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.

Solution:

Testing a simple calculator so that we can use AAA pattern

Named CalculatorTest.java

And a class Claculator

package mytest;

public class Calculator {

public int add(int a, int b) {

return a + b;

}

}

package mytest;

import static org.junit.Assert.assertEquals;

import org.junit.Before;

import org.junit.After;

import org.junit.Test;

public class CalculatorTest {

Calculator calc;

// Setup method - runs before each test

@Before

public void setUp() {

calc = new Calculator();

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

}

// Teardown method - runs after each test

@After

public void tearDown() {

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

}

@Test

public void testAdd() {

// Arrange

int a = 2;

int b = 3;

// Act

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

// Assert

assertEquals(5, result);

}

}

Output:

Setup done.

Teardown done.