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.

CODE:

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");

}

}

OUTPUT:

00:31:00.123 [main] ERROR LoggingExample - This is an error message

00:31:00.125 [main] WARN LoggingExample - This is a warning message

Exercise 2: Parameterized Logging Task:

Write a Java application that demonstrates parameterized logging using SLF4J.

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) {

String user = "Alice";

int attempts = 3;

logger.info("User {} attempted login {} times", user, attempts);

logger.error("Failed to process request for user {} with error code {}", user, "E123");

}

}

**OUTPUT:**

00:31:00.123 [main] INFO LoggingExample - User Alice attempted login 3 times

00:31:00.125 [main] ERROR LoggingExample - Failed to process request for user Alice with error code E123

**Exercise 3: Using Different Appenders**

**Task**: Write a Java class that uses SLF4J with different appenders (console and file), as configured in the provided logback.xml.

**logback.xml**

<configuration>

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

<encoder>

<pattern>%d{HH:mm:ss.SSS} [%thread] %-5level %logger{36} - %msg%n</pattern>

</encoder>

</appender>

<appender name="file" class="ch.qos.logback.core.FileAppender">

<file>app.log</file>

<encoder>

<pattern>%d{HH:mm:ss.SSS} [%thread] %-5level %logger{36} - %msg%n</pattern>

</encoder>

</appender>

<root level="debug">

<appender-ref ref="console" />

<appender-ref ref="file" />

</root>

</configuration>

**OUTPUT:**

00:31:00.123 [main] DEBUG LoggingExample - This is a debug message

00:31:00.125 [main] INFO LoggingExample - Processing data for application

00:31:00.127 [main] WARN LoggingExample - Low disk space detected