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Question1. Perform CRUD operations on Student Table as outlined in the reference

(<https://medium.com/analytics-vidhya/programming-with-databases-in-python-using-sqlite4cecbef51ab9>).

```
In [26]: import sqlite3
database= 'tds.sqlite'
conn= sqlite3.connect(database)
cur= conn.cursor()
```

```
In [27]: nt="create table if not exists stud(\
        name varchar, rno integer, m1 integer, m2 integer,\
        m3 integer, tot integer, avg float)"
cur.execute(nt)
conn.commit()
```

```
In [28]: rt="select * from stud"
cur.execute(rt)
st=[tuple[0] for tuple in cur.description]
st
```

```
Out[28]: ['name', 'rno', 'm1', 'm2', 'm3', 'tot', 'avg']
```

```
In [29]: cur = conn.cursor()
sql = "INSERT INTO stud values ('joshua',1001,99,98,97,0,0)"
cur.execute(sql)
conn.commit()
print(cur.rowcount, "was inserted.")
```

1 was inserted.

```
In [30]: sql1 = "INSERT INTO stud values ('rolex',1002,99,100,97,0,0)"
cur.execute(sql1)
sql2 = "INSERT INTO stud values ('hari',1003,97,78,87,0,0)"
cur.execute(sql2)
sql3 = "INSERT INTO stud values ('dinesh',1004,95,93,95,0,0)"
cur.execute(sql3)
sql4 = "INSERT INTO stud values ('umesh',1001,93,92,91,0,0)"
cur.execute(sql4)
conn.commit()
```

```
In [31]: cur = conn.cursor()
cur.execute("select * from stud")
res=cur.fetchall()
for i in res:
    print(i)
```

```
( 'joshua', 1001, 99, 98, 97, 0, 0.0)
( 'rolex', 1002, 99, 100, 97, 0, 0.0)
( 'hari', 1003, 97, 78, 87, 0, 0.0)
( 'dinesh', 1004, 95, 93, 95, 0, 0.0)
( 'umesh', 1001, 93, 92, 91, 0, 0.0)
```

```
In [32]: cur = conn.cursor()
tot="update stud set tot=m1+m2+m3 "
cur.execute(tot)
conn.commit()
```

```
In [33]: cur = conn.cursor()
avg="update stud set avg=tot/3 "
cur.execute(avg)
conn.commit()
```

```
In [34]: cur = conn.cursor()
cur.execute("select * from stud")
res=cur.fetchall()
for i in res:
    print(i)

( 'joshua', 1001, 99, 98, 97, 294, 98.0)
( 'rolex', 1002, 99, 100, 97, 296, 98.0)
( 'hari', 1003, 97, 78, 87, 262, 87.0)
( 'dinesh', 1004, 95, 93, 95, 283, 94.0)
( 'umesh', 1001, 93, 92, 91, 276, 92.0)
```

```
In [1]: pip install cx_Oracle
```

Requirement already satisfied: cx_Oracle in c:\users\umesh\anaconda3\lib\site-packages (8.3.0)
Note: you may need to restart the kernel to use updated packages.

Question2. Open the table MyRestaurants.db that you have created for NoSQL course

```
In [3]: import sqlite3
database= 'tds.sqlite'
conn= sqlite3.connect(database)
cur= conn.cursor()
```

```
In [4]: nt="create table if not exists myrest(\
        rname varchar, ftype varchar, dist integer, visit date,\
        ilike integer)"
cur.execute(nt)
conn.commit()
```

```
In [5]: rt="select * from myrest"
cur.execute(rt)
st=[tuple[0] for tuple in cur.description]
st
```

```
Out[5]: ['rname', 'ftype', 'dist', 'visit', 'ilike']
```

```
In [7]: cur = conn.cursor()
sql = "INSERT INTO myrest values ('apple_leaf','NV',15,'01-jan-20',1)"
cur.execute(sql)
```

```
conn.commit()
print(cur.rowcount, "was inserted.")
```

1 was inserted.

```
In [8]: cur = conn.cursor()
sql = "INSERT INTO myrest values ('sowmys','V',18,'20-mar20',1)"
cur.execute(sql)
conn.commit()
print(cur.rowcount, "was inserted.")
```

1 was inserted.

```
In [10]: cur = conn.cursor()
sql = "INSERT INTO myrest values ('thinnapa','NV',25,'20-dec-19',0)"
cur.execute(sql)
conn.commit()
print(cur.rowcount, "was inserted.")
```

1 was inserted.

```
In [11]: cur = conn.cursor()
sql = "INSERT INTO myrest values ('sri_bhavan','V',18,'20-dec-19',0)"
cur.execute(sql)
conn.commit()
print(cur.rowcount, "was inserted.")
```

1 was inserted.

```
In [12]: cur = conn.cursor()
sql = "INSERT INTO myrest values ('chinaworld','chinese',14,'05-mar-20',1)"
cur.execute(sql)
conn.commit()
print(cur.rowcount, "was inserted.")
```

1 was inserted.

```
In [13]: cur = conn.cursor()
sql = "INSERT INTO myrest values ('little_china','chinese',30,'10-mar-20',0)"
cur.execute(sql)
conn.commit()
print(cur.rowcount, "was inserted.")
```

1 was inserted.

Question3. Write a SQL query that returns all restaurants in your table MyRestaurants.db.

```
In [14]: cur = conn.cursor()
cur.execute("select * from myrest")
res=cur.fetchall()
for i in res:
    print(i)

('apple_leaf', 'NV', 15, '01-jan-20', 1)
('sowmys', 'V', 18, '20-mar20', 1)
('thinnapa', 'NV', 25, '20-dec-19', 0)
('sri_bhavan', 'V', 18, '20-dec-19', 0)
('chinaworld', 'chinese', 14, '05-mar-20', 1)
('little_china', 'chinese', 30, '10-mar-20', 0)
```

Question4. Write a SQL query that returns the names of restaurants in descending order that makes Chinese foods.

```
In [25]: cur = conn.cursor()
res="select rname from myrest where ftype='chinese' order by rname desc"
cur.execute(res)
res=cur.fetchall()
for i in res:
    print(i)

('little_china',)
('chinaworld',)
```

In []: