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

**Source code :**

**CalculatorFixtureTest.java**

package com; // adjust package if needed

import org.junit.Before;

import org.junit.After;

import org.junit.Test;

import static org.junit.Assert.\*;

public class CalculatorFixtureTest {

private Calculator calculator;

// This method runs BEFORE each @Test

@Before

public void setUp() {

calculator = new Calculator();

System.out.println("Setup: New Calculator instance created");

}

// This method runs AFTER each @Test

@After

public void tearDown() {

calculator = null;

System.out.println("Teardown: Calculator instance set to null");

}

@Test

public void testAddition() {

// Arrange

int a = 2;

int b = 3;

// Act

int result = calculator.add(a, b);

// Assert

assertEquals(5, result);

}

@Test

public void testSubtraction() {

// Arrange

int a = 5;

int b = 2;

// Act

int result = calculator.subtract(a, b);

// Assert

assertEquals(3, result);

}

}

**Calculator.java**

package com;

public class Calculator {

public int add(int a, int b) {

return a + b;

}

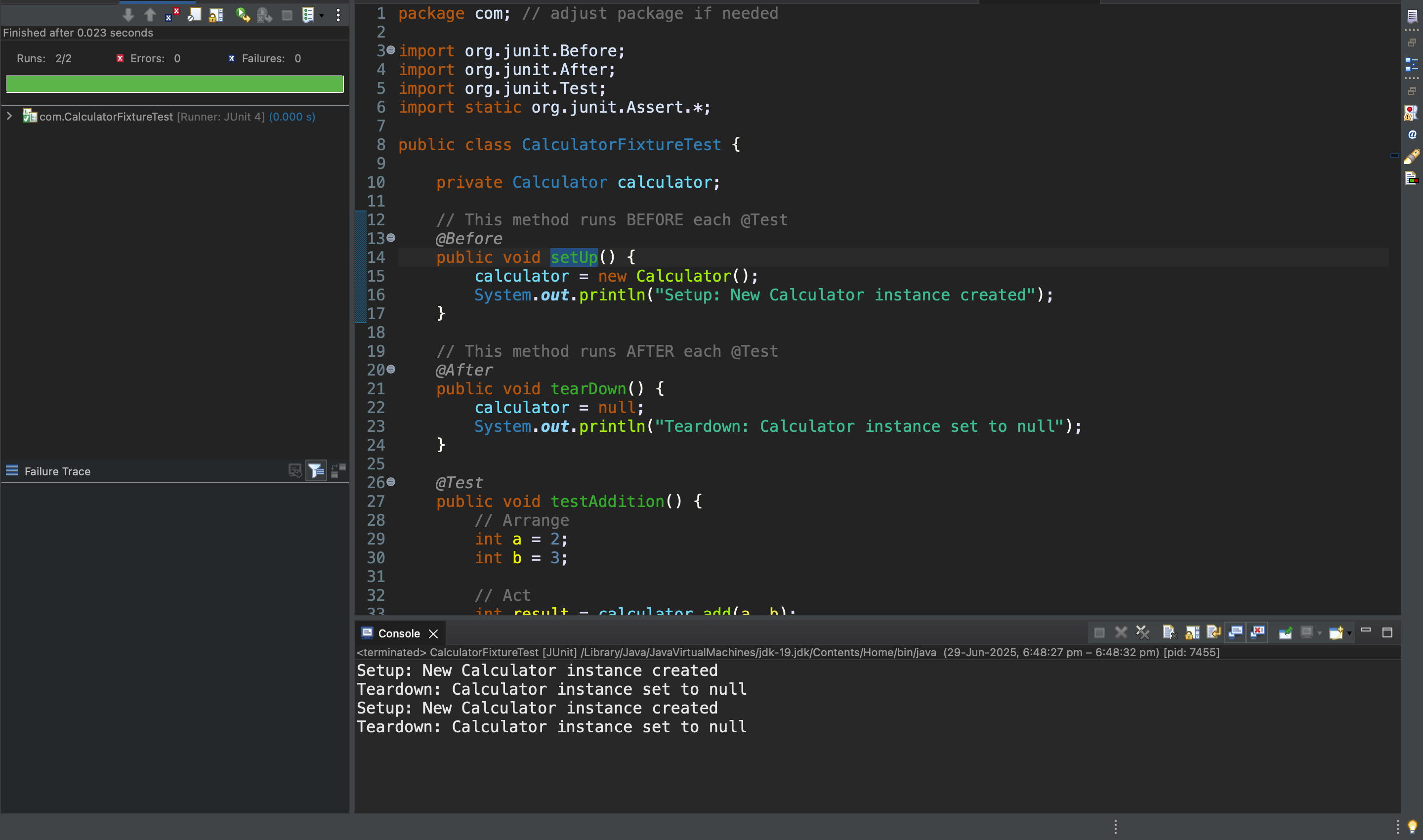
public int subtract(int a, int b) {

return a - b;

}

}

**Output :**

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