

Program 1:

```
import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.SQLException;

import java.sql.Statement;

public class StudentDatabase {

    private static final String JDBC_URL = "jdbc:mysql://localhost:3306/student_database";

    private static final String USERNAME = "your_username";

    private static final String PASSWORD = "your_password";

    public static void main(String[] args) {

        String createTableSQL = "CREATE TABLE students ("

            + "id INT AUTO_INCREMENT PRIMARY KEY,"

            + "name VARCHAR(100),"

            + "age INT,"

            + "grade VARCHAR(10)"

            + ")";

        String insertDataSQL = "INSERT INTO students (name, age, grade) VALUES "

            + "('John Doe', 20, 'A'),"

            + "('Jane Smith', 21, 'B'),"

            + "('Mike Johnson', 22, 'C')";

        try (Connection connection = DriverManager.getConnection(JDBC_URL, USERNAME, PASSWORD);

            Statement statement = connection.createStatement()) {

            statement.execute(createTableSQL);

            System.out.println("Table created successfully.");

            statement.executeUpdate(insertDataSQL);

            System.out.println("Data inserted successfully.");

        } catch (SQLException e) {

            e.printStackTrace();

        }

    }

}
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Program 2:

```
import java.sql.*;

public class StudentDatabase {

    static final String JDBC_URL = "jdbc:mysql://localhost:3306/student_db";

    static final String USERNAME = "username";

    static final String PASSWORD = "password";

    public static void main(String[] args) {

        try (Connection connection = DriverManager.getConnection(JDBC_URL, USERNAME,
PASSWORD)) {

            createTable(connection);

            insertData(connection, "John Doe", 25, "Computer Science");

            updateData(connection, "John Doe", 26);

            deleteData(connection, "John Doe");

        } catch (SQLException e) {

            e.printStackTrace();

        }

    }

    private static void createTable(Connection connection) throws SQLException {

        String sql = "CREATE TABLE IF NOT EXISTS students (" +

            "id INT AUTO_INCREMENT PRIMARY KEY," +

            "name VARCHAR(255) NOT NULL," +

            "age INT NOT NULL," +

            "major VARCHAR(255) NOT NULL)";

        try (Statement statement = connection.createStatement()) {

            statement.execute(sql);

        }

    }

    private static void insertData(Connection connection, String name, int age, String major) throws
SQLException {

        String sql = "INSERT INTO students (name, age, major) VALUES (?, ?, ?)";

        try (PreparedStatement preparedStatement = connection.prepareStatement(sql)) {
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        preparedStatement.setString(1, name);

        preparedStatement.setInt(2, age);

        preparedStatement.setString(3, major);
preparedStatement.executeUpdate();
    }
}

private static void updateData(Connection connection, String name, int newAge) throws
SQLException {
    String sql = "UPDATE students SET age = ? WHERE name = ?";
    try (PreparedStatement preparedStatement = connection.prepareStatement(sql)) {
        preparedStatement.setInt(1, newAge);
        preparedStatement.setString(2, name);
        preparedStatement.executeUpdate();
    }
}

private static void deleteData(Connection connection, String name) throws SQLException {
    String sql = "DELETE FROM students WHERE name = ?";
    try (PreparedStatement preparedStatement = connection.prepareStatement(sql)) {
        preparedStatement.setString(1, name);
        preparedStatement.executeUpdate();
    }
}
}

```