Updating or replacing data inside database table
Example:

```
# program update password
import mysql.connector as mysql
def main():
    cn=mysql.connect(database="db1",user="root",password="root")
    c=cn.cursor()
    u=input("UserName :") # nit
    op=input("Old Password:") # nit123
    np=input("New Password:") # nit321
    cmd="update user_register set pwd=%s where uname=%s and
pwd=%s"
    c.execute(cmd,params=[np,u,op])
    k=c.rowcount
    if k==0:
        print("invalid username or password")
    else:
        print("password updated")
        cn.commit()
    cn.close()

main()
```

Output:

```
UserName :nit
Old Password:nit123
New Password:nit321
password updated

======================== RESTART: F:/python6pm/dbtest4.py
======================
UserName :xyz
Old Password:abc
New Password:mno
invalid username or password
```

Example:

```
# updating salary of employee
```

```
import mysql.connector as mysql
def main():
    cn=mysql.connect(database="db1",user="root",password="root")
    c=cn.cursor()
    eno=int(input("EmployeeNo:"))
    s=float(input("Increment salary:")) # 100
    cmd="update emp set sal=sal+%s where empno=%s"
    c.execute(cmd,params=[s,eno])
    k=c.rowcount
    if k==0:
        print("Employee Not Found")
    else:
        print("Salary Updated")
        cn.commit()
    cn.close()

main()
```

Output:

```
EmployeeNo:1
Increment salary:5000
Salary Updated

======================== RESTART: F:/python6pm/dbtest5.py
======================
EmployeeNo:1
Increment salary:-5000
Salary Updated
```

Deleting rows from database table

 # write a program to delete rows from database table

```
import mysql.connector as mysql
def main():
    cn=mysql.connect(database="db1",user="root",password="root")
    c=cn.cursor()
    eno=int(input("enter employeeno to delete"))
    cmd="delete from emp where empno=%s"
    c.execute(cmd,params=[eno])
```

```
    k=c.rowcount
    if k==0:
        print(f'{eno} not exists')
    else:
        print("employee deleted")
        cn.commit()
    cn.close()

main()
```

Output

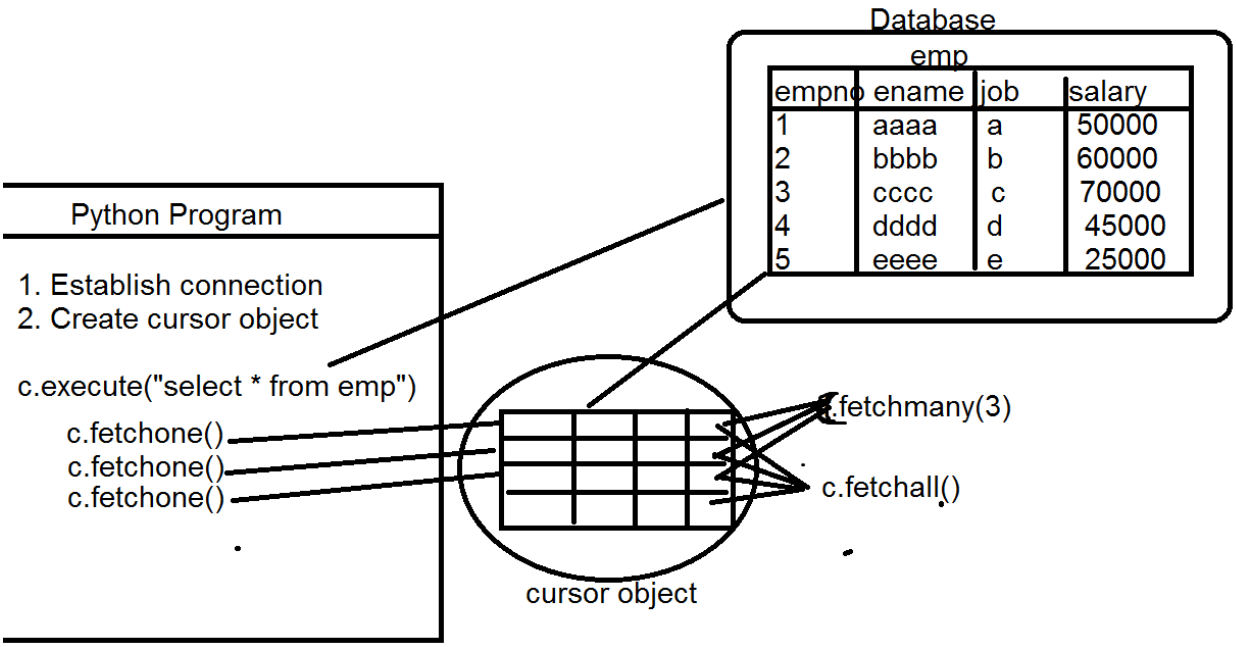
```
enter employeeno to delete1
employee deleted

======================== RESTART: F:/python6pm/dbtest6.py
=====================
enter employeeno to delete1
1 not exists
```

Reading data from database table

Reading data from databse table is done by sending “select” command. “select” command read the and store result of “select” command inside cursor object.

From cursor object we can read data using fetch methods.

1. fetchone
2. fetchmany
3. fetchall



 # write a program to read data from emp table

```
import mysql.connector as mysql
def main():
    cn=mysql.connect(database="db1",user="root",password="root")
    c=cn.cursor()
    c.execute("select * from emp")
    rows=c.fetchall()
    print(rows)
    for row in rows:
        print(row[0],row[1],row[2],row[3])

main()
```

Output:

```
[(1, 'naresh', 'CEO', 500000.0), (2, 'suresh', 'SE', 50000.0), (3, 'kishore',
'acc', 350000.0), (4, 'ramesh', 'mng', 550000.0), (5, 'rajesh', 'clerk',
250000.0)]
1 naresh CEO 500000.0
2 suresh SE 50000.0
3 kishore acc 350000.0
4 ramesh mng 550000.0
5 rajesh clerk 250000.0
```

 # write a program to read data from emp table

```
import mysql.connector as mysql
def main():
    cn=mysql.connect(database="db1",user="root",password="root")
    c=cn.cursor()
    c.execute("select * from emp")
    row=c.fetchone()
    print(row)
    row=c.fetchone()
    print(row)

main()
```

Output:

```
(1, 'naresh', 'CEO', 500000.0)
(2, 'suresh', 'SE', 50000.0)
```

Example:

```
# write a program to read data from emp table
import mysql.connector as mysql
def main():
    cn=mysql.connect(database="db1",user="root",password="root")
    c=cn.cursor()
    c.execute("select * from emp where empno=14")
    row=c.fetchone()
    print(row)


main()
```

Output:

```
None
```

Example:

```
# login or signin
import mysql.connector as mysql
def main():
    cn=mysql.connect(database="db1",user="root",password="root")
    c=cn.cursor()
    print("*****Login*****")
    u=input("UserName :") # abc
```

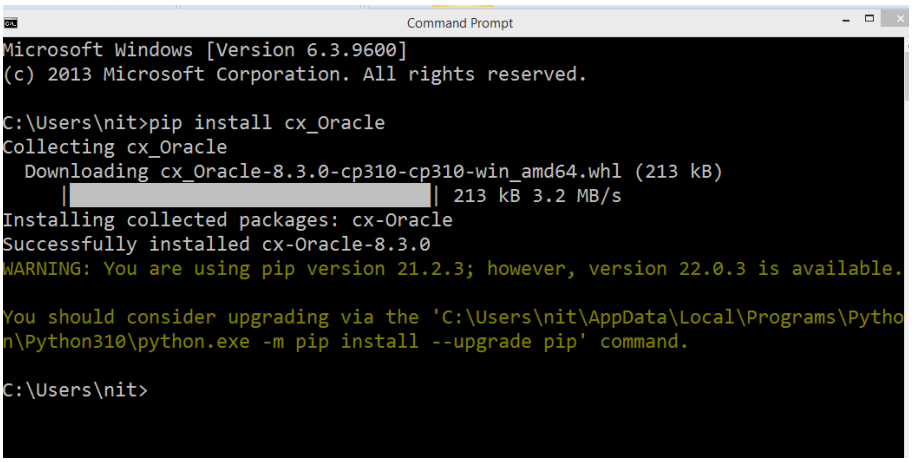
```
    p=input("Password :") # xyz
    cmd="select * from user_register where uname=%s and pwd=%s"
    c.execute(cmd,params=[u,p])
    row=c.fetchone()
    if row==None:
        print("invalid username or passwword")
    else:
        print("welcome")

main()
```

Output:

```
*****Login*****
UserName :nit
Password :nit321
welcome

======================== RESTART: F:/python6pm/dbtest7.py
========================
*****Login*****
UserName :abc
Password :xyz
invalid username or password
```

How to communicate with Oracle Database?

1. Download and install oracle database software
2. Install Cx_Oracle library/api, this library is used to communicate with oracle database



Steps for communicating with any database is same

1. Establish connection
2. Create cursor
3. Send SQL statements using cursor
4. Get results
5. Close connection

```
>>> import cx_Oracle
>>> cx_Oracle.connect("system/manager@xe")
<cx_Oracle.Connection to system@xe>
```