.execute(sql,data)
  db.commit()
  print('Record sucessfully modify.....')
elif chi=='5':
  ms5=int(input('Enter marks of Social;'))
  sql='update marks set sst=%s where roll=%s'
  data=(ms5,roll)
  cur.execute(sql,data)
  db.commit()
  print('Record sucessfully modify.....')
elif chi=='6':
  ms6=int(input('Enter marks of computer;'))
  sql='update marks set computer=%s where roll=%s'
```

```
data=(ms6,roll)
          cur.execute(sql,data)
          db.commit()
          print('Record sucessfully modify.....')
       else:
          print('Enter right choice....')
     else:
       print('Enter right choice.....')
def result_creator():
  total=0
  count=0
  percentage=0
  roll=int(input('Enter roll no of student for result creation;'))
  sql='select * from marks where roll=%s'
  data=(roll,)
  cur.execute(sql,data)
  record=cur.fetchall()
  if len(record)==0:
     print('Record not found for this roll no;')
  else:
     sql='select * from result where roll=%s'
     data=(roll,)
     cur.execute(sql,data)
     record=cur.fetchall()
     if len(record)!=0:
       print('Result already created...')
     else:
       sql='select * from marks where roll=%s'
       data=(roll,)
       cur.execute(sql,data)
       record=cur.fetchall()
       for i in range(len(record[0])-1):
          total+=int(record[0][i])
          if record[0][i]<33:
```

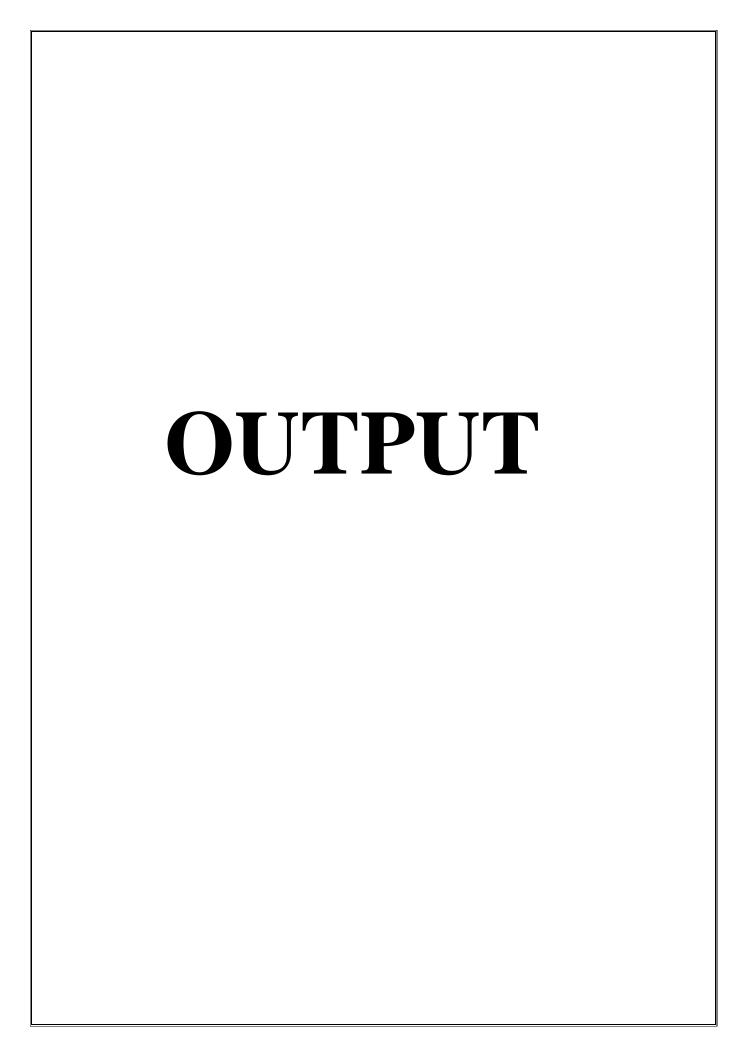
```
count+=1
       if count>=2:
          status='FAIL'
       else:
          status='PASS'
       percentage=str(total/5)
       sql='insert into result values(%s,%s,%s,%s)'
       data=(percentage,total,roll,status)
       cur.execute(sql,data)
       db.commit()
       print('Result sucessfully created...')
def display_result():
  cho=input('Want to see all result say(y/n);')
  if cho=='Y' or cho=='y':
     cur.execute( 'select * from details,marks,result where
details.roll=marks.roll=result.roll;')
    record=cur.fetchall()
    for rec in record:
       print('
       print('|')
       print('| student name : ',\t',rec[4])
       print('| roll : ','\t',rec[3])
       print('| date of birth: ',\t',rec[2])
       print('| mother\'s name : ','\t',rec[0])
       print('| father\'s name : ','\t',rec[1])
       print('|.....')
       print('| subject marks')
       print('|.....')
       print('| science : \t',rec[8])
       print('| hindi : \t',rec[6])
       print('| social studies :\t',rec[9])
       print('| maths : \t',rec[7])
       print('| computer : ','\t',rec[10])
       print('| englis : \t',rec[5])
```

```
print('| total : \t',rec[13])
       print('| percent : \t',rec[12],'%')
print('| status : \t',rec[15])
  elif cho=='N' or cho=='n':
     roll=int(input('Enter roll no of student for display result;'))
     sql=' select * from details,marks,result where
details.roll=%s=marks.roll=result.roll;
     data=(roll,)
     cur.execute(sql,data)
     rec=cur.fetchall()
     if len(rec)==0:
        print('NO record found for this roll no;')
     else:
        print('
        print('|')
        print('| student name : ',\'t',rec[0][4])
        print('| roll : ',\t',rec[0][3])
        print('| date of birth: ',\t',rec[0][2])
        print('| mother\'s name : ','\t',rec[0][0])
        print('| father\'s name : ','\t',rec[0][1])
        print('| science : \t',rec[0][8])
                      : \t',rec[0][6])
        print('| hindi
        print('| social studies :\t',rec[0][9])
        print('| maths : \t',rec[0][7])
        print('| computer : ','\t',rec[0][10])
        print('| englis : \t',rec[0][5])
        print('| total : \t',rec[0][13])
        print('| percent : \t',rec[0][12],'%')
        print('| status : \t',rec[0][15])
if connect=='ok' and table=='ok':
  while True:
     print('|.....')
```

```
print(" ******MENU FOR OPERATION******
print('|.....|')
print('| 1.To insert
                           |')
print('|.....|')
print('| 2.To display
                            |')
print('|.....|')
print('| 3.To modify/delete
                              |')
print('|.....|')
print('| 4.To create result
                             |')
print('|.....|')
print('| 5.To displsy result
                             ")
print('|.....|')
print('| 6.EXIT
                           |')
print('|.....')
cho=int(input('Enter your choice(1,2,3,4,5,6);'))
if cho == 1:
  while True:
    print('|.....|')
    print('| *****SUBMENU FOR OPERATION*****
    print('|......')
    print('| 1.To insert details of student
    print('|.....|')
    print('| 2.To insert marks of syudent
    print('|.....|')
                               |')
    print('| 3.EXIT
    print('|.....|')
    cho=int(input('Enter your choice(1,2,3);'))
    if cho == 1:
      insert details()
    elif cho==2:
      insert marks()
    elif cho==3:
      break
    else:
      print('Enter right choice...')
```

```
elif cho==2:
 while True:
    print('|.....|')
    print('| *****SUBMENU FOR OPERATION*****
    print('|.....|')
    print('| 1.To display details of student |')
    print('|......')
    print('| 2.To display marks of student
    print('|.....|')
    print('| 3.EXIT
                               ")
    print('|......')
    cho=int(input('Enter your choice(1,2,3);'))
    if cho == 1:
      display_details()
    elif cho==2:
      display_marks()
    elif cho==3:
      break
    else:
      print('Enter right choice...')
elif cho==3:
  while True:
    print('|.....|')
    print('| *****SUBMENU FOR OPERATION*****
                                                   |')
    print('|.....|')
    print('|1.To modify/delete details of student|')
    print('|.....|')
    print('|2.To modify/delete marks of student |')
    print('|.....|')
    print('|3.EXIT
                                |')
    print('|.....|')
    cho=int(input('Enter your choice(1,2,3);'))
    if cho==1:
      modify_details()
    elif cho==2:
      modify_marks()
```

```
elif cho==3:
    break
    else:
        print('Enter right choice...')
elif cho==4:
    result_creator()
elif cho==5:
    display_result()
elif cho==6:
    break
else:
    print('Enter right choice...')
```



```
— П
*IDLE Shell 3.9.1*
<u>F</u>ile <u>E</u>dit She<u>l</u>l <u>D</u>ebug <u>O</u>ptions <u>W</u>indow <u>H</u>elp
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec 7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
======= RESTART: C:\Python39\shivam project\shivam result.py ==========
                   *****************
                        STUDENT REPORT CARD MANAGEMENT SYSTEM
*****MENU FOR OPERATION*****
|....|
  1.To insert
| 2.To display
  3.To modify/delete
| 4.To create result
1..........
  5.To displsy result
|....|
1 6.EXIT
Enter your choice (1,2,3,4,5,6);
                                                                                       Ln: 26 Col: 3
🍌 *IDLE Shell 3.9.1*
\underline{\underline{F}} ile \quad \underline{\underline{F}} dit \quad \underline{\underline{D}} ebug \quad \underline{\underline{O}} ptions \quad \underline{\underline{W}} indow \quad \underline{\underline{H}} elp
Enter roll no of student; 1
Record already exist for this roll no;
.....
*****SUBMENU FOR OPERATION****
| 1.To insert details of student
| 2.To insert marks of syudent
|.....
| 3.EXIT
Enter your choice (1,2,3);1
Enter roll no of student;2
Enter name of student; shivam
Enter mother's name; kiran
Enter father's name; rajesh
Enter date of birth; 14-09-2003
Do you want to enter more record say(y/n)n
Record sucessfully inserted...
1..........
  *****SUBMENU FOR OPERATION****
| 1.To insert details of student
1..........
| 2.To insert marks of syudent
|.....
| 3.EXIT
Enter your choice(1,2,3);
                                                                                         Ln: 65 Col: 2
```

```
– п
*IDLE Shell 3.9.1*
<u>File Edit Shell Debug Options Window Help</u>
5.To displsy result
1.........
Enter your choice(1,2,3,4,5,6);2
1..........
*****SUBMENU FOR OPERATION****
|-----
| 1.To display details of student
[.....]
| 2.To display marks of student
| 3.EXIT
Enter your choice(1,2,3);1
Enter roll no of student for display details;1
[Mother's name, Father's name, DOB, Roll no, Name]
[('abcd', 'efghi', '12/13/2252', 1, 'saurav kumar')]
|-----
| *****SUBMENU FOR OPERATION****
| 1.To display details of student
| 2.To display marks of student
| 3.EXIT
Enter your choice(1,2,3);
                                                                       Ln: 104 Col:
                                                                      - 🗇 X
*IDLE Shell 3.9.1*
\underline{\text{File}} \quad \underline{\text{Edit}} \quad \text{She}\underline{\text{II}} \quad \underline{\text{D}}\text{ebug} \quad \underline{\text{O}}\text{ptions} \quad \underline{\text{W}}\text{indow} \quad \underline{\text{H}}\text{elp}
Enter your choice(1,2,3);2
Enter roll no of student for display marks;1
[English, Hindi, Math, Science, social, computer]
[(10, 0, 33, 78, 99, 0, 1)]
1.........
*****SUBMENU FOR OPERATION****
| 1.To display details of student
| 2.To display marks of student
[......
| 3.EXIT
Enter your choice (1,2,3);3
1.........
*****MENU FOR OPERATION*****
1.To insert
1.....
| 2.To display
3.To modify/delete
| 4.To create result
|.....
| 5.To displsy result
|-----
6.EXIT
```

```
– п x
*IDLE Shell 3.9.1*
\underline{\text{File}} \quad \underline{\text{E}} \text{dit} \quad \text{She}\underline{\text{II}} \quad \underline{\text{D}} \text{ebug} \quad \underline{\text{O}} \text{ptions} \quad \underline{\text{W}} \text{indow} \quad \underline{\text{H}} \text{elp}
Enter new name of student ; ram kumar
Record sucessfully modify.....
[.....
*****SUBMENU FOR OPERATION****
|....|
|1.To modify/delete details of student|
|-----
|2.To modify/delete marks of student |
|.....
|3.EXIT
Enter your choice (1,2,3);2
Enter roll no of student for modify/delete marks;1
Do you want to delete or modify marks; modify
what you want to modify marks of -
1.English
2.Hindi
3.Maths4.Science
5.Social
6.Computer
Enter-1
Enter marks of English;99
Record sucessfully modify.....
|-----
*****SUBMENU FOR OPERATION****
1.........
|1.To modify/delete details of student|
|-----
                                                                                Ln: 77 Col: 2
*IDLE Shell 3.9.1*
File Edit Shell Debug Options Window Help
3.Maths4.Science
5.Social
6.Computer
Enter-1
Enter marks of English;99
Record sucessfully modify.....
|-----
*****SUBMENU FOR OPERATION****
|1.To modify/delete details of student|
|-----
2.To modify/delete marks of student
|-----
13.EXIT
|.....
Enter your choice (1,2,3);2
Enter roll no of student for modify/delete marks;1
Do you want to delete or modify marks; delete
Record sucessfully delete.....
|-----
*****SUBMENU FOR OPERATION****
.....
|1.To modify/delete details of student|
|-----
|2.To modify/delete marks of student |
|-----
|3.EXIT
Enter your choice(1,2,3);
```

```
*IDLE Shell 3.9.1*
<u>F</u>ile <u>E</u>dit She<u>l</u>l <u>D</u>ebug <u>O</u>ptions <u>W</u>indow <u>H</u>elp
  student name :
                       shashwat
|.....
| subject marks
| science : 23
| hindi : 44
| social studies : 32
| maths : 33
| computer : 99
| englis : 45
| total : 220
| percent : 44.0 %
| status : FAIL
1........
*****MENU FOR OPERATION*****
| 2.To display
| 3.To modify/delete
1.........
  4.To create result
                                                                                                  Ln: 405 Col:
🍌 *IDLE Shell 3.9.1*
                                                                                                  - 0 X
\underline{\text{File}} \quad \underline{\text{E}} \text{dit} \quad \text{She} \underline{\text{II}} \quad \underline{\text{D}} \text{ebug} \quad \underline{\text{O}} \text{ptions} \quad \underline{\text{W}} \text{indow} \quad \underline{\text{H}} \text{elp}
Enter your choice (1, 2, 3, 4, 5, 6); 3
|-----
*****SUBMENU FOR OPERATION****
|1.To modify/delete details of student|
|-----
|2.To modify/delete marks of student |
|-----
13.EXIT
|-----
Enter your choice (1,2,3);1
Enter roll no of student for modify/delete details;1
Do you want to delete or modify record; modify
what you want to modify-
1.Name
2.Mother's name
3.Father's name
4.D.O.B
1
Enter new name of student ; ram kumar
Record sucessfully modify.....
|-----
*****SUBMENU FOR OPERATION****
.....
|1.To modify/delete details of student|
..........
```

LIMITATIONS AND UPGRADATIONS

*Limitations:

- Records of only one student can be modified at a time.
- Results of multiple students can't be displayed at once.
- Multiple Databases can't be used together.

*Upgradations:

The following upgradations can be made in future:

- Attendance record maintenance and attendance calculator.
- FEE details maintenance.
- GUI Interface.
- Option to Print the result of a student.

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