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

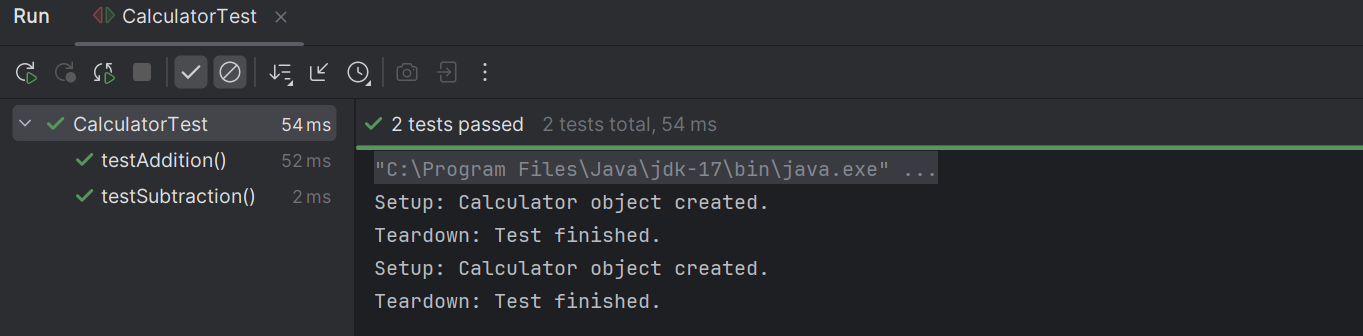
**Calculator.java**

package org.example;  
  
public class Calculator {  
  
 public int add(int a, int b) {  
 return a + b;  
 }  
  
 public int subtract(int a, int b) {  
 return a - b;  
 }  
}

**CalculatorTest.java**

import org.example.Calculator;  
import org.junit.jupiter.api.AfterEach;  
import org.junit.jupiter.api.BeforeEach;  
import org.junit.jupiter.api.Test;  
import static org.junit.jupiter.api.Assertions.\*;  
  
public class CalculatorTest {  
  
 Calculator calculator;  
  
 @BeforeEach  
 void setUp() {  
 // Arrange - Setup (before each test)  
 calculator = new Calculator();  
 System.*out*.println("Setup: Calculator object created.");  
 }  
  
 @AfterEach  
 void tearDown() {  
 // Teardown (after each test)  
 System.*out*.println("Teardown: Test finished.");  
 }  
  
 @Test  
 void testAddition() {  
 // Arrange: (Already done in setUp)  
  
 // Act:  
 int result = calculator.add(2, 3);  
  
 // Assert:  
 *assertEquals*(5, result);  
 }  
  
 @Test  
 void testSubtraction() {  
 // Arrange: (Already done in setUp)  
  
 // Act:  
 int result = calculator.subtract(5, 3);  
  
 // Assert:  
 *assertEquals*(2, result);  
 }  
}

**Output:**

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