**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:

<!-- Latest SLF4J -->

<dependency>

<groupId>org.slf4j</groupId>

<artifactId>slf4j-api</artifactId>

<version>2.0.9</version>

</dependency>

<!-- Logback binding for SLF4J 2.x -->

<dependency>

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

<artifactId>logback-classic</artifactId>

<version>1.4.14</version>

</dependency>

2.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");

} }

**Source Code:**

package org.example;  
  
import org.slf4j.Logger;  
import org.slf4j.LoggerFactory;  
  
public class LoggingExample {  
  
 private static System *LoggerFactory*;  
 private static final Logger *logger* = *LoggerFactory*.*getLogger*(String.*valueOf*(LoggingExample.class));  
  
 public static void main(String[] args) {  
 *logger*.error("This is an error message");  
 *logger*.warn("This is a warning message");  
 }  
  
 public static void setLoggerFactory(System loggerFactory) {  
 *LoggerFactory* = loggerFactory;  
 }  
}

**Output:**

