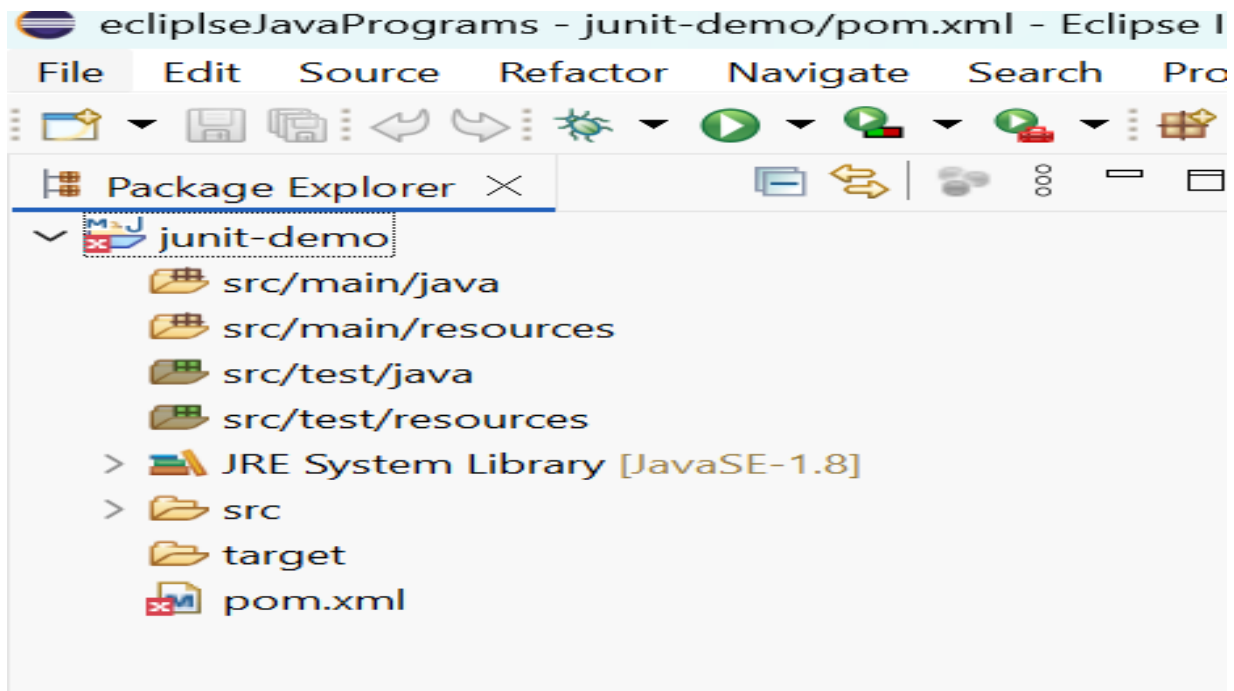**Name:- Vidya C S**   **Track: JAVA FSE**
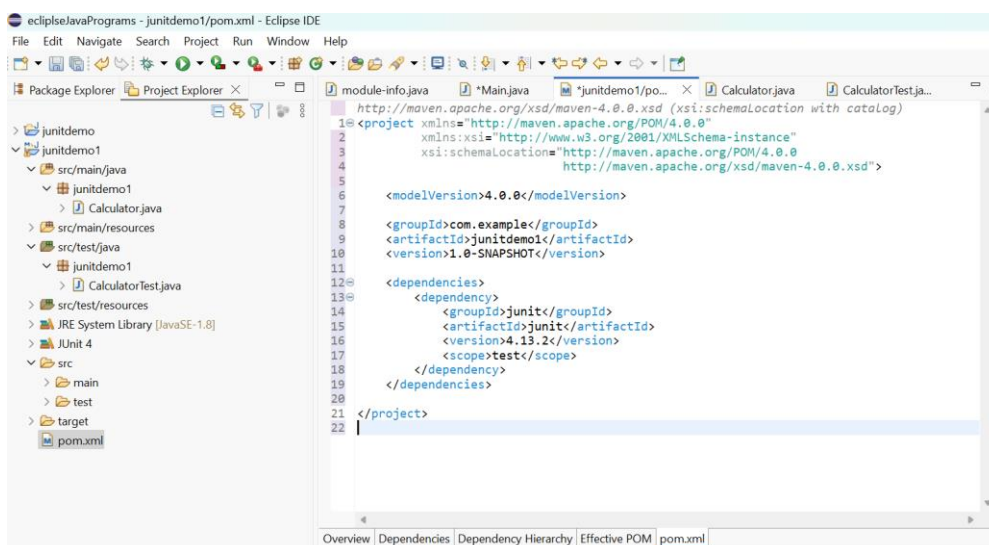
Exercise 1: Setting Up JUnit

Scenario: You need to set up JUnit in your Java project to start writing unit tests.

Solution:-

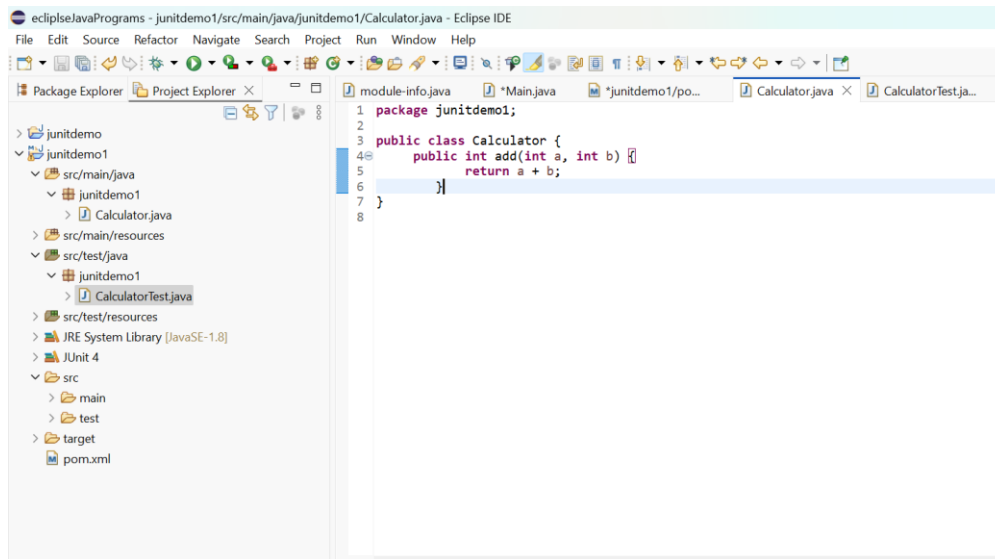**Step 1:- Create a new Java project in your IDE (e.g., Eclipse).**

Step 2:- Add JUnit dependency to your project. If you are using Maven, add the following to your pom.xml:
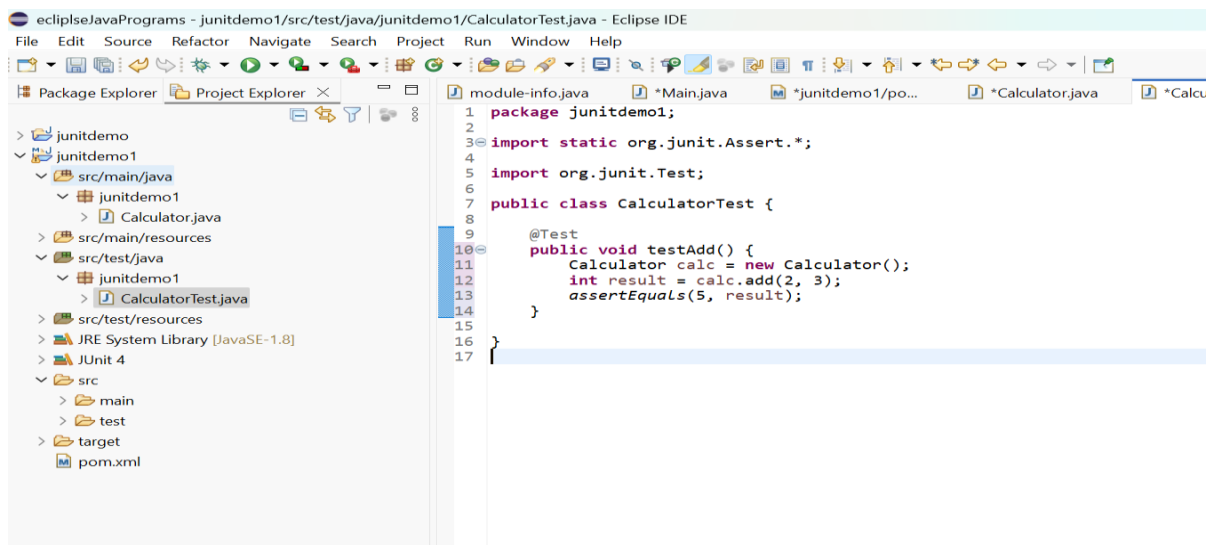
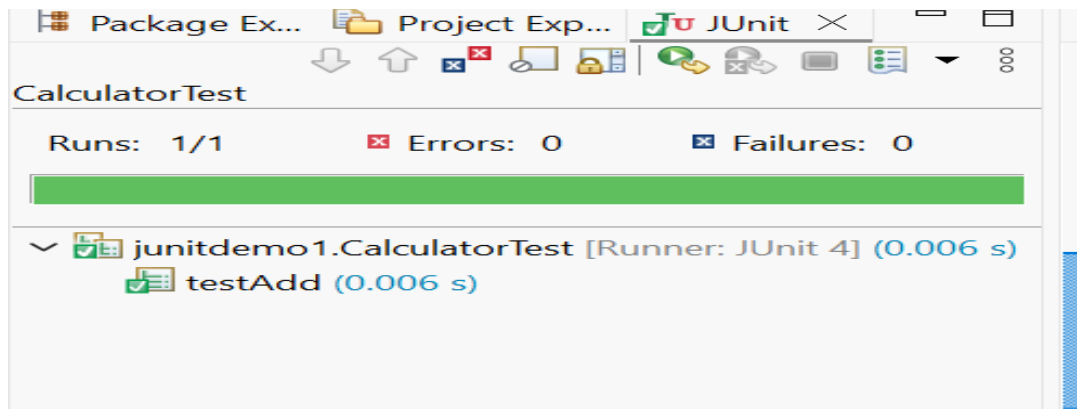## 3. Create a new test class in your project.

- ○ **Calculator class to test**

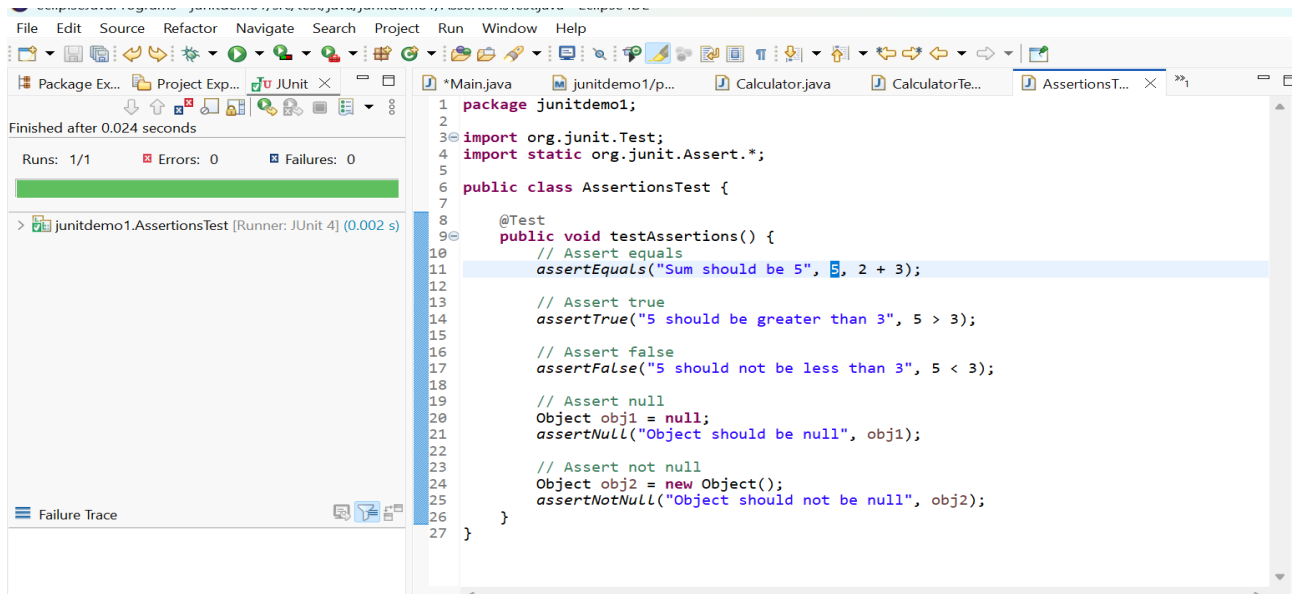- ○ **CalculatorTest class to test Calculator class**

Output of the test :-

Exercise 3: Assertions in Junit

Scenario: You need to use different assertions in JUnit to validate your test results
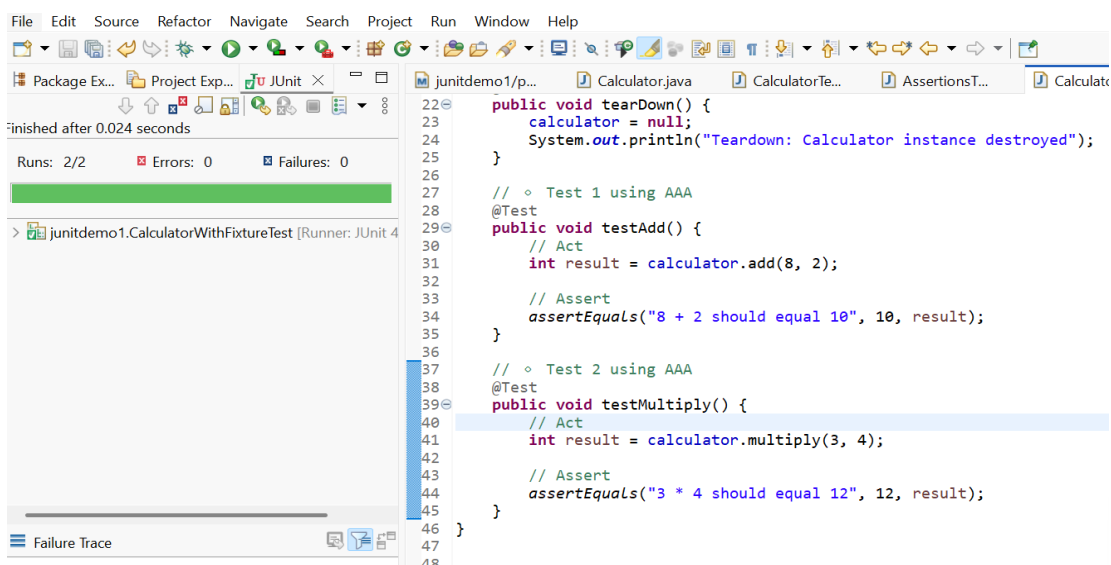

Exercise 4: Arrange-Act-Assert (AAA) Pattern, Test Fixtures, Setup and Teardown Methods in Junit

 Scenario: You need to organize your tests using the Arrange-Act-Assert (AAA) pattern and use setup and teardown methods.

 Steps: 1. Write tests using the AAA pattern.

        2. Use @Before and @After annotations for setup and teardown methods

Output:-

<terminated> CalculatorWithFixtureTest [JUnit] C:\Program Files\Java\jdk-21\bin

```
Setup: Calculator instance created
Teardown: Calculator instance destroyed
Setup: Calculator instance created
Teardown: Calculator instance destroyed
```