**Exercise 4: AAA Pattern, Test Fixtures, Setup & Teardown**

**Scenario:**

* Use the **Arrange-Act-Assert (AAA)** pattern for clean test structure.
* Utilize @Before and @After annotations for **setup** and **teardown** logic.

import org.junit.Before;

import org.junit.After;

import org.junit.Test;

import static org.junit.Assert.\*;

public class CalculatorTest {

private Calculator calculator;

// Setup method: runs before each test

@Before

public void setUp() {

calculator = new Calculator();

System.out.println("Setup complete.");

}

// Teardown method: runs after each test

@After

public void tearDown() {

calculator = null;

System.out.println("Teardown complete.");

}

@Test

public void testAddition() {

// Arrange

int a = 10;

int b = 20;

// Act

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

// Assert

assertEquals(30, result);

}

@Test

public void testSubtraction() {

// Arrange

int a = 10;

int b = 5;

// Act

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

// Assert

assertEquals(5, result);

}

}