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

**Teardown Methods in Junit**

package com.example.demo;

import org.junit.Before;

import org.junit.After;

import org.junit.Test;

import static org.junit.Assert.\*;

public class CalculatorTest {

private Calculator calculator;

// Setup – runs before each test

@Before

public void setUp() {

calculator = new Calculator();

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

}

// Teardown – runs after each test

@After

public void tearDown() {

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

calculator = null;

}

@Test

public void testAddition() {

// Arrange

int a = 2, b = 3;

// Act

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

// Assert

assertEquals("Addition result should be 5", 5, result);

}

@Test

public void testSubtraction() {

// Arrange

int a = 5, b = 2;

// Act

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

// Assert

assertEquals("Subtraction result should be 3", 3, result);

}

}

Calculator Class 🡪

package com.example.demo;

public class Calculator {

public int add(int a, int b) { return a + b; }

public int subtract(int a, int b){ return a - b; }

}

Output 🡪

