

**Experiment – 7 (Hard)**

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**Subject Name: PBLJ**

**Subject Code: 22CSH-359**

1. **Aim:** Develop a Java application using JDBC and MVC architecture to manage student data. The application should: Use a Student class as the model with fields like StudentID, Name, Department, and Marks. Include a database table to store student data. Allow the user to perform CRUD operations through a simple menu-driven view. Implement database operations in a separate controller class.

2. **Code:**

```
import java.sql.SQLException;
```

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

```
public class Hard {
```

```
    public static void main(String[] args) {
```

```
        Scanner scanner = new Scanner(System.in);
```

```
        StudentDAO dao = new StudentDAO();
```

```
        while (true) {
```

```
            System.out.println("\n1. Add Student\n2. View Students\n3. Exit");
```

```
            System.out.print("Choose an option: ");
```

```
            int choice = scanner.nextInt();
```

```
            scanner.nextLine();
```

```
try {
    if (choice == 1) {
        System.out.print("Enter Student 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();

        dao.addStudent(new Student(id, name, dept, marks));
        System.out.println("Student added successfully!");

    } else if (choice == 2) {
        dao.getStudents().forEach(s -> System.out.println(s.getStudentID() + " | " +
s.getName()));

    } else {
        System.exit(0);
    }
} catch (SQLException e) {
    e.printStackTrace();
}
}
```

}

}

### 3. Output:

```
Enter Student ID: 101
Enter Name: John Doe
Enter Department: Computer Science
Enter Marks: 85.5
Student added successfully!
```

(Output 1)