how to filter the records:
----
        we can filter the records by using where clause.

        select * from tablename where condition;

ex11:
----
wap to print the employe data,whose employe working under department number 10?

```python
import sqlite3
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
cur_obj.execute("select * from emp where dno=10")
for rec in cur_obj:
    print(rec)
cur_obj.close()
conn_obj.close()
print("Connection Closeing")
```

output:

Connection Establish
(101, 'siva', 3000.0, 10)
(104, 'sachin', 2800.0, 10)
(106, 'rama', 3100.0, 10)
(109, 'rohith', 3000.0, 10)
(111, 'krishna', 2700.0, 10)
Connection Closeing

ex12:
----
wap to print the employe data whose employe working under department number 10 and
which employe name startswith 's' charecter?

```python
import sqlite3
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
cur_obj.execute("select * from emp where dno=10 and ename like 's%'")
for rec in cur_obj:
    print(rec)
cur_obj.close()
conn_obj.close()
print("Connection Closeing")
```

output:

Connection Establish

```
(101, 'siva', 3000.0, 10)
(104, 'sachin', 2800.0, 10)
Connection Closeing

ex13:
-----
wap to print the employe data whose employe working under department number 10 and
which employe name endswith 'a' charecter?

import sqlite3
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
cur_obj.execute("select * from emp where dno=10 and ename like '%a'")
for rec in cur_obj:
    print(rec)
cur_obj.close()
conn_obj.close()
print("Connection Closeing")

output:
-------
Connection Establish
(101, 'siva', 3000.0, 10)
(106, 'rama', 3100.0, 10)
(111, 'krishna', 2700.0, 10)
Connection Closeing

ex14:
----
wap to print the employe data whose employe working under department number 10 and
which employe name contains 'i' charecter?

import sqlite3
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
cur_obj.execute("select * from emp where dno=10 and ename like '%i%'")
for rec in cur_obj:
    print(rec)
cur_obj.close()
conn_obj.close()
print("Connection Closeing")

output:
-------
Connection Establish
(101, 'siva', 3000.0, 10)
(104, 'sachin', 2800.0, 10)
(109, 'rohith', 3000.0, 10)
```

```
(111, 'krishna', 2700.0, 10)
Connection Closeing

ex15:
----
wap to print the employe data whose employe working under department number 10 and
which employe name contains second charecter is 'i'?

import sqlite3
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
cur_obj.execute("select * from emp where dno=10 and ename like '_i%'")
for rec in cur_obj:
    print(rec)
cur_obj.close()
conn_obj.close()
print("Connection Closeing")

output:
------
Connection Establish
(101, 'siva', 3000.0, 10)
Connection Closeing

ex16:
----
wap to print the employe data whose employe working under department number 10 and
which employe name dont contains 'i' charecter?

import sqlite3
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
cur_obj.execute("select * from emp where dno=10 and ename not like '%i%'")
for rec in cur_obj:
    print(rec)
cur_obj.close()
conn_obj.close()
print("Connection Closeing")

output:
------
Connection Establish
(106, 'rama', 3100.0, 10)
Connection Closeing

ex17:
----
wap to print the employe data whose employe working under department number 10 and
```

which employe get the salary between 2700 and 3000?

```
import sqlite3
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
cur_obj.execute("select * from emp where dno=10")
for rec in cur_obj:
    print(rec)
print('*'*30)
cur_obj.execute("select * from emp where dno=10 and\
 sal between 2700 and 3000")
for rec in cur_obj:
    print(rec)
cur_obj.close()
conn_obj.close()
print("Connection Closeing")
```

output:

Connection Establish
(101, 'siva', 3000.0, 10)
(104, 'sachin', 2800.0, 10)
(106, 'rama', 3100.0, 10)
(109, 'rohith', 3000.0, 10)
(111, 'krishna', 2700.0, 10)
****
(101, 'siva', 3000.0, 10)
(104, 'sachin', 2800.0, 10)
(109, 'rohith', 3000.0, 10)
(111, 'krishna', 2700.0, 10)
Connection Closeing

ex18:
----
wap to print the employe data whose employe working under department number 10 and
which employe get the salary not between 2700 and 3000?

```
import sqlite3
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
cur_obj.execute("select * from emp where dno=10")
for rec in cur_obj:
    print(rec)
print('*'*30)
cur_obj.execute("select * from emp where dno=10 and\
 sal not between 2700 and 3000")
for rec in cur_obj:
    print(rec)
```

```
cur_obj.close()
conn_obj.close()
print("Connection Closeing")
```

output:

```
Connection Establish
(101, 'siva', 3000.0, 10)
(104, 'sachin', 2800.0, 10)
(106, 'rama', 3100.0, 10)
(109, 'rohith', 3000.0, 10)
(111, 'krishna', 2700.0, 10)
****************************
(106, 'rama', 3100.0, 10)
Connection Closeing
```

ex19:
----
wap to print the employe data whose employe working under department number 10 and
which employe to get the salary in 2700 and 3000?

```
import sqlite3
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
cur_obj.execute("select * from emp where dno=10")
for rec in cur_obj:
    print(rec)
print('*'*30)
cur_obj.execute("select * from emp where dno=10 and\
 sal in(2700,3000)")
for rec in cur_obj:
    print(rec)
cur_obj.close()
conn_obj.close()
print("Connection Closeing")
```

output:

```
Connection Establish
(101, 'siva', 3000.0, 10)
(104, 'sachin', 2800.0, 10)
(106, 'rama', 3100.0, 10)
(109, 'rohith', 3000.0, 10)
(111, 'krishna', 2700.0, 10)
****************************
(101, 'siva', 3000.0, 10)
(109, 'rohith', 3000.0, 10)
(111, 'krishna', 2700.0, 10)
Connection Closeing
```

ex20:
----
wap to print the employe data whose employe working under department number 10 and
which employe to get the salary not in 2700 and 3000?

```
import sqlite3
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
cur_obj.execute("select * from emp where dno=10")
for rec in cur_obj:
    print(rec)
print('*'*30)
cur_obj.execute("select * from emp where dno=10 and\
 sal not in(2700,3000)")
for rec in cur_obj:
    print(rec)
cur_obj.close()
conn_obj.close()
print("Connection Closeing")
```

output:

```
Connection Establish
(101, 'siva', 3000.0, 10)
(104, 'sachin', 2800.0, 10)
(106, 'rama', 3100.0, 10)
(109, 'rohith', 3000.0, 10)
(111, 'krishna', 2700.0, 10)
****************************
(104, 'sachin', 2800.0, 10)
(106, 'rama', 3100.0, 10)
Connection Closeing
```

working with aggrigate functions:
----
ex21:

```
import sqlite3
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
cur_obj.execute("select count(*),min(sal),max(sal),sum(sal) from\
 emp")
for rec in cur_obj:
    print("Total No.of Records:",rec[0])
    print("Minimum Salary:",rec[1])
    print("maximum Salary:",rec[2])
    print("Total Salary:",rec[3])
```

```
cur_obj.close()
conn_obj.close()
print("Connection Closeing")
```

output:

Connection Establish
Total No.of Records: 11
Minimum Salary: 2500.0
maximum Salary: 3100.0
Total Salary: 31600.0
Connection Closeing

what is sub-query?
----
        we can define sql query inside another sql query,is known as a subquery.

        the inner query output is passing to input to the outer query.

ex22:
----
wap to fetch the employe data,whose employe to get the maximum salary?

```
import sqlite3
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
cur_obj.execute("select * from emp where sal=(select max(sal) from emp)")
for rec in cur_obj:
    print(rec)
cur_obj.close()
conn_obj.close()
print("Connection Closeing")
```

output:

Connection Establish
(102, 'virat', 3100.0, 20)
(106, 'rama', 3100.0, 10)
Connection Closeing

how to update the records:
----
        we can update the records by using update command.

        update tablename set condition where condition;

ex23:

```
import sqlite3
```

```
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
print("Before Update")
cur_obj.execute("select * from emp where dno=10")
for rec in cur_obj:
    print(rec)
cur_obj.execute("update emp set sal=3500 where dno=10 and ename\
 like '%i%' ")
print("Updated Successfully")
print("After Update")
cur_obj.execute("select * from emp where dno=10")
for rec in cur_obj:
    print(rec)
cur_obj.execute("rollback")
print("rollback completed")
cur_obj.execute("select * from emp where dno=10")
for rec in cur_obj:
    print(rec)
cur_obj.close()
conn_obj.close()
print("Connection Closeing")

output:
------
Connection Establish
Before Update
(101, 'siva', 3000.0, 10)
(104, 'sachin', 2800.0, 10)
(106, 'rama', 3100.0, 10)
(109, 'rohith', 3000.0, 10)
(111, 'krishna', 2700.0, 10)
Updated Successfully
After Update
(101, 'siva', 3500.0, 10)
(104, 'sachin', 3500.0, 10)
(106, 'rama', 3100.0, 10)
(109, 'rohith', 3500.0, 10)
(111, 'krishna', 3500.0, 10)
rollback completed
(101, 'siva', 3000.0, 10)
(104, 'sachin', 2800.0, 10)
(106, 'rama', 3100.0, 10)
(109, 'rohith', 3000.0, 10)
(111, 'krishna', 2700.0, 10)
Connection Closeing
```

how to delete the records?
----
         we can delete the records by using delete command

```
        delete from tablename where condition;

ex24:
----
import sqlite3
conn_obj=sqlite3.connect("myemploye.db")
print("Connection Establish")
cur_obj=conn_obj.cursor()
print("Before Delete")
cur_obj.execute("select * from emp where dno=10")
for rec in cur_obj:
    print(rec)
cur_obj.execute("delete from emp where dno=10 and ename\
 like '%i%' ")
print("Deleted Successfully")
print("After Delete")
cur_obj.execute("select * from emp where dno=10")
for rec in cur_obj:
    print(rec)
try:
    cur_obj.execute("commit")
    print("commit completed")
    cur_obj.execute("rollback")
except:
    print("Once we can commit the transaction we can't rollback\
 the data")
else:
    print("rollback completed")
    cur_obj.execute("select * from emp where dno=10")
    for rec in cur_obj:
        print(rec)
finally:
    cur_obj.close()
    conn_obj.close()
    print("Connection Closeing")

output:
------
Connection Establish
Before Delete
(101, 'siva', 3000.0, 10)
(104, 'sachin', 2800.0, 10)
(106, 'rama', 3100.0, 10)
(109, 'rohith', 3000.0, 10)
(111, 'krishna', 2700.0, 10)
Deleted Successfully
After Delete
(106, 'rama', 3100.0, 10)
commit completed
```

Once we can commit the transaction we can't rollback the data
Connection Closeing