**Exercise 1: Setting Up JUnit Scenario**:

You need to set up JUnit in your Java project to start writing unit tests.

Steps: 1. Create a new Java project in your IDE (e.g., IntelliJ IDEA, Eclipse).

2. Add JUnit dependency to your project. If you are using Maven, add the following to your pom.xml:

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>4.13.2</version>

<scope>test</scope>

</dependency>

3. Create a new test class in your project.

**Solution**

Folder structure in VS studio is as follows:

demo/

├── pom.xml

└── src/

├── main/java/com/example/Calculator.java

└── test/java/com/example/CalculatorTest.java

**Code for pom.xml**

<?xml version="1.0" encoding="UTF-8"?>

<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>com.example</groupId>

<artifactId>demo</artifactId>

<version>1.0-SNAPSHOT</version>

<name>demo</name>

<url>http://www.example.com</url>

<properties>

<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>

<maven.compiler.source>24</maven.compiler.source>

<maven.compiler.target>24</maven.compiler.target>

</properties>

<dependencies>

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>4.13.2</version>

<scope>test</scope>

</dependency>

</dependencies>

<build>

<pluginManagement>

<plugins>

<plugin>

<artifactId>maven-clean-plugin</artifactId>

<version>3.1.0</version>

</plugin>

<plugin>

<artifactId>maven-resources-plugin</artifactId>

<version>3.0.2</version>

</plugin>

<plugin>

<artifactId>maven-compiler-plugin</artifactId>

<version>3.11.0</version> <!-- latest known version, supports JDK 24 -->

</plugin>

<plugin>

<artifactId>maven-surefire-plugin</artifactId>

<version>2.22.1</version>

</plugin>

<plugin>

<artifactId>maven-jar-plugin</artifactId>

<version>3.0.2</version>

</plugin>

<plugin>

<artifactId>maven-install-plugin</artifactId>

<version>2.5.2</version>

</plugin>

<plugin>

<artifactId>maven-deploy-plugin</artifactId>

<version>2.8.2</version>

</plugin>

<plugin>

<artifactId>maven-site-plugin</artifactId>

<version>3.7.1</version>

</plugin>

<plugin>

<artifactId>maven-project-info-reports-plugin</artifactId>

<version>3.0.0</version>

</plugin>

</plugins>

</pluginManagement>

</build>

</project>

**Code For App.java**

package com.example;

public class App{

public int add(int a, int b) {

return a + b;

}

}

**Code For AppTest.java**

package com.example;

import org.junit.Test;

import static org.junit.Assert.\*;

public class AppTest {

@Test

public void testAdd() {

Calculator calc = new App();

int result = calc.add(2, 3);

assertEquals(5, result);

}

}

**Terminal Command**

mvn test

**OUTPUT**

A screenshot of a computer

AI-generated content may be incorrect.