**JUnit Testing Exercises**

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

**Calculator.java**

package com.example.test;

public class Calculator {

public int add(int a, int b) {

return a + b;

}

public int multiply(int a, int b) {

return a \* b;

}

}

**CalculatorTest.java**

package com.example.test;

import org.junit.After;

import org.junit.Before;

import org.junit.Test;

import static org.junit.Assert.\*;

public class CalculatorTest {

private Calculator calculator;

@Before

public void setUp() {

calculator = new Calculator();

System.*out*.println("Setup completed.");

}

@After

public void tearDown() {

calculator = null;

System.*out*.println("Teardown completed.");

}

@Test

public void testAddition() {

int a = 5, b = 3;

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

*assertEquals*(8, result);

}

@Test

public void testMultiplication() {

int a = 4, b = 6;

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

*assertEquals*(24, result);

}

}

**OUTPUT:**



