Exercise 4: 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 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;  
  
 // Setup method - runs BEFORE each @Test  
 @Before  
 public void setUp() {  
 System.*out*.println("Setting up...");  
 calculator = new Calculator(); // Arrange  
 }  
  
 // Teardown method - runs AFTER each @Test  
 @After  
 public void tearDown() {  
 System.*out*.println("Tearing down...");  
 calculator = null;  
 }  
  
 @Test  
 public void testAddition() {  
 // Arrange is done in @Before  
  
 // Act  
 int result = calculator.add(10, 5);  
  
 // Assert  
 *assertEquals*(15, result);  
 }  
  
 @Test  
 public void testSubtraction() {  
 // Arrange is done in @Before  
  
 // Act  
 int result = calculator.subtract(10, 5);  
  
 // Assert  
 *assertEquals*(5, result);  
 }  
}

Output:

