**JUnit Testing Exercises**

**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.

**CODE:**

Calculator.java

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

CalculatorFixerTest.java

package org.example;  
  
import org.junit.After;  
import org.junit.Assert;  
import org.junit.Before;  
import org.junit.Test;  
  
public class CalculatorFixtureTest {  
  
 private Calculator calculator;  
 @Before  
 public void setUp() {  
 calculator = new Calculator(); // Arrange  
 System.*out*.println("Setup complete");  
 }  
 @After  
 public void tearDown() {  
 calculator = null;  
 System.*out*.println("Teardown complete");  
 }  
 @Test  
 public void testAddition() {  
 int result = calculator.add(4, 6);  
 Assert.*assertEquals*(10, result);  
 System.*out*.println("testAddition passed");  
 }  
  
 @Test  
 public void testAdditionNegative() {  
 int result = calculator.add(-2, -3);  
 Assert.*assertEquals*(-5, result);  
 System.*out*.println("testAdditionNegative passed");  
 }  
}

**OUTPUT:**

