



## **Experiment No. 7**

**Title: CRUD operations using Python**

**Batch:A2**

**Roll No:16010421063**

**Experiment**

**No.:7 Aim:** CRUD Operations in Python with MySQL Database

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**Resources needed:** Python IDE , MySQL Server

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### Theory:



In python, a self-contained Python driver for communicating with connection with the MySQL server can be established using `connector.connect ()` or the `mysql.connector.MySQLConnection ()`

```
connector.connect(user='joe', database='test')
```

```
connector.MySQLConnection(user='joe', database='test')
```

### Connection Arguments for Connector:

- **user (username\*)** -The user name used to authenticate with the MySQL server.
- **password (passwd\*)**- The password to authenticate the user with the MySQL server.
- **host** - The host name or IP address of the MySQL server and default is 127.0.0.1
- **database (db\*)** -The database name to use when connecting with the MySQL server.
- **port** -The TCP/IP port of the MySQL server. Must be an integer and default is 3306

There are the following steps to connect a python application to the database.

1. Import mysql.connector module
2. Create the connection object.
3. Create the cursor object
4. Execute the query

```
import mysql.connector

#Create the connection object
myconn = mysql.connector.connect(host = "localhost", user = "root", passwd = "pass1")

#creating the cursor object
cur = myconn.cursor()

try:
    dbs = cur.execute("show databases")
except:
    myconn.rollback()
for x in cur:
    print(x)
myconn.close()
```



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#### Activities:

- Create a Employee Database to store all the Employee details.
- Read all the records from the Employee database.
- Give 15% hike in salary to all the employees who are having years of experience greater than 5.
- Delete the records for the employees who are having age equals to 60 yrs.

## Result: (script and output)

```
1 import mysql.connector
2
3
4 myconn=mysql.connector.connect(host="localhost",user="root",password="",db="employee")
5 cur=myconn.cursor(buffered=True)
6
7 try:
8     cur.execute("SELECT * FROM `employee` ")
9     all_emp=cur.fetchall()
10
11     for i in all_emp:
12         print(i)
13
14     # cur.execute("UPDATE employee SET salary=salary*1.15 where yoe>5")
15
16
17
18
19
20 except:
21     print("Error")
22
23 cur=myconn.cursor()
```

PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE

```
Error
PS D:\testing> & C:/Users/91992/AppData/Local/Programs/Python/Python310/python.exe d:/testing/gui.py
Error
PS D:\testing> & C:/Users/91992/AppData/Local/Programs/Python/Python310/python.exe d:/testing/gui.py
Traceback (most recent call last):
  File "d:\testing\gui.py", line 8, in <module>
    all_emp=all_emp.fetchall()
AttributeError: 'NoneType' object has no attribute 'fetchall'
PS D:\testing> & C:/Users/91992/AppData/Local/Programs/Python/Python310/python.exe d:/testing/gui.py
('arya', 10000, 19, 6)
('uwu', 12000, 60, 3)
PS D:\testing> █
```

```
1 import mysql.connector
2
3
4 myconn=mysql.connector.connect(host="localhost",user="root",password="",db="employee")
5 cur=myconn.cursor(buffered=True)
6
7 try:
8
9     cur.execute("UPDATE employee SET salary=salary*1.15 where yoe>5")
10
11     myconn.commit()
12     cur.execute("SELECT * FROM `employee` ")
13     all_emp=cur.fetchall()
14
15     for i in all_emp:
16         print(i)
17
18
19
20
21
22
23 except:
24     print("Error")
25
26 cur=myconn.cursor()
```

PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE

Traceback (most recent call last):

File "d:\testing\gui.py", line 8, in <module>

all\_emp=all\_emp.fetchall()

AttributeError: 'NoneType' object has no attribute 'fetchall'

PS D:\testing> & C:/Users/91992/AppData/Local/Programs/Python/Python310/python.exe d:/testing/gui.p

('arya', 10000, 19, 6)

('uwu', 12000, 60, 3)

PS D:\testing> & C:/Users/91992/AppData/Local/Programs/Python/Python310/python.exe d:/testing/gui.p

PS D:\testing> & C:/Users/91992/AppData/Local/Programs/Python/Python310/python.exe d:/testing/gui.p

('arya', 13225, 19, 6)

('uwu', 12000, 60, 3)

PS D:\testing> █

```
1 import mysql.connector
2
3
4 myconn=mysql.connector.connect(host="localhost",user="root",password="",db="employee")
5 cur=myconn.cursor(buffered=True)
6
7 try:
8
9     cur.execute("DELETE FROM employee where age=60")
10    myconn.commit()
11
12    cur.execute("SELECT * FROM `employee` ")
13    all_emp=cur.fetchall()
14
15    for i in all_emp:
16        print(i)
17
18
19
20
21
22
23 except:
24     print("Error")
25
26 cur=myconn.cursor()
```

PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE

```
all_emp=all_emp.fetchall()
AttributeError: 'NoneType' object has no attribute 'fetchall'
PS D:\testing> & C:/Users/91992/AppData/Local/Programs/Python/Python310/python.exe d:/testing/gui.py
('arya', 10000, 19, 6)
('uwu', 12000, 60, 3)
PS D:\testing> & C:/Users/91992/AppData/Local/Programs/Python/Python310/python.exe d:/testing/gui.py
PS D:\testing> & C:/Users/91992/AppData/Local/Programs/Python/Python310/python.exe d:/testing/gui.py
('arya', 13225, 19, 6)
('uwu', 12000, 60, 3)
PS D:\testing> & C:/Users/91992/AppData/Local/Programs/Python/Python310/python.exe d:/testing/gui.py
('arya', 13225, 19, 6)
PS D:\testing> █
```

### Outcomes:

**CO4-Demonstrate handling database with python and to understand network programming with Python scapy**

**Conclusion: (Conclusion to be based on the objectives and outcomes achieved)**

**Understood how to connect to a database and run query commands on the same**

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**References:**

1. <https://www.python.org/dev/peps/pep-0249/>
2. Daniel Arbuttle, Learning Python Testing, Packt Publishing, 1st Edition, 2014
3. Wesly J Chun, Core Python Applications Programming, O'Reilly, 3rd Edition, 2015
4. Wes McKinney, Python for Data Analysis, O'Reilly, 1st Edition, 2017
5. Albert Lukaszewsk, MySQL for Python, Packt Publishing, 1st Edition, 2010
6. Eric Chou, Mastering Python Networking, Packt Publishing, 2nd Edition, 2017