**Assignment 2- MySQL with Python**

In this assignment, you'll be tasked with creating a simple database application that manages a list of students. The application will allow you to add new students, retrieve student information, update student records, and delete student entries.

**Task 1: Database Setup**

1. Install the mysql-connector-python package if not already installed.
2. Create a MySQL database named university.
3. Create a table named students with the following fields:

id (INT, PRIMARY KEY, AUTO\_INCREMENT)

name (VARCHAR)

age (INT)

gender (VARCHAR)

major (VARCHAR)

**Task 2: Python Script**

Write a Python script that accomplishes the following tasks:

1. Connect to the MySQL database.
2. Provide a menu to perform the following operations:
3. Add a new student.
4. Retrieve student information by ID.
5. Update student information.
6. Delete a student record.
7. Exit the program.

**Solution: (Complete Code):**

import mysql.connector  
  
mydb = mysql.connector.connect(  
 host = "localhost",  
 user = "root",  
 password = "admin@123",  
 database = 'university'  
)  
  
mycursor = mydb.cursor()  
  
# Create a table and insert data  
mycursor.execute("CREATE TABLE students (id INT AUTO\_INCREMENT PRIMARY KEY, name VARCHAR(255), age INT, gender VARCHAR(255), major VARCHAR(255))")  
sql = "INSERT INTO students (name, age, gender, major) VALUES (%s, %s, %s, %s)"  
val = ("Chetan", 23, 'Male', 'Major')  
mycursor.execute(sql, val)  
mydb.commit()  
print(mycursor.rowcount, "record inserted.")  
  
# Query the database  
mycursor.execute("SELECT \* FROM students")  
myresult = mycursor.fetchall()  
for row in myresult:  
 print("ID:",row[0], "Name:", row[1], "Age:", row[2], "Gender:", row[1], "Major:", row[2])  
  
# Update data in the table  
sql = "UPDATE students SET age = 22 WHERE age = 23"  
mycursor.execute(sql)  
mydb.commit()  
print(mycursor.rowcount, "record(s) affected")  
  
# Delete data from the table  
sql = "DELETE FROM students WHERE name = 'Chetan'"  
mycursor.execute(sql)  
mydb.commit()  
print(mycursor.rowcount, "record(s) deleted")  
  
# Close the connection  
mydb.close()