```java
import java.sql.*;

import java.util.*;


// Model: Handles database operations
class Student {
    private int id;
    private String name;
    private int age;

    public Student(int id, String name, int age) {
        this.id = id;
        this.name = name;
        this.age = age;
    }

    public int getId() { return id; }
    public String getName() { return name; }
    public int getAge() { return age; }
}


class StudentDAO {
    private Connection connect() {
        try {
            return DriverManager.getConnection("jdbc:mysql://localhost:3306/testdb", "root", "password");
        } catch (SQLException e) {
            e.printStackTrace();
            return null;
```

```java
        }
    }


    public void createStudent(Student student) {
        String sql = "INSERT INTO students (id, name, age) VALUES (?, ?, ?)";
        try (Connection conn = connect(); PreparedStatement pstmt = conn.prepareStatement(sql)) {

            pstmt.setInt(1, student.getId());

            pstmt.setString(2, student.getName());

            pstmt.setInt(3, student.getAge());

            pstmt.executeUpdate();

            System.out.println("Student added successfully.");

        } catch (SQLException e) {

            e.printStackTrace();

        }
    }


    public void readStudents() {
        String sql = "SELECT * FROM students";
        try (Connection conn = connect(); Statement stmt = conn.createStatement(); ResultSet rs = stmt.executeQuery(sql)) {

            while (rs.next()) {

                System.out.println("ID: " + rs.getInt("id") + ", Name: " + rs.getString("name") + ", Age: " + rs.getInt("age"));

            }

        } catch (SQLException e) {

            e.printStackTrace();

        }
    }
```

```java
    public void updateStudent(int id, String name, int age) {

        String sql = "UPDATE students SET name = ?, age = ? WHERE id = ?";

        try (Connection conn = connect(); PreparedStatement pstmt =
conn.prepareStatement(sql)) {

            pstmt.setString(1, name);

            pstmt.setInt(2, age);

            pstmt.setInt(3, id);

            pstmt.executeUpdate();

            System.out.println("Student updated successfully.");

        } catch (SQLException e) {

            e.printStackTrace();

        }

    }


    public void deleteStudent(int id) {

        String sql = "DELETE FROM students WHERE id = ?";

        try (Connection conn = connect(); PreparedStatement pstmt =
conn.prepareStatement(sql)) {

            pstmt.setInt(1, id);

            pstmt.executeUpdate();

            System.out.println("Student deleted successfully.");

        } catch (SQLException e) {

            e.printStackTrace();

        }

    }

}


// View: Displays output
```

```java
class StudentView {

    public void printStudentDetails(Student student) {

        System.out.println("Student ID: " + student.getId() + ", Name: " + student.getName() + ",
Age: " + student.getAge());

    }

}


// Controller: Handles user input and updates model

class StudentController {

    private StudentDAO model;

    private StudentView view;


    public StudentController(StudentDAO model, StudentView view) {

        this.model = model;

        this.view = view;

    }


    public void addStudent(int id, String name, int age) {

        Student student = new Student(id, name, age);

        model.createStudent(student);

    }


    public void showStudents() {

        model.readStudents();

    }


    public void modifyStudent(int id, String name, int age) {

        model.updateStudent(id, name, age);
```

```java
    }


    public void removeStudent(int id) {

        model.deleteStudent(id);

    }

}


// Main Class

public class StudentApp {

    public static void main(String[] args) {

        StudentDAO model = new StudentDAO();

        StudentView view = new StudentView();

        StudentController controller = new StudentController(model, view);


        controller.addStudent(1, "John Doe", 20);

        controller.showStudents();

        controller.modifyStudent(1, "John Smith", 22);

        controller.showStudents();

        controller.removeStudent(1);

        controller.showStudents();

    }

}
```

```
> javac -cp ".;libs/mysql-connector-java.jar" src/StudentApp.java
> java -cp ".;libs/mysql-connector-java.jar" src/StudentApp


Student added successfully.
----------------------------------
ID: 1 | Name: John Doe | Age: 20
----------------------------------
Student updated successfully.
----------------------------------
ID: 1 | Name: John Smith | Age: 22
----------------------------------
Student deleted successfully.
----------------------------------
(No students found)
----------------------------------
```