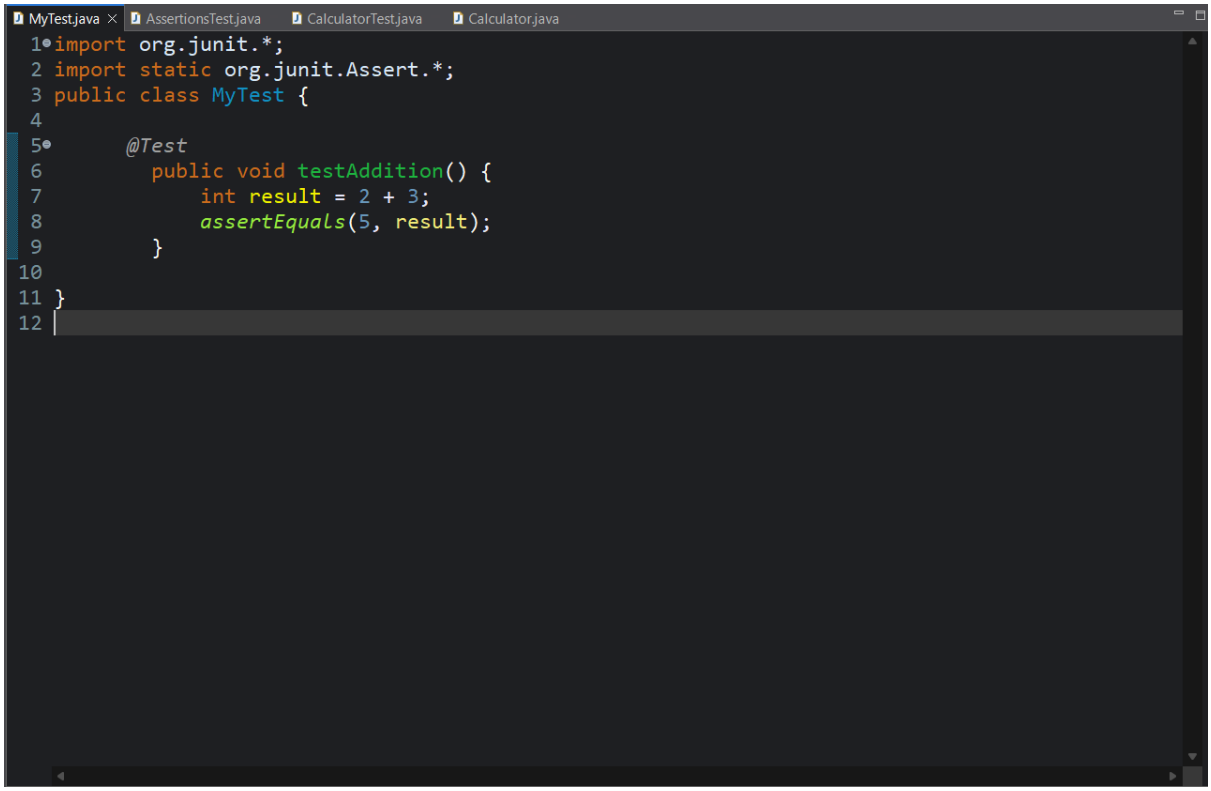
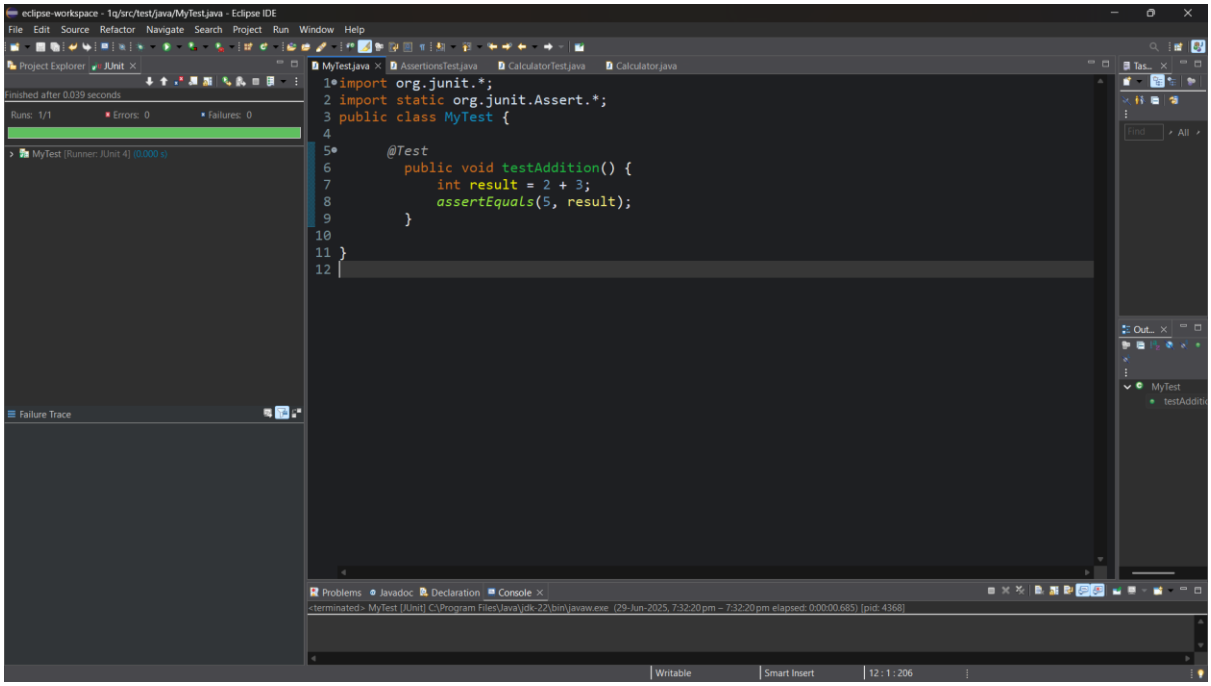
WEEK 2

Setting Up Junit



Output

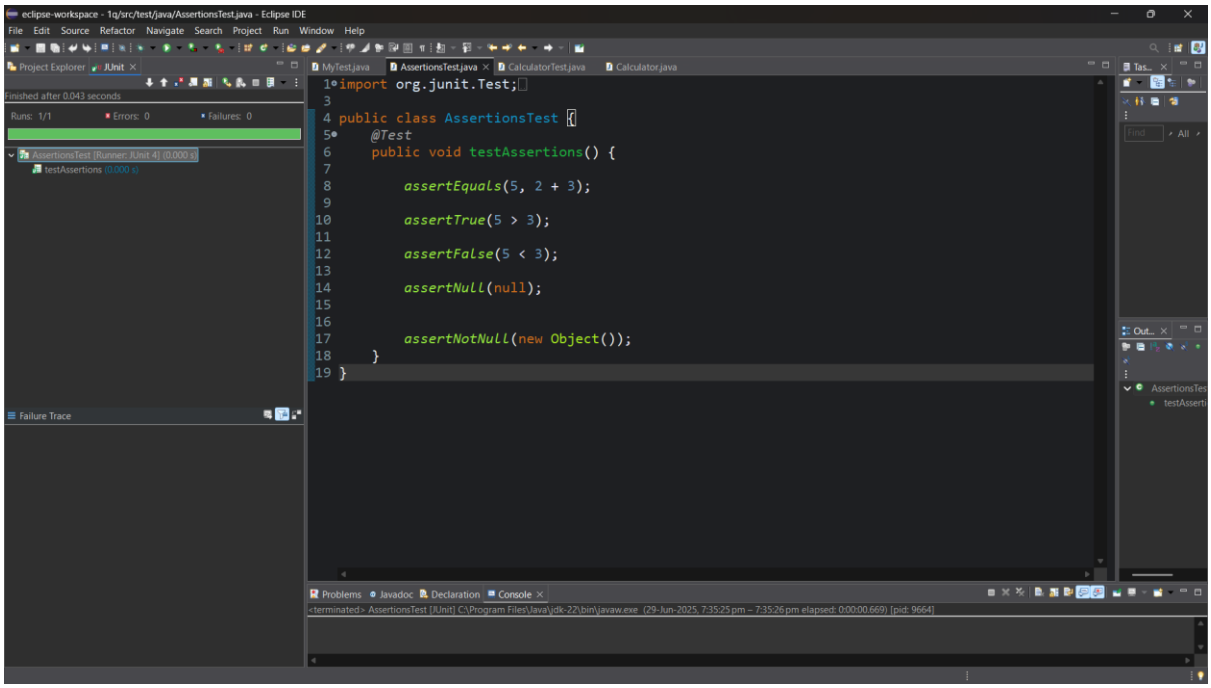


Assertions in Junit

Code

```java
import org.junit.Test;

public class AssertionsTest {
    @Test
    public void testAssertions() {

        assertEquals(5, 2 + 3);

        assertTrue(5 > 3);

        assertFalse(5 < 3);

        assertNull(null);


        assertNotNull(new Object());
    }
}
```

Output



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

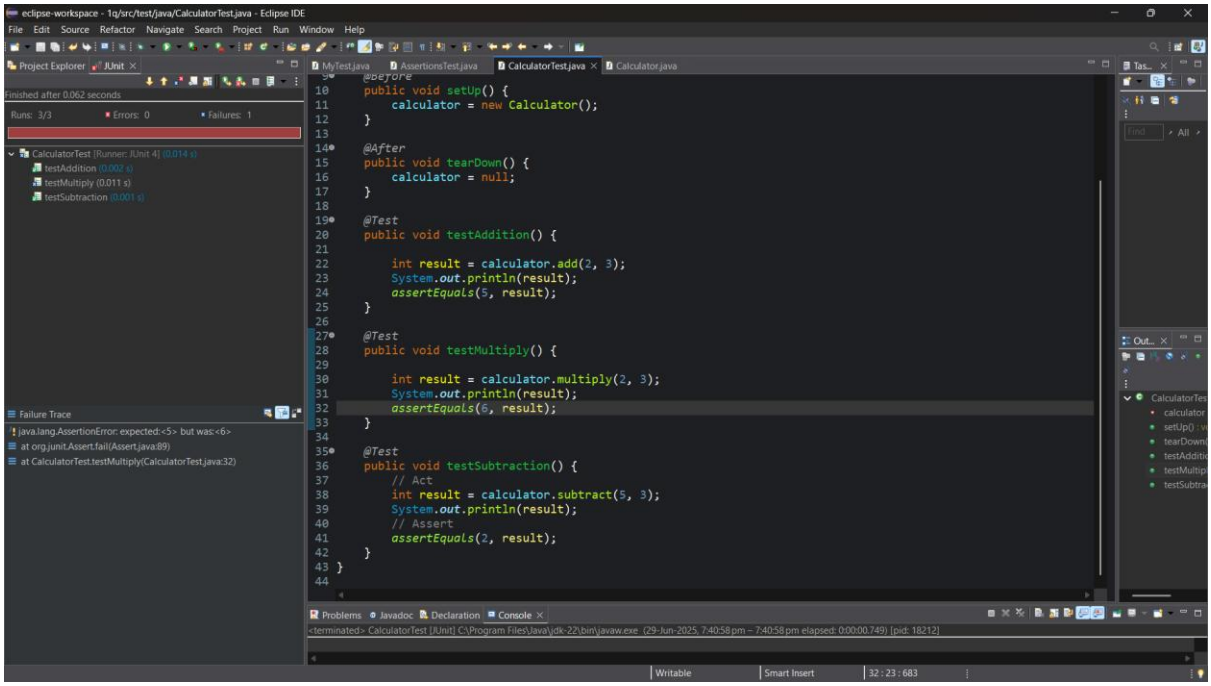
Code

MyTest.java | AssertionsTest.java | CalculatorTest.java | Calculator.java

```java
import org.junit.Before;
import org.junit.After;
import org.junit.Test;
import static org.junit.Assert.*;

public class CalculatorTest {
    private Calculator calculator;

    @Before
    public void setUp() {
        calculator = new Calculator();
    }

    @After
    public void tearDown() {
        calculator = null;
    }

    @Test
    public void testAddition() {

        int result = calculator.add(2, 3);
        System.out.println(result);
        assertEquals(5, result);
    }

    @Test
    public void testMultiply() {

        int result = calculator.multiply(2, 3);
        System.out.println(result);
        assertEquals(5, result);
    }

    @Test
    public void testSubtraction() {
        // Act
        int result = calculator.subtract(5, 3);
        System.out.println(result);
        // Assert
        assertEquals(2, result);
    }
}
```

```java
public class Calculator {
    public int add(int a, int b) {
        return a + b;
    }

    public int subtract(int a, int b) {
        return a - b;
    }

    public int multiply(int a, int b) {
        return a * b;
    }

    public int divide(int a, int b) {
        if (b == 0) {
            throw new IllegalArgumentException("Cannot divide by zero");
        }
        return a / b;
    }
}
```

Output



Making a test case to fail