Exercise 1: Setting Up JUnit

Exercise 3: Assertions in JUnit

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

Solution:

Step 1: Create a Maven Project

Step 2: Fill Group ID and Artifact ID: Group ID - com.example, Artifact ID – JunitExample

Step 3: Add JUnit Dependency to pom.xml

Step 4: Update Maven Project

Step 5: Create Java Class to Test

public class Calculator {

public int add(int a, int b) {

return a + b;

}

public int subtract(int a, int b) {

return a - b;

}

}

Step 6: Create JUnit Test Class

import static org.junit.Assert.\*;

import org.junit.After;

import org.junit.Before;

import org.junit.Test;

public class CalculatorTest {

private Calculator calc;

*@Before*

public void setUp() {

calc = new Calculator();

System.***out***.println("Setup before test");

}

*@After*

public void tearDown() {

// Clean up after each test

System.***out***.println("Teardown after test");

}

*@Test*

public void testAdd() {

// Act & Assert

*assertEquals*(5, calc.add(2, 3));

}

*@Test*

public void testSubtract() {

// Act & Assert

*assertEquals*(1, calc.subtract(3, 2));

}

}

Step 7: Run the Test

Output:

A screenshot of a computer error message

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.