**Cognizant Digital Nurture 4.0-Week(2)**

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**SL4J Logging exercises**

**Exercise 1: Logging Error Messages and Warning Levels using SLF4J**

**Scenario:**

In this exercise, I learned how to use the SLF4J logging API with Logback to log error and warning messages in a Java application. Logging is important because it helps in monitoring the behavior of a program, especially when debugging or tracking problems.

**Steps I Followed:**

1. **Added SLF4J and Logback Dependencies:**  
   I added the following dependencies in my pom.xml file:

<!-- SLF4J API -->

<dependency>

<groupId>org.slf4j</groupId>

<artifactId>slf4j-api</artifactId>

<version>1.7.30</version>

</dependency>

<!-- Logback Classic -->

<dependency>

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

<artifactId>logback-classic</artifactId>

<version>1.2.3</version>

</dependency>

1. **Created the Java Logging Class:**  
   I created a class named LoggingExample.java in src/main/java/com/lasya/ and added the following code:

package com.lasya;

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");

}

}

1. **Configured the exec plugin:**  
   I added the exec-maven-plugin in my pom.xml to allow running Java classes directly:

<plugin>

<groupId>org.codehaus.mojo</groupId>

<artifactId>exec-maven-plugin</artifactId>

<version>3.0.0</version>

<configuration>

<mainClass>com.lasya.LoggingExample</mainClass>

</configuration>

</plugin>

1. **Compiled and Ran the Program:**  
   I used the terminal to run the program with these commands:

mvn clean compile

mvn exec:java

**Output:**

[ERROR] This is an error message

[WARN ] This is a warning message

✅ This confirms that logging is working properly using SLF4J and Logback.

