Logging using SLF4J

# Exercise 1: Logging Error Messages and Warning Levels

Task: Write a Java application that demonstrates logging error messages and warning levels using SLF4J.

## Step-by-Step Solution:

1. Add SLF4J and Logback dependencies to your `pom.xml` file:

<dependency>

<groupId>org.slf4j</groupId>

<artifactId>slf4j-api</artifactId>

<version>1.7.30</version>

</dependency>

<dependency>

<groupId>ch.qos.logback</groupId>

<artifactId>logback-classic</artifactId>

<version>1.2.3</version>

</dependency>

1. Create a Java class that uses SLF4J for logging:

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

public class LoggingExample {

private static final Logger logger = LoggerFactory.getLogger(LoggingExample.class);

public static void main(String[] args) { logger.error("This is an error message"); logger.warn("This is a warning message");

}

}

**Solution:**

**AppTest.java**package com.exampl.LoggingDemo2;

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

import org.junit.jupiter.api.Test;

/\*\*

\* Unit test for simple App.

\*/

public class AppTest {

/\*\*

\* Rigorous Test :-)

\*/

@Test

public void shouldAnswerWithTrue() {

assertTrue(true);

}

}

**LoggingExample.java:**

package com.exampl.LoggingDemo2;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

public class LoggingExample {

// Create the logger instance

private static final Logger *logger* = LoggerFactory.*getLogger*(LoggingExample.class);

public static void main(String[] args) {

*logger*.error("This is an error message");

*logger*.warn("This is a warning message");

*logger*.info("This is an info message");

*logger*.debug("This is a debug message");

}

}

**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.exampl</groupId>

<artifactId>LoggingDemo2</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>LoggingDemo2</name>

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

<properties>

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

<maven.compiler.release>17</maven.compiler.release>

</properties>

<dependencies>

<!-- SLF4J API -->

<dependency>

<groupId>org.slf4j</groupId>

<artifactId>slf4j-api</artifactId>

<version>1.7.30</version>

</dependency>

<!-- Logback Classic (SLF4J Implementation) -->

<dependency>

<groupId>ch.qos.logback</groupId>

<artifactId>logback-classic</artifactId>

<version>1.2.3</version>

</dependency>

<!-- JUnit 5 (Jupiter API + Engine) -->

<dependency>

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

<artifactId>junit-jupiter</artifactId>

<version>5.9.3</version>

<scope>test</scope>

</dependency>

</dependencies>

<build>

<plugins>

<!-- Compiler Plugin -->

<plugin>

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

<version>3.13.0</version>

<configuration>

<release>17</release>

</configuration>

</plugin>

<!-- Surefire Plugin to run JUnit 5 tests -->

<plugin>

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

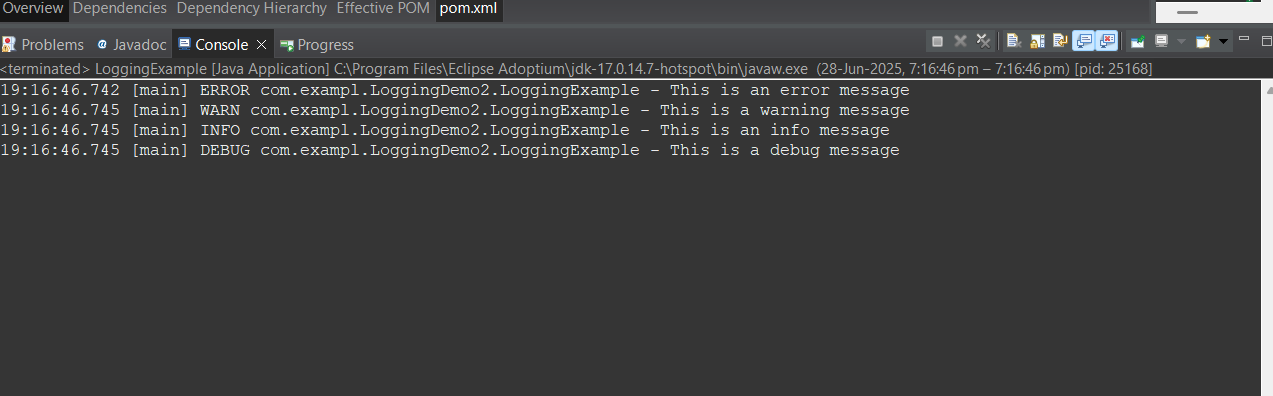
<version>3.0.0-M9</version>

</plugin>

</plugins>

</build>

</project**>**

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