**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

**Calculator.java**  
public class Calculator

{

public int add(int a, int b) {

return a + b;

}

public int subtract(int a, int b) {

return a - b;

}

}  
  
  
**CalculatorTest.java**  
  
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;

int b = 3;

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

assertEquals(8, result);

}

@Test

public void testSubtraction() {

int a = 10;

int b = 4;

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

assertEquals(6, result);

}

}