**Exp. No: 23**

**Date:**

**DATABASE CONNECTIVITY USING PYTHON AND MYSQL**

**AIM:**

To connect the MySQL using PYTHON and to execute the CREATE, INSERT, DELETE, UPDATE and SELECT commands in MySQL.

**PROGRAM:**

import mysql.connector

from mysql.connector import Error

try:

**# Connect Python with MySQL**

connection = mysql.connector.connect(host='localhost',

database='Student',

user='root',

password='root')

**# create table**

mySql\_Create\_Table\_Query = """CREATE TABLE classroom1 (

Course\_ID varchar(100) NOT NULL,

Course\_Name varchar(250) NOT NULL,

Classroom\_No int(50) NOT NULL,

Total\_Students int(11) NOT NULL,

Floor\_No int(11) NOT NULL,

PRIMARY KEY (Course\_ID)) """

cursor = connection.cursor()

result = cursor.execute(mySql\_Create\_Table\_Query)

print("classroom1 Table created successfully ")

**# Insert Values**

mySql\_insert\_query = """INSERT INTO classroom1 (Course\_ID, Course\_Name, Classroom\_No,

Total\_Students,Floor\_No) VALUES ('CSA0501', 'DBMS', 311, 40,3),

('CSA0502', 'DBMS', 312, 40,3), ('CSA0503', 'DBMS', 313, 40,3),

('CSA0504', 'DBMS', 314, 40,3) """

cursor = connection.cursor()

cursor.execute(mySql\_insert\_query)

connection.commit()

print(cursor.rowcount, "Record inserted successfully into classroom table")

cursor.close()

**# Select / Display Values**

sql\_select\_Query = "select \* from classroom1"

cursor = connection.cursor()

cursor.execute(sql\_select\_Query)

**# get all records**

records = cursor.fetchall()

print("Total number of rows in table: ", cursor.rowcount)

print("\nPrinting each row")

for row in records:

print("Course\_ID = ", row[0], )

print("Course\_Name = ", row[1])

print("Classroom\_No = ", row[2])

print("Total\_Students = ", row[3])

print("Floor\_No = ", row[4], "\n")

**# Update Values**

print("Before updating a record ")

sql\_select\_query = """select \* from classroom1"""

cursor.execute(sql\_select\_query)

record = cursor.fetchall()

print(record)

print("Total number of rows in table: ", cursor.rowcount)

# Update single record now

sql\_update\_query = """Update classroom1 set Classroom\_No = 301 where Course\_ID = "CSA0501" """

cursor.execute(sql\_update\_query)

connection.commit()

print("Record Updated successfully ")

# After updates

print("After updating a record ")

sql\_select\_query = """select \* from classroom1"""

cursor.execute(sql\_select\_query)

record = cursor.fetchall()

print(record)

print("Total number of rows in table: ", cursor.rowcount)

**# Delete a record**

sql\_Delete\_query = """Delete from classroom1 where Classroom\_No = 316"""

cursor.execute(sql\_Delete\_query)

connection.commit()

print('number of rows deleted', cursor.rowcount)

sql\_select\_query = """select \* from classroom1"""

cursor.execute(sql\_select\_query)

record = cursor.fetchall()

print(record)

print("Total number of rows in table: ", cursor.rowcount)

**# Error handling block**

except mysql.connector.Error as error:

print("Failed to create table in MySQL: {}".format(error))

**# Disconnect the connection**

finally:

if connection.is\_connected():

cursor.close()

connection.close()

print("MySQL connection is closed")

**OUTPUT:**

**# Create table**

**classroom1 Table created successfully**

**MySQL connection is closed**

**# Select / Display Values**

**4 Record inserted successfully into classroom table**

**Total number of rows in table: 4**

**Printing each row**

**Course\_ID = CSA0501**

**Course\_Name = DBMS**

**Classroom\_No = 311**

**Total\_Students = 40**

**Floor\_No = 3**

**Course\_ID = CSA0502**

**Course\_Name = DBMS**

**Classroom\_No = 312**

**Total\_Students = 40**

**Floor\_No = 3**

**Course\_ID = CSA0503**

**Course\_Name = DBMS**

**Classroom\_No = 313**

**Total\_Students = 40**

**Floor\_No = 3**

**Course\_ID = CSA0504**

**Course\_Name = DBMS**

**Classroom\_No = 314**

**Total\_Students = 40**

**Floor\_No = 3**

**MySQL connection is closed**

**# Update Values**

**Before updating a record**

**[('CSA0501', 'DBMS', 311, 40, 3), ('CSA0502', 'DBMS', 312, 40, 3), ('CSA0503', 'DBMS', 313, 40, 3), ('CSA0504', 'DBMS', 314, 40, 3), ('CSA0505', 'DBMS', 315, 40, 3), ('CSA0506', 'DBMS', 316, 40, 3)]**

**Total number of rows in table: 6**

**Record Updated successfully**

**MySQL connection is closed**

**After updating a record**

**[('CSA0501', 'DBMS', 301, 40, 3), ('CSA0502', 'DBMS', 312, 40, 3), ('CSA0503', 'DBMS', 313, 40, 3), ('CSA0504', 'DBMS', 314, 40, 3), ('CSA0505', 'DBMS', 315, 40, 3), ('CSA0506', 'DBMS', 316, 40, 3)]**

**Total number of rows in table: 6**

**MySQL connection is closed**

**# Delete record**

**Number of rows deleted 1**

**[('CSA0501', 'DBMS', 301, 40, 3), ('CSA0502', 'DBMS', 312, 40, 3), ('CSA0503', 'DBMS', 313, 40, 3), ('CSA0504', 'DBMS', 314, 40, 3), ('CSA0505', 'DBMS', 315, 40, 3)]**

**Total number of rows in table: 5**

**MySQL connection is closed**

**RESULT:** Thus the MySQL is connected using Python and executed the CREATE, INSERT, DELETE, UPDATE and SELECT commands in MySQL.