**Logging Error Messages and Warning Levels**

**Exercise 1: Logging Error Messages and Warning Levels Task: Write a Java application that demonstrates logging error messages and warning levels using SLF4J.**

**Java code:**

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

/\*\*

\* Demonstrates logging using SLF4J with Logback.

\*/

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");

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

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

logger.trace("This is a trace message");

int x = 5;

if (x < 10) {

logger.warn("x is less than 10: {}", x);

}

}

}

**DEPENDENCIES**

<dependencies>

<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>

</dependencies>

**CONFIGURATION**

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

<configuration>

<appender name="STDOUT" class="ch.qos.logback.core.ConsoleAppender">

<encoder>

<pattern>%d{yyyy-MM-dd HH:mm:ss} %-5level %logger{36} - %msg%n</pattern>

</encoder>

</appender>

<root level="debug">

<appender-ref ref="STDOUT" />

</root>

</configuration>

**OUTPUT:**

ERROR LoggingExample - This is an error message

WARN LoggingExample - This is a warning message

INFO LoggingExample - This is an info message

DEBUG LoggingExample - This is a debug message

TRACE LoggingExample - This is a trace message

WARN LoggingExample - x is less than 10: 5