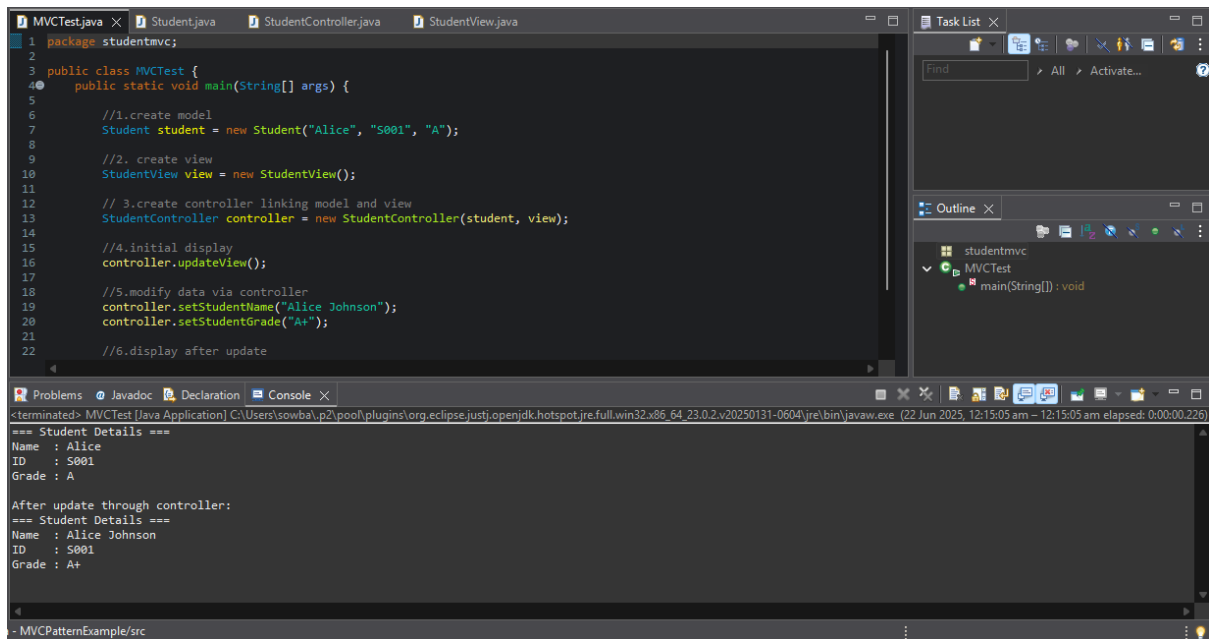


Exercise 10: Implementing the MVC Pattern

OUTPUT:



```
1 package studentmvc;
2
3 public class MVCTest {
4     public static void main(String[] args) {
5
6         //1.create model
7         Student student = new Student("Alice", "S001", "A");
8
9         //2. create view
10        StudentView view = new StudentView();
11
12        // 3.create controller linking model and view
13        StudentController controller = new StudentController(student, view);
14
15        //4.initial display
16        controller.updateView();
17
18        //5.modify data via controller
19        controller.setStudentName("Alice Johnson");
20        controller.setStudentGrade("A+");
21
22        //6.display after update
23    }
24 }
```

```
<terminated> MVCTest [Java Application] C:\Users\sowba\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_23.0.2.v20250131-0604\jre\bin\javaw.exe (22 Jun 2025, 12:15:05 am - 12:15:05 am elapsed: 0:00:00.226)

=== Student Details ===
Name : Alice
ID : S001
Grade : A

After update through controller:
=== Student Details ===
Name : Alice Johnson
ID : S001
Grade : A+
```

The MVC Pattern separates an application into Model, View, and Controller layers. This improves code organization, makes it easier to update or scale the system, and enhances maintainability and user interface flexibility.