**Advanced JUnit Testing Exercises**

**Exercise 1: Parameterized Tests**

import org.example.EvenChecker;

import org.junit.jupiter.params.ParameterizedTest;

import org.junit.jupiter.params.provider.ValueSource;

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

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

public class EvenCheckerTest {

@ParameterizedTest

@ValueSource(ints = {2, 4, 6})

void shouldReturnTrueForEvenNumbers(int input) {

assertTrue(EvenChecker.isEven(input));

}

@ParameterizedTest

@ValueSource(ints = {1, 3, 5})

void shouldReturnFalseForOddNumbers(int input) {

assertFalse(EvenChecker.isEven(input));

}

}

**Pom.xml file:**

<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>junitadv</artifactId>

<version>1.0-SNAPSHOT</version>

<properties>

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

<maven.compiler.source>1.8</maven.compiler.source>

<maven.compiler.target>1.8</maven.compiler.target>

<junit.jupiter.version>5.10.0</junit.jupiter.version>

</properties>

<dependencies>

<dependency>

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

<artifactId>junit-jupiter-api</artifactId>

<version>${junit.jupiter.version}</version>

<scope>test</scope>

</dependency>

<dependency>

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

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

<version>${junit.jupiter.version}</version>

<scope>test</scope>

</dependency>

<dependency>

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

<artifactId>junit-jupiter-params</artifactId>

<version>${junit.jupiter.version}</version>

<scope>test</scope>

</dependency>

</dependencies>

<build>

<plugins>

<plugin>

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

<version>3.11.0</version>

<configuration>

<source>${maven.compiler.source}</source>

<target>${maven.compiler.target}</target>

</configuration>

</plugin>

<plugin>

<groupId>org.apache.maven.plugins</groupId>

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

<version>3.1.2</version>

</plugin>

</plugins>

</build>

</project>

**Main class file :**

package org.example;

public class EvenChecker {

public static boolean isEven(int number) {

return number % 2 == 0;

}

}

