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.

public class Calculator {

public int multiply(int a, int b) {

return a \* b;

}

public int subtract(int a, int b) {

return a - b;

}

}

import static org.junit.Assert.\*;

import org.junit.Before;

import org.junit.After;

import org.junit.Test;

public class CalculatorTest {

private Calculator calculator;

@Before

public void setUp() {

calculator = new Calculator();

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

}

@After

public void tearDown() {

calculator = null;

System.out.println("Teardown: Calculator instance cleared.");

}

@Test

public void testMultiply() {

int result = calculator.multiply(4, 5);

assertEquals(20, result);

}

@Test

public void testSubtract() {

int result = calculator.subtract(10, 4);

assertEquals(6, result);

}

}

OUTPUT:

