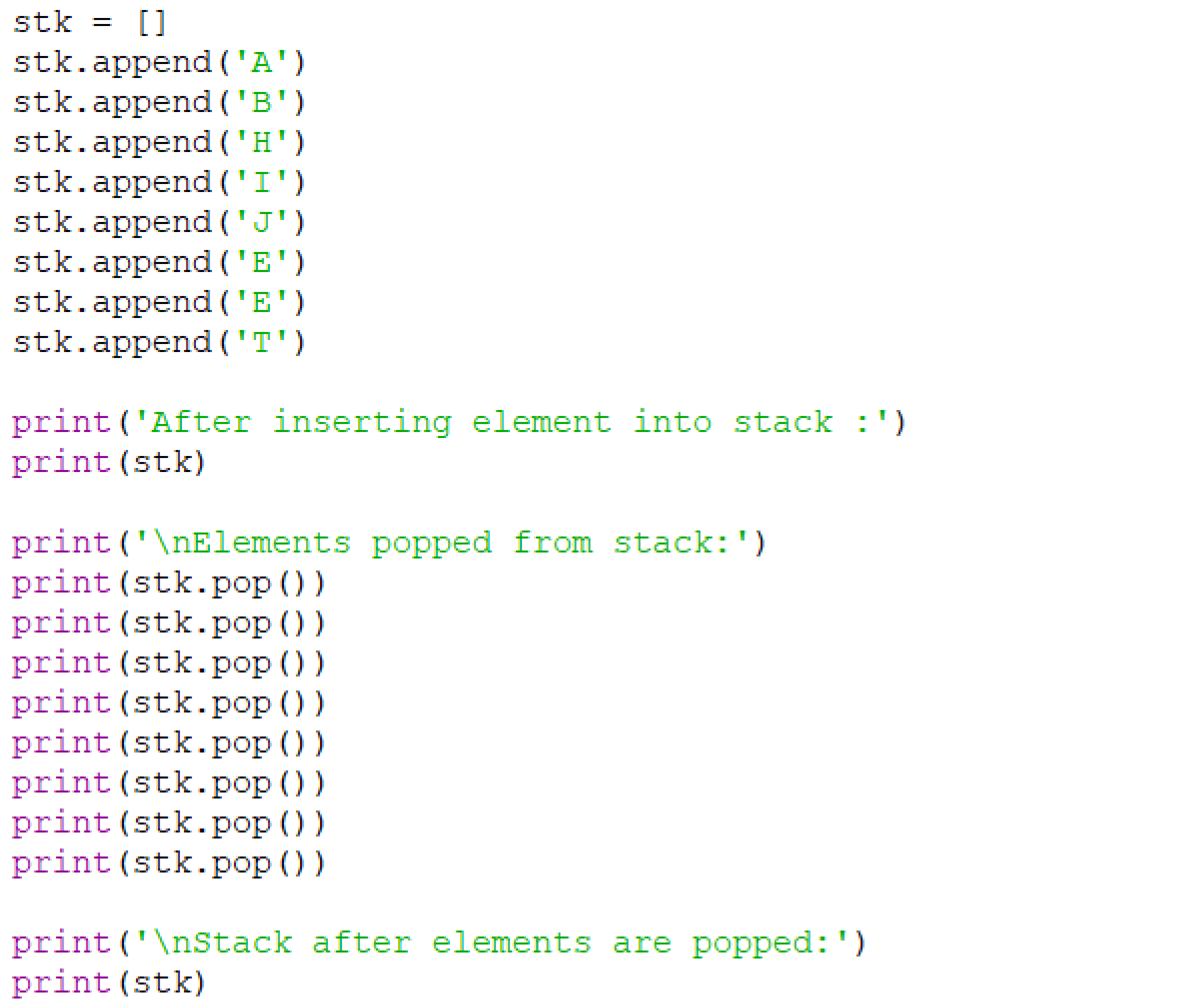
INDEX

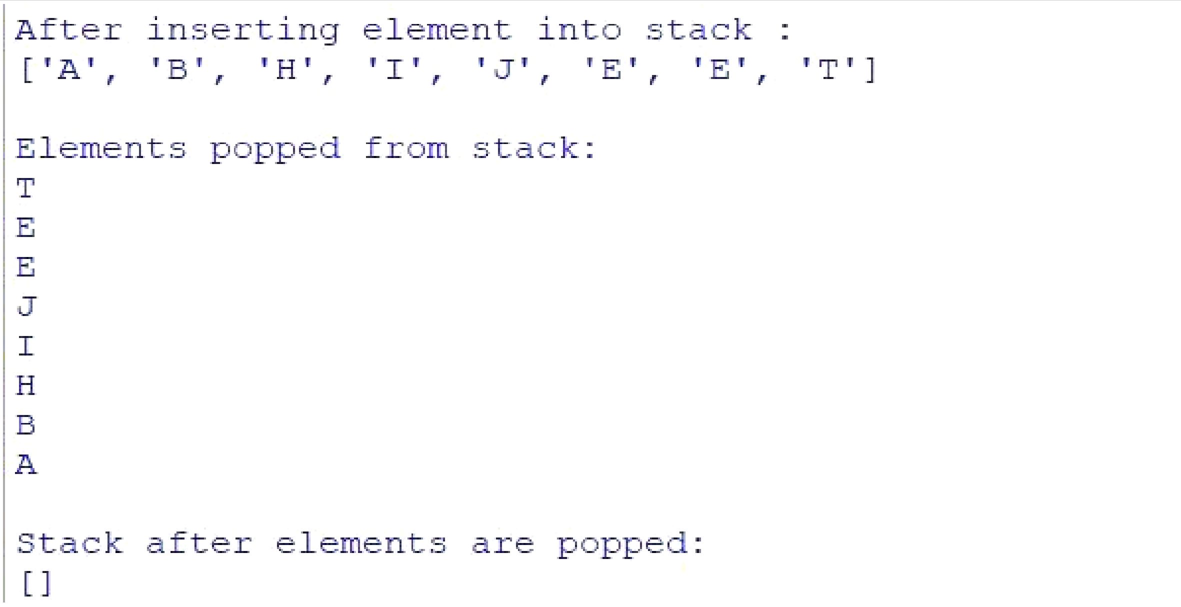
XII CS – Practical Assignments for TERM 2

1.PROGRAM TO DEMONSTRATE STACK IMPLEMENTATION USING LIST



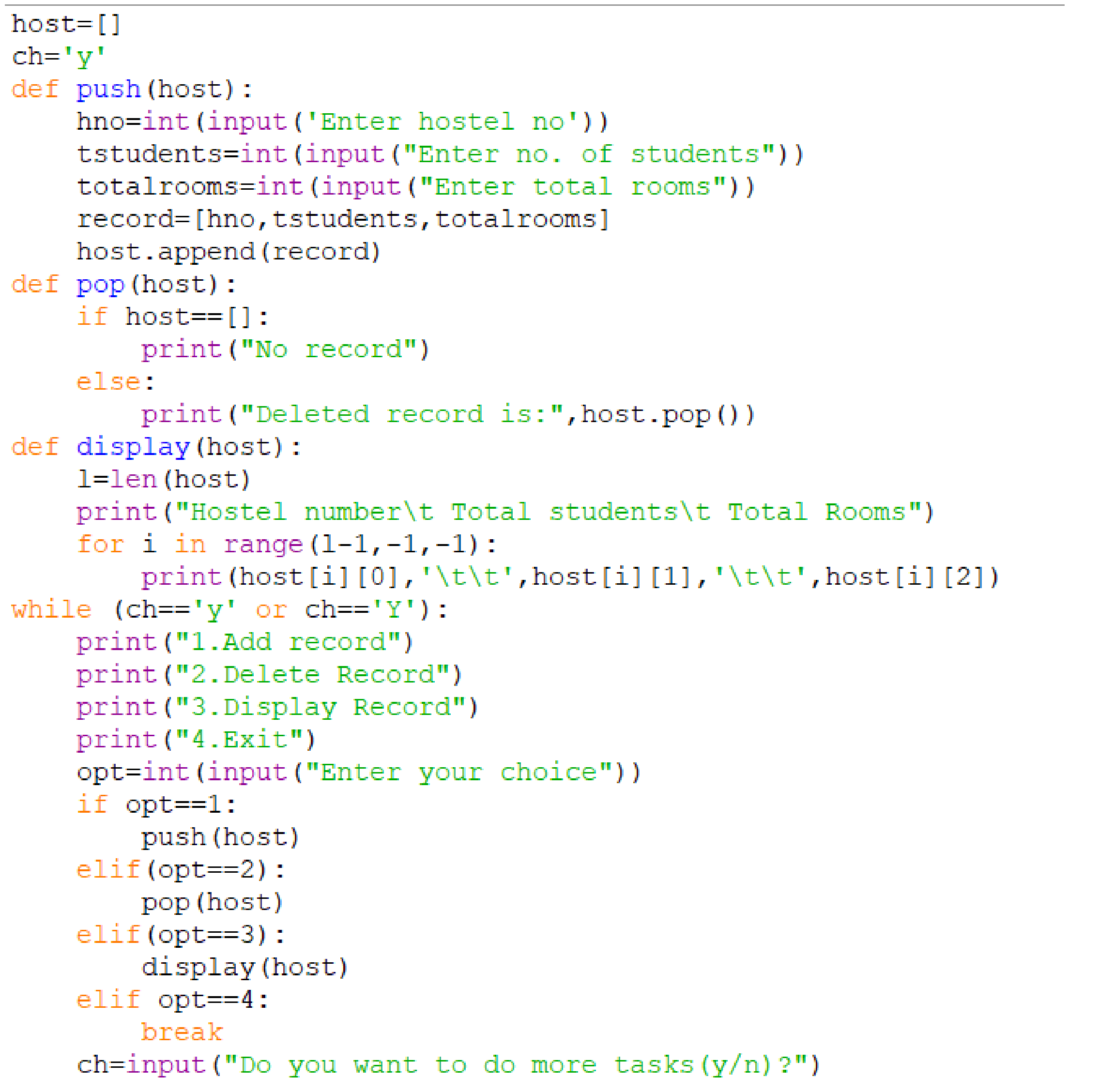
```
stk = []
stk.append('A')
stk.append('B')
stk.append('H')
stk.append('I')
stk.append('J')
stk.append('E')
stk.append('E')
stk.append('T')

print('After inserting element into stack :')
print(stk)

print('\nElements popped from stack:')
print(stk.pop())
print(stk.pop())
print(stk.pop())
print(stk.pop())
print(stk.pop())
print(stk.pop())
print(stk.pop())
print(stk.pop())

print('\nStack after elements are popped:')
print(stk)
```

OUTPUT



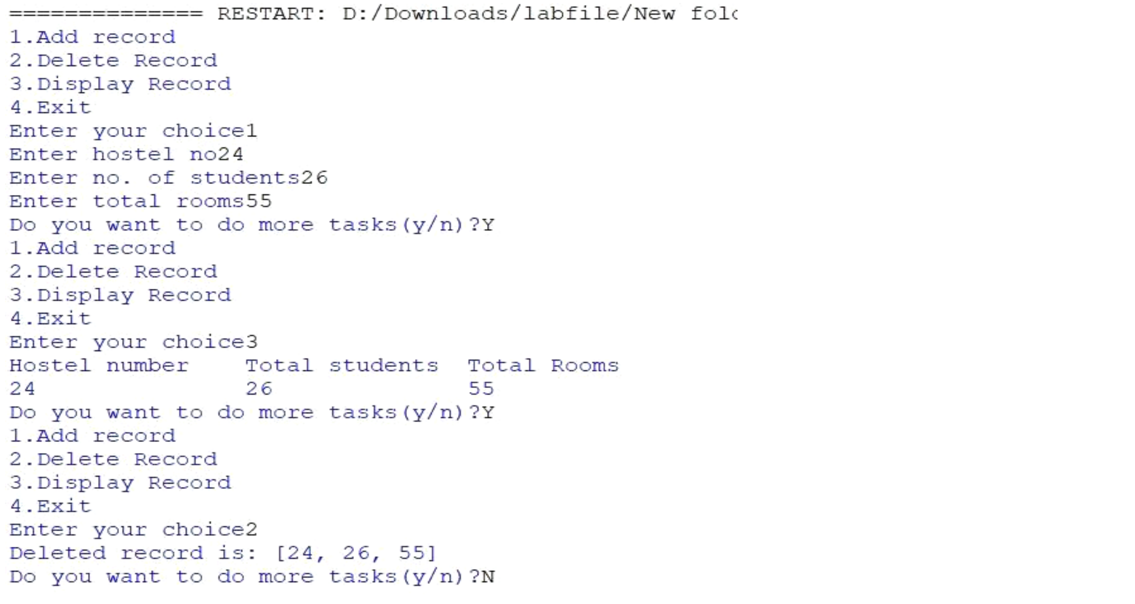
```
After inserting element into stack :
['A', 'B', 'H', 'I', 'J', 'E', 'E', 'T']

Elements popped from stack:
T
E
E
J
I
H
B
A

Stack after elements are popped:
[]
```

2.MENU DRIVEN PRG TO ADD,DELETE AND DISPLAY RECORD (STACK)



```python
host=[]
ch='y'
def push(host):
    hno=int(input('Enter hostel no'))
    tstudents=int(input("Enter no. of students"))
    totalrooms=int(input("Enter total rooms"))
    record=[hno,tstudents,totalrooms]
    host.append(record)
def pop(host):
    if host==[]:
        print("No record")
    else:
        print("Deleted record is:",host.pop())
def display(host):
    l=len(host)
    print("Hostel number\t Total students\t Total Rooms")
    for i in range(l-1,-1,-1):
        print(host[i][0],'\t\t',host[i][1],'\t\t',host[i][2])
while (ch=='y' or ch=='Y'):
    print("1.Add record")
    print("2.Delete Record")
    print("3.Display Record")
    print("4.Exit")
    opt=int(input("Enter your choice"))
    if opt==1:
        push(host)
    elif(opt==2):
        pop(host)
    elif(opt==3):
        display(host)
    elif opt==4:
        break
    ch=input("Do you want to do more tasks(y/n)?")
```

OUTPUT



```
============== RESTART: D:/Downloads/labfile/New fol
1.Add record
2.Delete Record
3.Display Record
4.Exit
Enter your choice1
Enter hostel no24
Enter no. of students26
Enter total rooms55
Do you want to do more tasks(y/n)?Y
1.Add record
2.Delete Record
3.Display Record
4.Exit
Enter your choice3
Hostel number    Total students  Total Rooms
24               26              55
Do you want to do more tasks(y/n)?Y
1.Add record
2.Delete Record
3.Display Record
4.Exit
Enter your choice2
Deleted record is: [24, 26, 55]
Do you want to do more tasks(y/n)?N
```

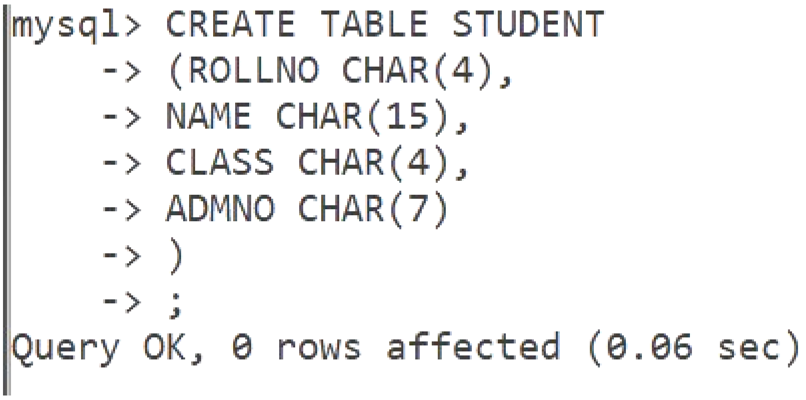
3.PROGRAM TO SHOW PUSH AND POP OPERATION (STACK)

```
s=[]
c='y'
while (c=='y'):
    print("1.Push")
    print("2.Pop")
    print("3.Display")
    print("4.Exit")
    choice=int(input("Enter your choice"))
    if choice==1:
       rollno=int(input("Enter rollno:"))
       name=input("Enter name:")
       s.append(rollno)
       s.append(name)
    elif choice==2:
         if s==[]:
            print("Stack empty")
         else:
            print("Deleted element is:",s.pop())
    elif choice==3:
           l=len(s)
           for i in range(l-1,-1,-1):
               print(s[i])
    elif choice==4:
        break

    else:
        print("Wrong Input")
    c=input("Do you want to continue or not?")
```

OUTPUT

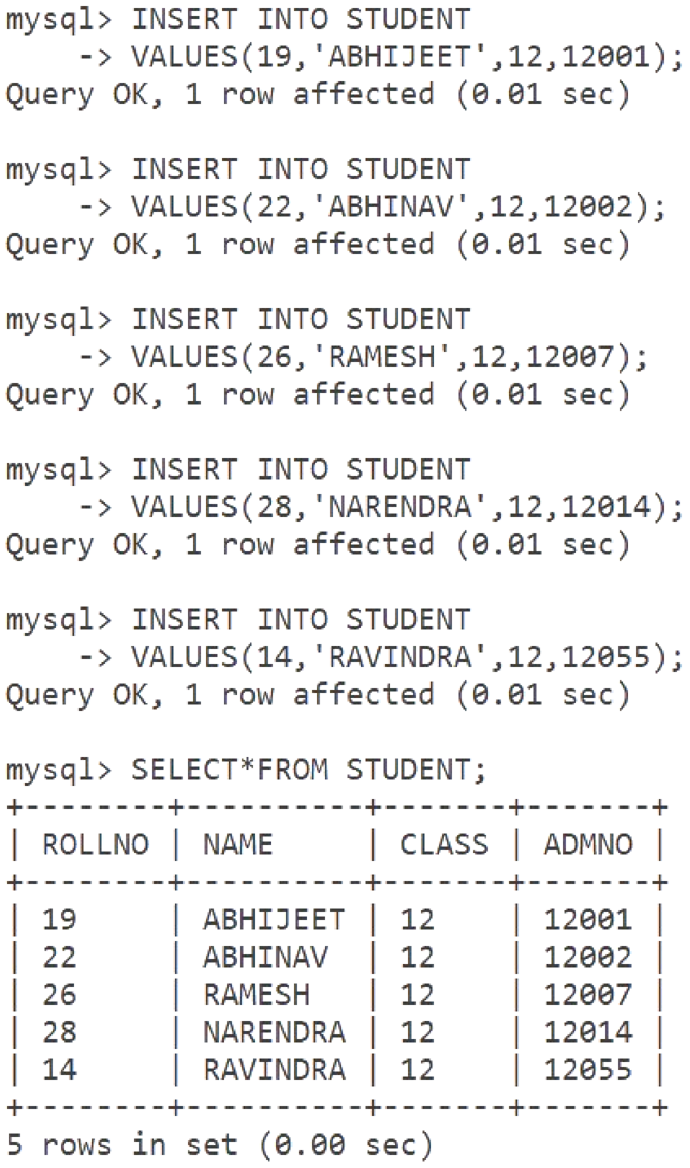
```
1.Push
2.Pop
3.Display
4.Exit
Enter your choice1
Enter rollno:12
Enter name:ABHIJEET
Do you want to continue or not?y
1.Push
2.Pop
3.Display
4.Exit
Enter your choice3
ABHIJEET
12
Do you want to continue or not?N
```

4. CREATE TABLE IN MYSQL



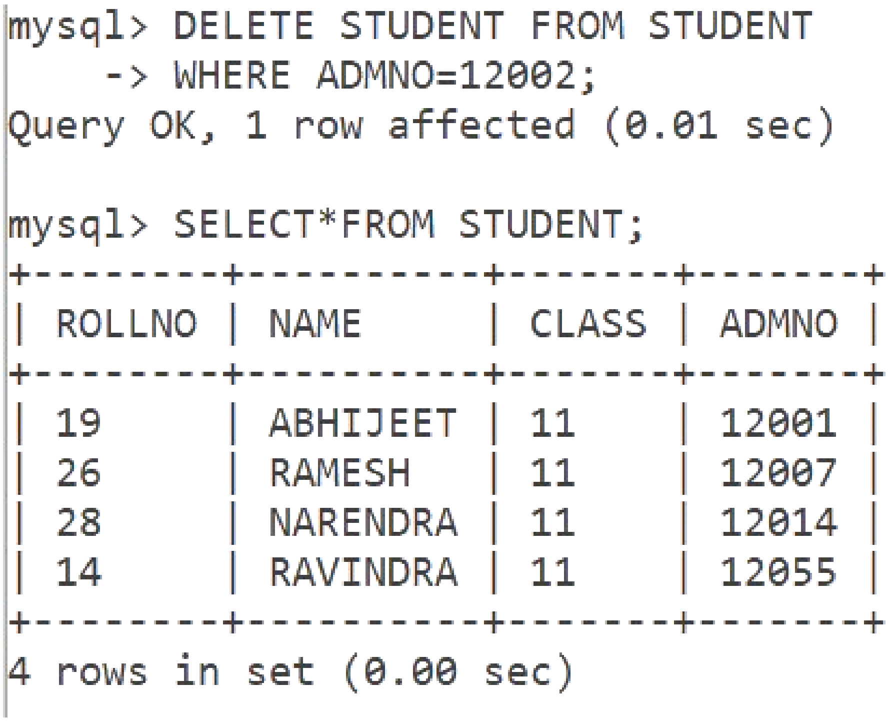
```
mysql> CREATE TABLE STUDENT
    -> (ROLLNO CHAR(4),
    -> NAME CHAR(15),
    -> CLASS CHAR(4),
    -> ADMNO CHAR(7)
    -> )
    -> ;
Query OK, 0 rows affected (0.06 sec)
```

5. INSERT VALUES INTO TABLE



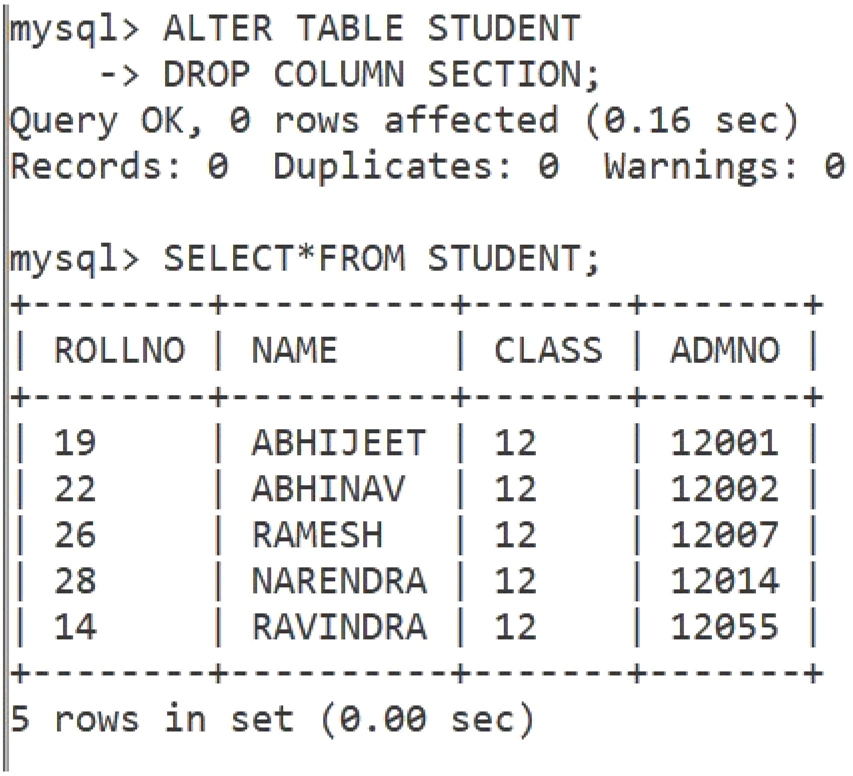
```
mysql> INSERT INTO STUDENT
    -> VALUES(19,'ABHIJEET',12,12001);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO STUDENT
    -> VALUES(22,'ABHINAV',12,12002);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO STUDENT
    -> VALUES(26,'RAMESH',12,12007);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO STUDENT
    -> VALUES(28,'NARENDRA',12,12014);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO STUDENT
    -> VALUES(14,'RAVINDRA',12,12055);
Query OK, 1 row affected (0.01 sec)

mysql> SELECT*FROM STUDENT;
+--------+----------+-------+-------+
| ROLLNO | NAME     | CLASS | ADMNO |
+--------+----------+-------+-------+
| 19     | ABHIJEET | 12    | 12001 |
| 22     | ABHINAV  | 12    | 12002 |
| 26     | RAMESH   | 12    | 12007 |
| 28     | NARENDRA | 12    | 12014 |
| 14     | RAVINDRA | 12    | 12055 |
+--------+----------+-------+-------+
5 rows in set (0.00 sec)
```

6. DELETE RECORD



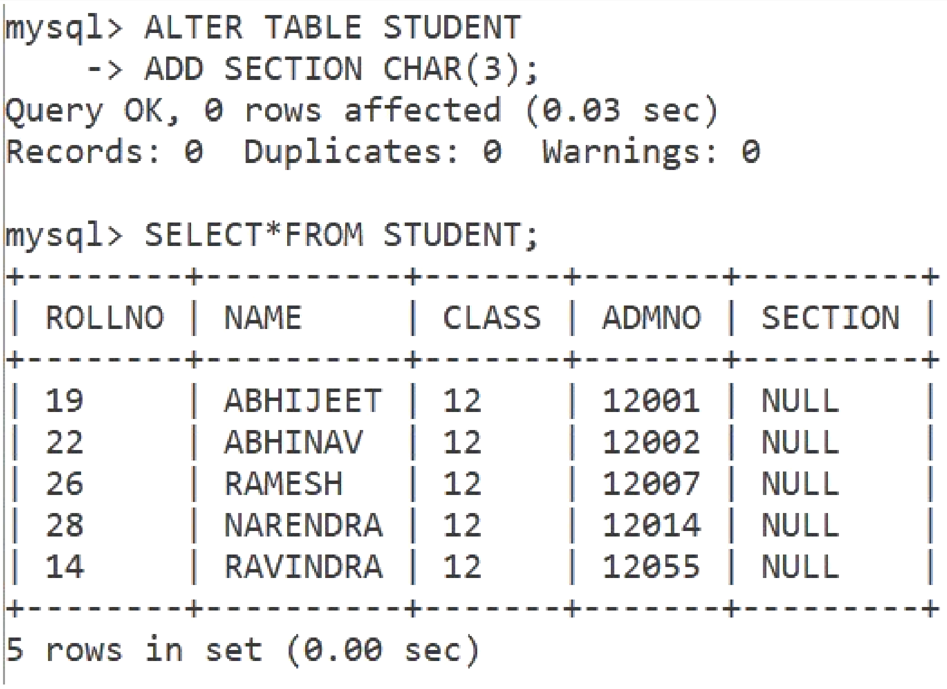
```
mysql> DELETE STUDENT FROM STUDENT
    -> WHERE ADMNO=12002;
Query OK, 1 row affected (0.01 sec)

mysql> SELECT*FROM STUDENT;
+--------+----------+-------+-------+
| ROLLNO | NAME     | CLASS | ADMNO |
+--------+----------+-------+-------+
| 19     | ABHIJEET | 11    | 12001 |
| 26     | RAMESH   | 11    | 12007 |
| 28     | NARENDRA | 11    | 12014 |
| 14     | RAVINDRA | 11    | 12055 |
+--------+----------+-------+-------+
4 rows in set (0.00 sec)
```

7. DROP RECORD



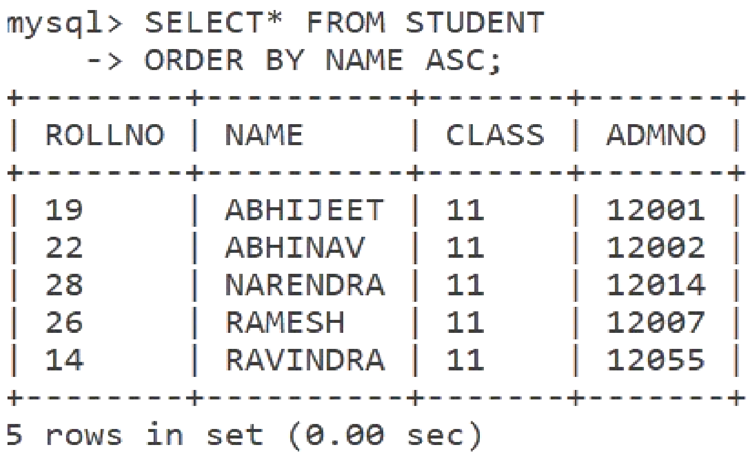
```
mysql> ALTER TABLE STUDENT
    -> DROP COLUMN SECTION;
Query OK, 0 rows affected (0.16 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> SELECT*FROM STUDENT;
+--------+----------+-------+-------+
| ROLLNO | NAME     | CLASS | ADMNO |
+--------+----------+-------+-------+
| 19     | ABHIJEET | 12    | 12001 |
| 22     | ABHINAV  | 12    | 12002 |
| 26     | RAMESH   | 12    | 12007 |
| 28     | NARENDRA | 12    | 12014 |
| 14     | RAVINDRA | 12    | 12055 |
+--------+----------+-------+-------+
5 rows in set (0.00 sec)
```

8. ALTER TABLE ADD COLUMN



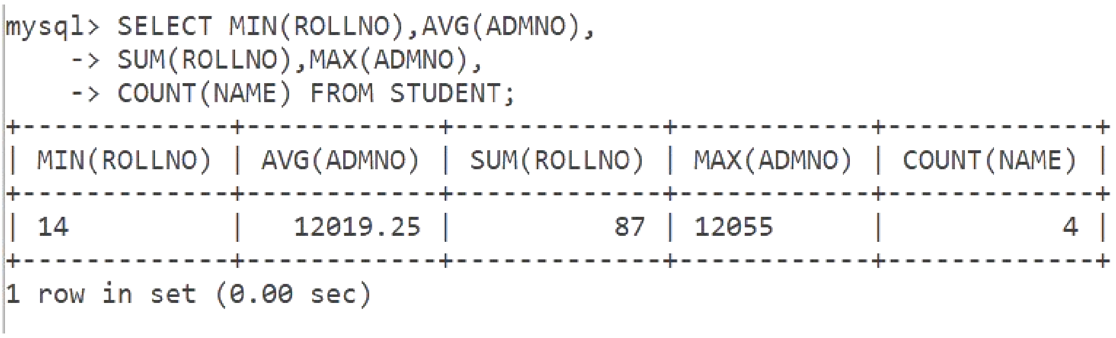
```
mysql> ALTER TABLE STUDENT
    -> ADD SECTION CHAR(3);
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> SELECT*FROM STUDENT;
+--------+----------+-------+-------+---------+
| ROLLNO | NAME     | CLASS | ADMNO | SECTION |
+--------+----------+-------+-------+---------+
| 19     | ABHIJEET | 12    | 12001 | NULL    |
| 22     | ABHINAV  | 12    | 12002 | NULL    |
| 26     | RAMESH   | 12    | 12007 | NULL    |
| 28     | NARENDRA | 12    | 12014 | NULL    |
| 14     | RAVINDRA | 12    | 12055 | NULL    |
+--------+----------+-------+-------+---------+
5 rows in set (0.00 sec)
```

9. ORDER BY



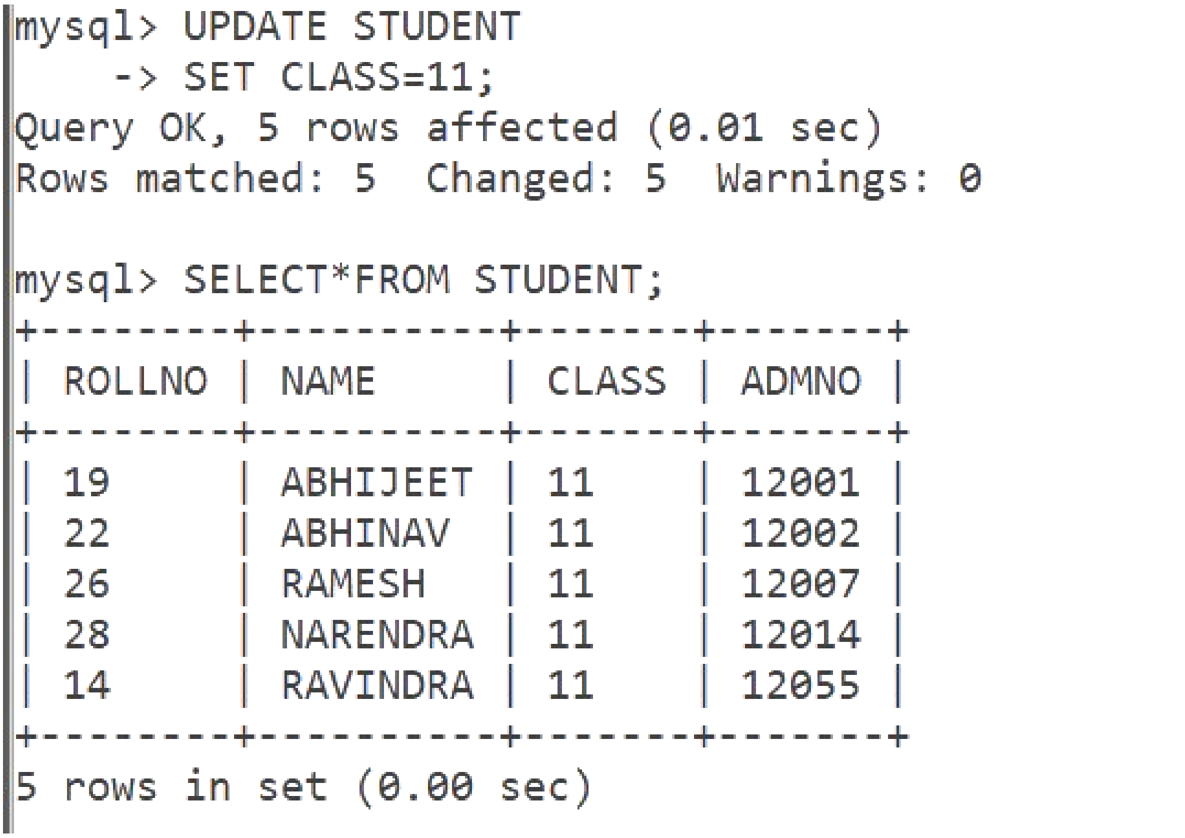
```
mysql> SELECT* FROM STUDENT
    -> ORDER BY NAME ASC;
+--------+----------+-------+-------+
| ROLLNO | NAME     | CLASS | ADMNO |
+--------+----------+-------+-------+
| 19     | ABHIJEET | 11    | 12001 |
| 22     | ABHINAV  | 11    | 12002 |
| 28     | NARENDRA | 11    | 12014 |
| 26     | RAMESH   | 11    | 12007 |
| 14     | RAVINDRA | 11    | 12055 |
+--------+----------+-------+-------+
5 rows in set (0.00 sec)
```

10. AGGREGATE FUNCTIONS



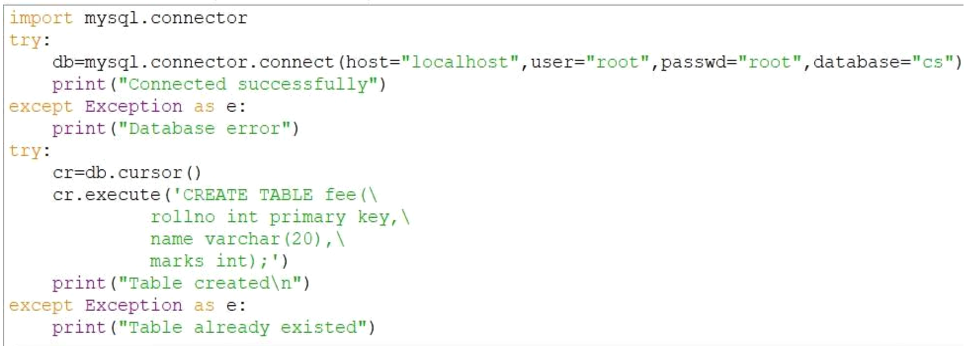
```
mysql> SELECT MIN(ROLLNO),AVG(ADMNO),
    -> SUM(ROLLNO),MAX(ADMNO),
    -> COUNT(NAME) FROM STUDENT;
+-------------+------------+-------------+------------+-------------+
| MIN(ROLLNO) | AVG(ADMNO) | SUM(ROLLNO) | MAX(ADMNO) | COUNT(NAME) |
+-------------+------------+-------------+------------+-------------+
| 14          |   12019.25 |          87 | 12055      |           4 |
+-------------+------------+-------------+------------+-------------+
1 row in set (0.00 sec)
```

11.UPDATE TABLE

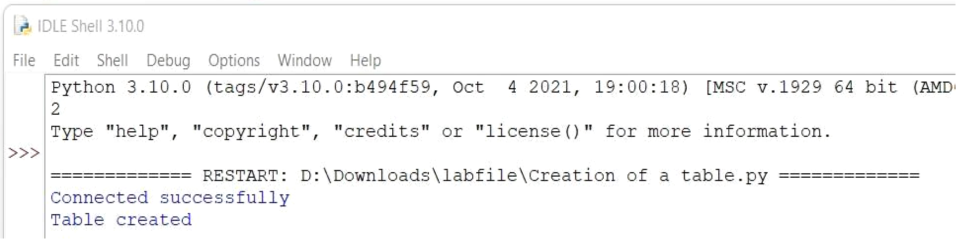


```
mysql> UPDATE STUDENT
    -> SET CLASS=11;
Query OK, 5 rows affected (0.01 sec)
Rows matched: 5  Changed: 5  Warnings: 0

mysql> SELECT*FROM STUDENT;
+--------+----------+-------+-------+
| ROLLNO | NAME     | CLASS | ADMNO |
+--------+----------+-------+-------+
| 19     | ABHIJEET | 11    | 12001 |
| 22     | ABHINAV  | 11    | 12002 |
| 26     | RAMESH   | 11    | 12007 |
| 28     | NARENDRA | 11    | 12014 |
| 14     | RAVINDRA | 11    | 12055 |
+--------+----------+-------+-------+
5 rows in set (0.00 sec)
```

12.CREATE TABLE IN MYSQL USING PYTHON



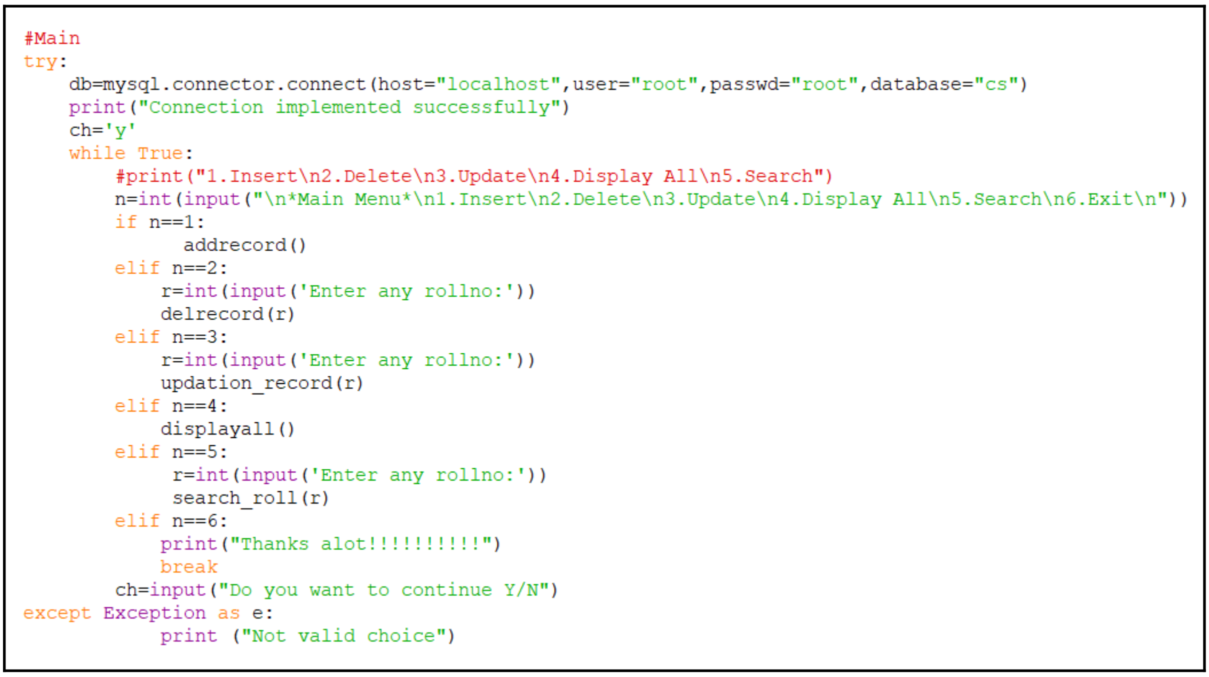
```
import mysql.connector
try:
    db=mysql.connector.connect(host="localhost",user="root",passwd="root",database="cs")
    print("Connected successfully")
except Exception as e:
    print("Database error")
try:
    cr=db.cursor()
    cr.execute('CREATE TABLE fee(\
             rollno int primary key,\
             name varchar(20),\
             marks int);')
    print("Table created\n")
except Exception as e:
    print("Table already existed")
```



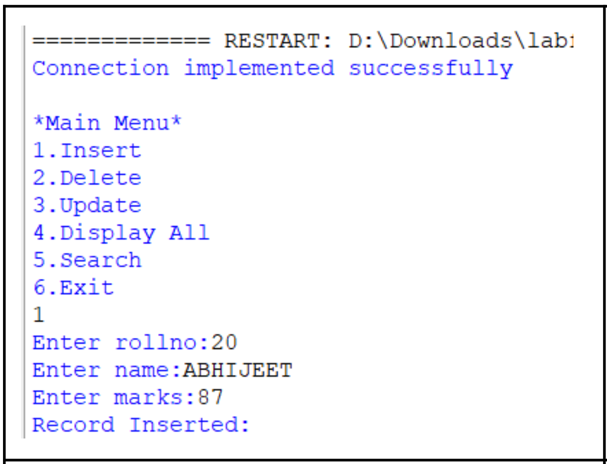
```
Python 3.10.0 (tags/v3.10.0:b494f59, Oct  4 2021, 19:00:18) [MSC v.1929 64 bit (AMD
2
Type "help", "copyright", "credits" or "license()" for more information.
>>>
============= RESTART: D:\Downloads\labfile\Creation of a table.py =============
Connected successfully
Table created
```

13.MENU DRIVEN PRG TO ADD,DISPLAY,UPDATE,DELETE RECORDS IN MYSQL USING PYTHON

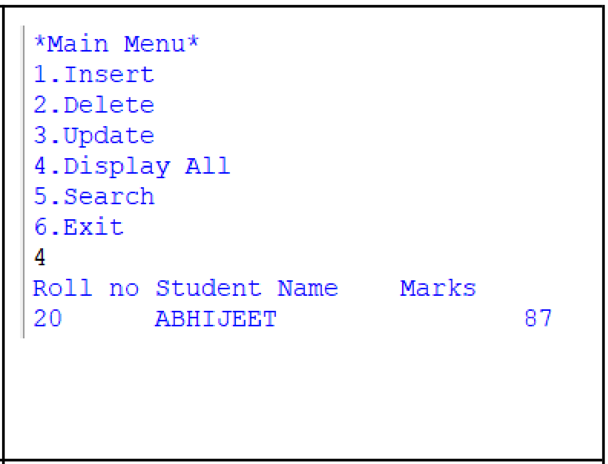
```
import mysql.connector

def addrecord():
   try:
        r=int(input("Enter rollno:"))
        na=input("Enter name:")
        m=int(input("Enter marks:"))
        query="insert into fee(rollno,name,marks) values({},'{}',{})".format(r,na,m)
        db.commit()
        cr=db.cursor()
        cr.execute(query)
        print("Record Inserted:")
   except Exception as e:
        print("Error in inserting in records",e)

def displayall():
    try:
         cr=db.cursor()
         row=cr.execute("select *from fee")
         x=cr.fetchall()
         print("Roll no\tStudent Name\tMarks")
         for row in x:
             print("{}\t{}\t\t{}".format(row[0],row[1],row[2]))
    except Exception as e:
              print("Error",e)

def search_roll(r):
    try:
        query="Select *from fee where rollno={}".format(r)
        cr=db.cursor()
        cr.execute(query)
        f=cr.fetchone()
        if f[0]==r:     #here f[0] -->represnts column roll column
            print("Record Found",f)
        else:
            print("Record not found")
    except Exception as e:
        print("Error in searching:",e)

def updation_record(n):
    try:
        query="select *from fee where rollno='%s' " % n
        cr=db.cursor()
        cr.execute(query)
        n1=cr.rowcount
        if n1!=0:
            print("Record found and enter new values")
            na=input("Enter name")
            m=int(input("Enter marks:"))
            query="update fee set name='%s',marks='%s' where rollno='%s' " %(na,m,n)
            cr.execute(query)
            db.commit()
            print("Record updated successfully")
        else:
            print("Record not found")
    except Exception as e:
        print("Record not found or any other error",e)

def delrecord(n):

       try:
           query="Delete from fee where rollno='%s' " %n
           cr=db.cursor()
           cr.execute(query)
           n1=cr.rowcount
           if n1!=0:
                db.commit()
                print("Record Deleted")
           else:
                print("Record not found")
       except Exception as e:
              print("Record not found or any other error",e)
```



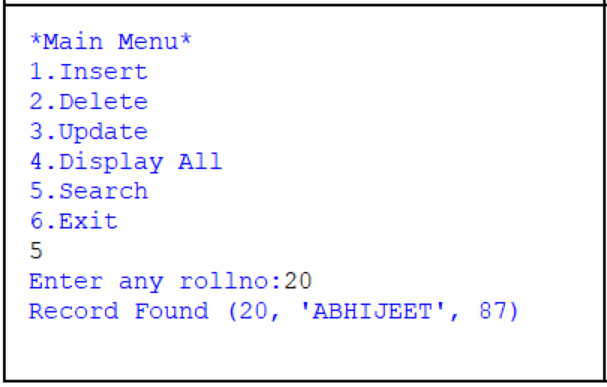
```python
#Main
try:
    db=mysql.connector.connect(host="localhost",user="root",passwd="root",database="cs")
    print("Connection implemented successfully")
    ch='y'
    while True:
        #print("1.Insert\n2.Delete\n3.Update\n4.Display All\n5.Search")
        n=int(input("\n*Main Menu*\n1.Insert\n2.Delete\n3.Update\n4.Display All\n5.Search\n6.Exit\n"))
        if n==1:
              addrecord()
        elif n==2:
            r=int(input('Enter any rollno:'))
            delrecord(r)
        elif n==3:
            r=int(input('Enter any rollno:'))
            updation_record(r)
        elif n==4:
            displayall()
        elif n==5:
             r=int(input('Enter any rollno:'))
             search_roll(r)
        elif n==6:
            print("Thanks alot!!!!!!!!!!")
            break
        ch=input("Do you want to continue Y/N")
except Exception as e:
            print ("Not valid choice")
```



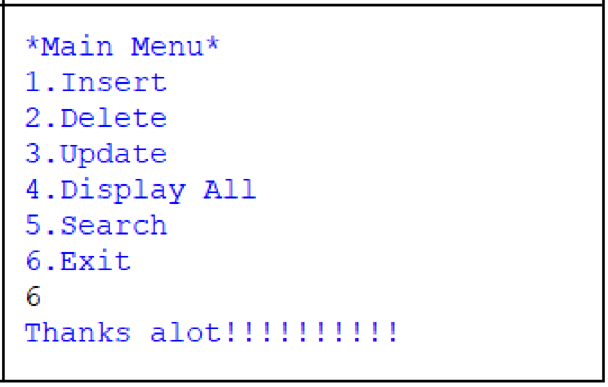
```
============= RESTART: D:\Downloads\lab
Connection implemented successfully

*Main Menu*
1.Insert
2.Delete
3.Update
4.Display All
5.Search
6.Exit
1
Enter rollno:20
Enter name:ABHIJEET
Enter marks:87
Record Inserted:
```



```
*Main Menu*
1.Insert
2.Delete
3.Update
4.Display All
5.Search
6.Exit
4
Roll no Student Name     Marks
20       ABHIJEET                87
```

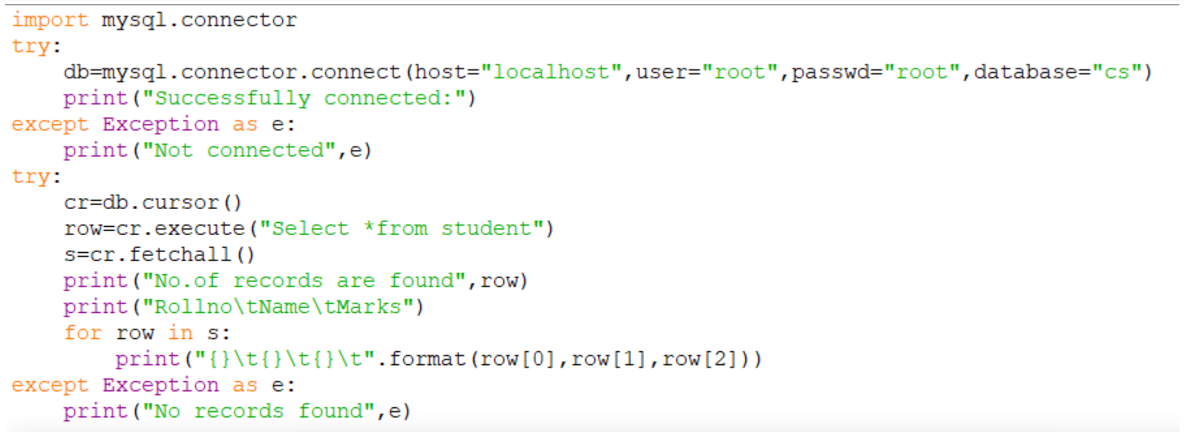


```
*Main Menu*
1.Insert
2.Delete
3.Update
4.Display All
5.Search
6.Exit
5
Enter any rollno:20
Record Found (20, 'ABHIJEET', 87)
```

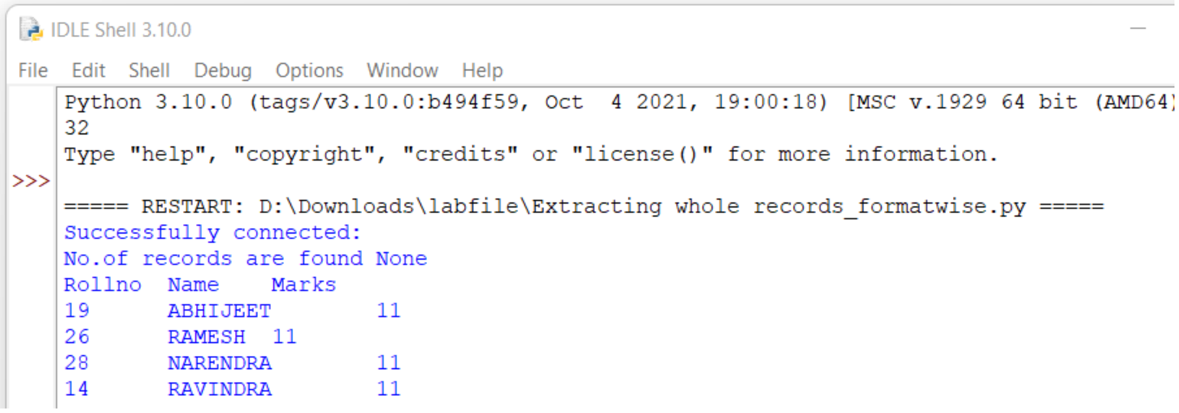


```
*Main Menu*
1.Insert
2.Delete
3.Update
4.Display All
5.Search
6.Exit
6
Thanks alot!!!!!!!!!!
```

14.EXTRACT RECORDS FROM MYSQL USING PYTHON



```python
import mysql.connector
try:
    db=mysql.connector.connect(host="localhost",user="root",passwd="root",database="cs")
    print("Successfully connected:")
except Exception as e:
    print("Not connected",e)
try:
    cr=db.cursor()
    row=cr.execute("Select *from student")
    s=cr.fetchall()
    print("No.of records are found",row)
    print("Rollno\tName\tMarks")
    for row in s:
        print("{}\t{}\t{}\t".format(row[0],row[1],row[2]))
except Exception as e:
    print("No records found",e)
```



```
Python 3.10.0 (tags/v3.10.0:b494f59, Oct  4 2021, 19:00:18) [MSC v.1929 64 bit (AMD64)
32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:\Downloads\labfile\Extracting whole records_formatwise.py =====
Successfully connected:
No.of records are found None
Rollno  Name    Marks
19      ABHIJEET        11
26      RAMESH  11
28      NARENDRA        11
14      RAVINDRA        11
```

THANK YOU