**Practice project assisted**

**Nested and Repeated Tests**

**pom.xml**

<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<groupId>UsingJUnit</groupId>

<artifactId>UsingJUnit</artifactId>

<version>0.0.1-SNAPSHOT</version>

<dependencies>

<dependency>

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

<artifactId>junit-jupiter-engine</artifactId>

<version>5.4.2</version>

</dependency>

<dependency>

<groupId>org.junit.platform</groupId>

<artifactId>junit-platform-launcher</artifactId>

<version>1.2.0</version>

</dependency>

</dependencies>

</project>

**Calculator.java**

package com.ecommerce.tests;

public class Calculator

{

public int add(int a, int b) {

return a + b;

}

}

**NestedCases.java**

package com.ecommerce.tests;

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

import org.junit.jupiter.api.AfterAll;

import org.junit.jupiter.api.BeforeAll;

import org.junit.jupiter.api.Test;

import org.junit.platform.runner.JUnitPlatform;

import org.junit.runner.RunWith;

@DisplayName("JUnit 5 Nested Example")

@RunWith(JUnitPlatform.class)

public class NestedCases {

@BeforeAll

static void beforeAll() {

System.out.println("Before all test methods");

}

@BeforeEach

void beforeEach() {

System.out.println("Before each test method");

}

@AfterEach

void afterEach() {

System.out.println("After each test method");

}

@AfterAll

static void afterAll() {

System.out.println("After all test methods");

}

@Nested

@DisplayName("Tests for the method A")

class A {

@BeforeEach

void beforeEach() {

System.out.println("Before each test method of the A class");

}

@AfterEach

void afterEach() {

System.out.println("After each test method of the A class");

}

@Test

@DisplayName("Example test for method A")

void sampleTestForMethodA() {

System.out.println("Example test for method A");

}

@Nested

@DisplayName("When X is true")

class WhenX {

@BeforeEach

void beforeEach() {

System.out.println("Before each test method of the WhenX class");

}

@AfterEach

void afterEach() {

System.out.println("After each test method of the WhenX class");

}

@Test

@DisplayName("Example test for method A when X is true")

void sampleTestForMethodAWhenX() {

System.out.println("Example test for method A when X is true");

}

}

}

}

**RepeatedTests.java**

package com.ecommerce.tests;

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

import org.junit.jupiter.api.AfterAll;

import org.junit.jupiter.api.BeforeAll;

import org.junit.jupiter.api.Test;

import org.junit.platform.runner.JUnitPlatform;

import org.junit.runner.RunWith;

import static org.junit.jupiter.api.Assertions.assertEquals;

@DisplayName("JUnit 5 Repeated Tests Example")

@RunWith(JUnitPlatform.class)

public class RepeatedTests {

@BeforeAll

public static void init(){

System.out.println("Before All init() method called");

}

@BeforeEach

public void initEach(){

System.out.println("Before Each initEach() method called");

}

@Test

@DisplayName("Add operation test")

@RepeatedTest(5)

void addNumber(TestInfo testInfo) {

Calculator calculator = new Calculator();

Assertions.assertEquals(2, calculator.add(1, 1), "1 + 1 should equal 2");

System.out.println("===addNumber testcase executed===");

}

@AfterEach

public void cleanUpEach(){

System.out.println("After Each cleanUpEach() method called");

}

@AfterAll

public static void cleanUp(){

System.out.println("After All cleanUp() method called");

}

}