

Python to MySQL database Connectivity

To handle mysql database from python, you need to install three things:

1. Python
2. MySQL
3. MySQL Driver

```
python -m pip install mysql.connector.python
```

Step 1 : - create connection

Check the following three Version using cmd

```
cmd → python --version
```

```
cmd → mysql --version
```

```
cmd → pip --version
```

Install Terminal Though mysql Connection

Open Terminal: -

```
pip install mysql-connector-python
```

Create Connection: -

```
import mysql.connector as myconn  
mydb = myconn.connect (host = 'localhost',  
                        user = 'username',  
                        password = 'password',  
                        database = 'database.name') # optional Value  
print(mydb)
```

Python Code: -

```
import mysql.connector as MyConn  
mydb = MyConn.connect (host = 'localhost',  
                        user = 'root,  
                        password = 'AB12cd@',  
                        database = 'database.name') # optional Value  
print(mydb,"Connection Established....")
```

Step 2: Create database

Create database using two type: -

1. Mysql
2. python

```
db_cursor = mydb.cursor()  
db_cursor.execute('create database CodeBlockAcademy')
```

Python Code: -

```
import mysql.connector as MyConn  
  
mydb = MyConn.connect(host = "localhost" , user="root", password = "PW")  
db_cursor = mydb.cursor()  
  
db_cursor.execute("create database CodeBlockAcademy")  
  
print("Database Created.!")
```

Step 3: Create Table

```
db_cursor = mydb.cursor()
db.cursor.execute('Create Table emp(name varchar(20), roll number)')
```

Python Code: -

Create Table

```
import mysql.connector as MyConn

mydb = MyConn.connect(host = "localhost" , user="root", password = "PW"
database = 'CodeBlockAcademy')
db_cursor = mydb.cursor()
db_cursor.execute("Create Table Emp1(Roll int, Name varchar(20))")

print("Table Created..!")
```

Show Table

```
import mysql.connector as MyConn

mydb = MyConn.connect(host = "localhost" , user="root", password = "PW"
database = 'CodeBlockAcademy')
db_cursor = mydb.cursor()
db_cursor.execute("show tables") /// as a string

# using loop print the table
for i in db.cursor:
    print(i)
print("Table Created..!")
```

Note: - Print Many Table (Emp2, student)

Step 4: insert Record

```
insert_query = "insert into emp1(Name,roll) value(%s, %s)"
```

```
insert_value = ("Neha", 10)
```

```
db_cursor.execute(insert_query,insert_value)
```

```
mydb.commit() // connection established reference code to be executed of  
MySQL using python
```

Python Code: -

Insert Record

```
import mysql.connector as MyConn
```

```
mydb = MyConn.connect(host = "localhost" , user="root", password = "PW"  
database = 'CodeBlockAcademy')
```

```
db_cursor = mydb.cursor()
```

```
db_cursor.execute("insert into Emp1(Roll,Ename)  
values(%s,%s)",(10,"Neha"))
```

```
mydb.commit() // actual record performing effects of MySQL
```

```
print(db_cursor.rowcount,"Record Inserted")
```

Check Record: -

```
mysql> select * from CodeBlockAcademy.emp1;
```

Python Code: -**Insert Multiple Record**

```
import mysql.connector as MyConn

mydb = MyConn.connect(host = "localhost" , user="root", password = "PW"
database = 'CodeBlockAcademy')

db_cursor = mydb.cursor()

db_insert = "insert into Emp1(EmpID,Name) values(%s,%s)"
db_list = [(1,"Shri"),(2,"Anisha"),(3,"Lyen")]
db_cursor.execute(db_insert, db_list)

mydb.commit() // actual record performing effects of MySQL
print(db_cursor.rowcount,"Record Inserted")
```

Check Record: -

```
mysql> select * from CodeBlockAcademy.emp1;
```

Step 5: Select Record

```
My_cursor.execute('select * from emp1')  
Myresult = my_cursor.fetchall()
```

Python Code: -

Show All Record in Python Compiler

```
import mysql.connector as MyConn  
  
mydb = MyConn.connect(host = "localhost" , user="root", password = "PW"  
database = 'CodeBlockAcademy')  
db_cursor = mydb.cursor()  
db_cursor.execute(select * from CodeBlockAcademy.emp1)  
db_select = db_cursor.fetchall()  
  
print(db_select)
```

Note: - Fetch only one Record

```
db_select = db_cursor.fetchone()
```

Print Record in Step by Step

Python Code: -

```
import mysql.connector as MyConn  
  
mydb = MyConn.connect(host = "localhost" , user="root", password = "PW"  
database = 'CodeBlockAcademy')  
  
db_cursor = mydb.cursor()  
db_cursor.execute(select * from CodeBlockAcademy.emp1)  
for db_data in db_cursor.fetchall():  
    print(db_data)
```

Step 6: Delete Record

```
delete_record = 'delete from emp where roll = %s'  
value = ('10',)
```

```
db_cursor.execute(delete_record,value)  
mydb.commit();
```

Python Code: -

```
import mysql.connector as MyConn  
mydb = MyConn.connect(host = "localhost" , user="root", password = "PW"  
database = 'CodeBlockAcademy')  
  
db_cursor = mydb.cursor()  
db_deletedata = "delete from CodeBlockAcademy.emp where name = %s"  
db_value = ("Name",)  
db_cursor.execute(db_deletedata,db_value)  
  
mydb.commit()  
print(db_cursor.rowcount,"Record Deleted..!")
```

Delete ALL Record: -

Python Code: -

```
import mysql.connector as MyConn  
mydb = MyConn.connect(host = "localhost" , user="root", password = "PW"  
database = 'CodeBlockAcademy')  
  
db_cursor = mydb.cursor()  
db_deletedata = "truncate table CodeBlockAcademy.emp"  
db_cursor.execute(db_deletedata)  
  
mydb.commit()  
print(Table Deleted..!)
```

Step 7: Update Records

```
update_query = 'update emp set roll = %s where name = %s'  
set_value = ('100',ankit)  
db_cursor.execute(update_query, set_value)
```

Python Code: -

```
import mysql.connector as MyConn  
mydb = MyConn.connect(host = "localhost" , user="root", password = "PW"  
database = 'CodeBlockAcademy')  
  
db_cursor = mydb.cursor()  
db_updatedata = "update CodeBlockAcademy.emp set roll = %s where name = %s"  
db_value = (50, "Name")  
db_cursor.execute(db_updatedata,db_value)  
  
mydb.commit()  
print(db_cursor.rowcount,"Data Updated..!")
```