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

**Code:**

Calculator.java: 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:

import org.junit.jupiter.api.Test;

import static org.junit.jupiter.api.Assertions.\*;

public class CalculatorTest {

@Test

void testAddition() {

// Arrange

Calculator calculator = new Calculator();

int a = 10;

int b = 20;

// Act

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

// Assert

assertEquals(30, result);

}

@Test

void testMultiplication() {

// Arrange

Calculator calculator = new Calculator();

int x = 4;

int y = 5;

// Act

int result = calculator.multiply(x, y);

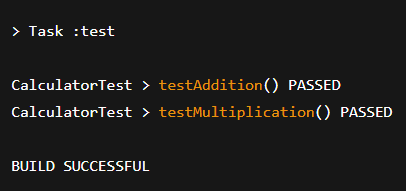
// Assert

assertEquals(20, result);

}

}

**Output:**

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