

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.ArrayList;
```

```
import java.util.List;  
import java.util.Scanner;
```

```
class Student {  
    private int studentID;  
    private String name;  
    private String department;  
    private double marks;  
  
    public Student(int studentID, String  
name, String department, double marks) {  
        this.studentID = studentID;  
        this.name = name;  
        this.department = department;  
        this.marks = marks;  
    }  
  
    public int getStudentID() {  
        return studentID;  
    }  
}
```

```
public String getName() {  
    return name;  
}
```

```
public String getDepartment() {  
    return department;  
}
```

```
public double getMarks() {  
    return marks;  
}  
}
```

```
class StudentController {  
    private static final String URL =  
"jdbc:mysql://localhost:3306/  
your_database";  
    private static final String USER =  
"your_username";  
    private static final String PASSWORD =  
"your_password";
```

```
public void addStudent(Student student)
throws SQLException {
    String sql = "INSERT INTO Student
(StudentID, Name, Department, Marks)
VALUES (?, ?, ?, ?)";
    try (Connection conn =
DriverManager.getConnection(URL, USER,
PASSWORD);
        PreparedStatement pstmt =
conn.prepareStatement(sql)) {
        pstmt.setInt(1,
student.getStudentID());
        pstmt.setString(2,
student.getName());
        pstmt.setString(3,
student.getDepartment());
        pstmt.setDouble(4,
student.getMarks());
        pstmt.executeUpdate();
    }
```

```
}
```

```
    public List<Student> getAllStudents()
throws SQLException {
    List<Student> students = new
ArrayList<>();
    String sql = "SELECT * FROM Student";
    try (Connection conn =
DriverManager.getConnection(URL, USER,
PASSWORD);
        Statement stmt =
conn.createStatement();
        ResultSet rs =
stmt.executeQuery(sql)) {
        while (rs.next()) {
            students.add(new
Student(rs.getInt("StudentID"),
rs.getString("Name"),
            rs.getString("Department"),
rs.getDouble("Marks")));
        }
    }
```

```
    }  
    return students;  
}  
}
```

```
public class StudentView {  
    public static void main(String[] args) {  
        StudentController controller = new  
StudentController();  
        Scanner scanner = new  
Scanner(System.in);  
  
        while (true) {  
            System.out.println("\n1. Add  
Student\n2. View Students\n3. Exit");  
            int choice = scanner.nextInt();  
  
            if (choice == 1) {  
                System.out.print("Enter ID: ");  
                int id = scanner.nextInt();  
                scanner.nextLine();  
            }  
        }  
    }  
}
```

```
        System.out.print("Enter Name: ");
        String name = scanner.nextLine();
        System.out.print("Enter
Department: ");
        String dept = scanner.nextLine();
        System.out.print("Enter Marks: ");
        double marks =
scanner.nextDouble();
        try {
            controller.addStudent(new
Student(id, name, dept, marks));
            System.out.println("Student
added.");
        } catch (SQLException e) {
            e.printStackTrace();
        }
    } else if (choice == 2) {
        try {
            List<Student> students =
controller.getAllStudents();
            students.forEach(s ->
```

```
System.out.println(  
    s.getStudentID() + " | " +  
s.getName() + " | " + s.getDepartment() + "  
| " + s.getMarks()));  
    } catch (SQLException e) {  
        e.printStackTrace();  
    }  
} else  
    break;  
}  
scanner.close();  
}  
}
```