Test driven development and Logging framework

SuperSet ID:6412063

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

Teardown Methods in Junit

Pom.xml

<dependencies>

<dependency>

<groupId>org.junit.jupiter</groupId>

<artifactId>junit-jupiter</artifactId>

<version>5.10.0</version>

<scope>test</scope>

</dependency>

</dependencies>

Calculator.java

package com.example.app;

public class Calculator {

public int add(int a, int b) {

return a + b;

}

}

CalculatorTest.java

package com.example.app;

import static org.junit.jupiter.api.Assertions.\*;

import org.junit.jupiter.api.\*;

public class CalculatorTest {

private Calculator calculator;

@BeforeEach

public void setUp() {

calculator = new Calculator();

System.out.println("🔧 Setup: Calculator instance created");

}

@AfterEach

public void tearDown() {

System.out.println("🧹 Teardown: Test finished\n");

}

@Test

public void testAddition() {

int a = 10;

int b = 20;

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

assertEquals(30, result);

System.out.println("✅ Test Passed: 10 + 20 = " + result);

}

@Test

public void testAdditionWithNegativeNumbers() {

int a = -5;

int b = -3;

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

assertEquals(-8, result);

System.out.println("✅ Test Passed: -5 + -3 = " + result);

}

}

Output:

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated