# Experiment 10

**Aim: Demonstrate Database connectivity**

**Resources required:** P-IV and above, Python compiler

**Theory:**

**Step1: Install python and set the path.**

**Step2: Using any IDE or in terminal write the following command to install mysql connector:**

**pip install mysql-connector-python**

**or**

**Python -m pip install mysql-connector-python (if upper command doesn't work)**

**After installing above library we're ready to use it in our python files**
**(Note: If you create Virtual Environment you need to install it in your Virtual Environment.)**

**Step3: Create a Python file of your desired name(extension: .py)**

**Step4: You need to write following code at the top to import mysql connector:**

**from mysql import connector**

**Step5: Now we need to connect to database using mysql.connector object, for that we have following syntax:**

**Object_name = connector.connect( host="hostname", username="db_username", password = "user_password", database = "db_name")**

**Hostname: In our case hostname is local host since we're not hosting it anywhere**

**db_username: It is a database username it should exist or else code will raise an error.**
**Password: user password should be correct or code will raise an error.**
**Db_name: database name which you're going to use if not exist it will raise an error.**

**Step6: If everything is correct in Step5 we have successfully connected to our database and we can write queries using our Object.**

**Conclusion: We have successfully demonstrate MySQL database connectivity in python.**

**Code:**

```
from mysql import connector


mydb = connector.connect(
            host = "localhost",
            username = "root",
            password = "admin",
            database = "pythontemp"
        )

mycursor = mydb.cursor()

mycursor.execute("CREATE TABLE IF NOT EXISTS customers(customer_id INT AUTO_INCREMENT P
RIMARY KEY,name VARCHAR(30))")

mycursor.execute("SHOW TABLES")

print(*[x for x in mycursor])

try:
    mycursor.execute("ALTER TABLE customers ADD address VARCHAR(255)")
except:
    print("Column already exist")

mycursor.execute("DESC customers")

print(*[x for x in mycursor])

sql = "INSERT INTO customers(name,address) values(%s,%s)"

val = [
    ("Levi Ackermann","Wall Rose"),
    ("Eren Jaeger","Wall Maria"),
    ("Lalatinna","Konosuba"),
    ("Kaneki Kun","Re"),
    ("Rias Gremory","DxD"),
]

mycursor.executemany(sql,val)

mydb.commit()

print(mycursor.rowcount," was inserted")

mycursor.execute("SELECT * FROM customers ORDER BY name")

result = mycursor.fetchall()

for x in result:
    print(x)
```

**Output**:

```
[Running] python -u "c:\Users\adnan\OneDrive\Desktop\College\Sem 4\DBMS\Practicals\Practical-10\dbconnect.py"
('customers',)
('customer_id', b'int', 'NO', 'PRI', None, 'auto_increment') ('name', b'varchar(30)', 'YES', '', None, '') ('address', b'varchar(255)', 'YES', '', None, '')
5  was inserted
(2, 'Eren Jaeger', 'Wall Maria')
(4, 'Kaneki Kun', 'Re')
(3, 'Lalatinna', 'Konosuba')
(1, 'Levi Ackermann', 'Wall Rose')
(5, 'Rias Gremory', 'DxD')

[Done] exited with code=0 in 0.261 seconds
```