

Week 2 - SL4J Logging exercises

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>
```

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");
    }
}
```

LoggingExample.java

```
package com.example.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) {
```

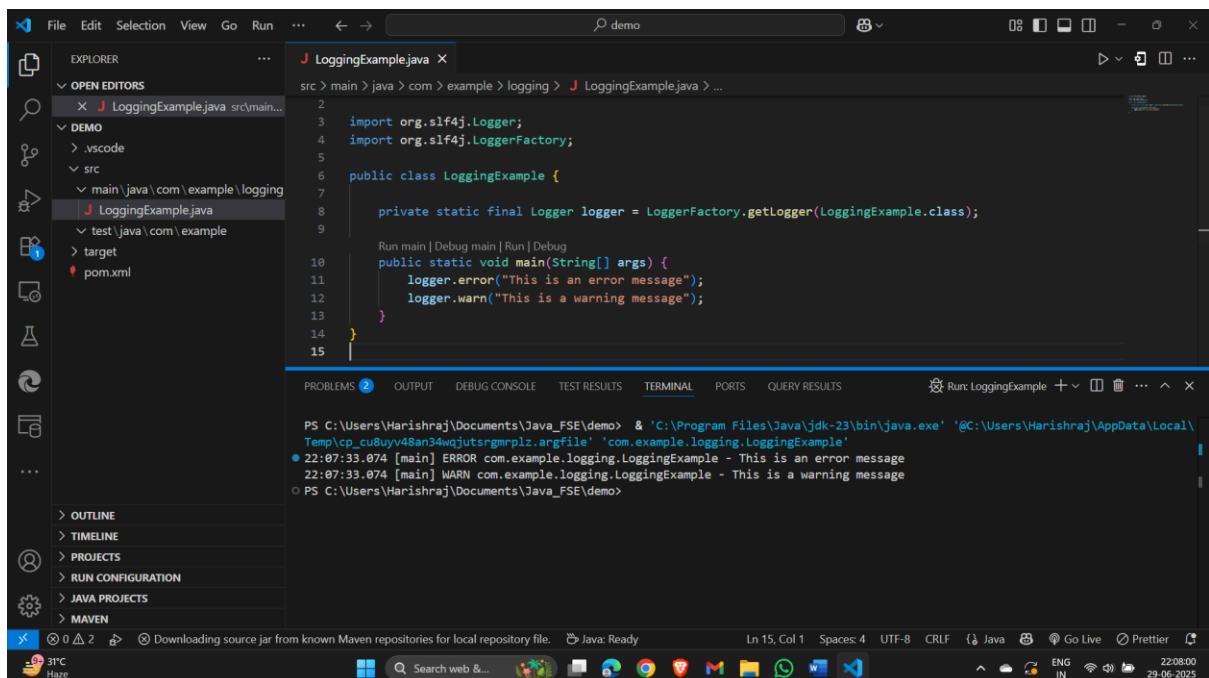
```
        logger.error("This is an error message");
```

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

```
    }
```

```
}
```

Output



The screenshot shows the Visual Studio Code editor with the file `LoggingExample.java` open. The code is as follows:

```
1 package com.example.logging;
2
3 import org.slf4j.Logger;
4 import org.slf4j.LoggerFactory;
5
6 public class LoggingExample {
7
8     private static final Logger logger = LoggerFactory.getLogger(LoggingExample.class);
9
10    public static void main(String[] args) {
11        logger.error("This is an error message");
12        logger.warn("This is a warning message");
13    }
14 }
15
```

The output window at the bottom shows the following log messages:

```
PS C:\Users\Harishraj\Documents\Java_FSE\demo> & 'C:\Program Files\Java\jdk-23\bin\java.exe' '@C:\Users\Harishraj\AppData\Local\Temp\cp_cu8uyv48an34wqjutsrgmrlz.argfile' 'com.example.logging.LoggingExample'
22:07:33.074 [main] ERROR com.example.logging.LoggingExample - This is an error message
22:07:33.074 [main] WARN com.example.logging.LoggingExample - This is a warning message
PS C:\Users\Harishraj\Documents\Java_FSE\demo>
```