Week-2;

Logging using SLF4J:

**🟩 STEP 1: Create a Maven Project**

1. Open **Eclipse**
2. Go to File > New > Maven Project
3. Choose Create a simple project (skip archetype selection) → Click **Next**
4. Fill in:
   * **Group Id**: com.example
   * **Artifact Id**: LoggerApp
   * Click **Finish**

**🟩 STEP 2: Add SLF4J and Logback to pom.xml**

1. In Eclipse Project Explorer, open pom.xml
2. Inside <dependencies> section, paste:

xml

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<dependencies>

<!-- SLF4J API -->

<dependency>

<groupId>org.slf4j</groupId>

<artifactId>slf4j-api</artifactId>

<version>1.7.30</version>

</dependency>

<!-- Logback: SLF4J implementation -->

<dependency>

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

<artifactId>logback-classic</artifactId>

<version>1.2.3</version>

</dependency>

</dependencies>

1. Save the file
2. Right-click the project → Maven > Update Project → ✅ Tick your project → Click **OK**

**🟩 STEP 3: Create Java Class to Log Messages**

1. Right-click src/main/java → New > Package → Name: com.example
2. Right-click the new package → New > Class → Name: LoggerDemo
3. Paste the code below:

java

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package com.example;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

public class LoggerDemo {

private static final Logger logger = LoggerFactory.getLogger(LoggerDemo.class);

public static void main(String[] args) {

logger.info("Application started");

try {

simulateBusinessLogic();

} catch (Exception e) {

logger.error("An exception occurred: {}", e.getMessage(), e);

}

logger.warn("Application is using deprecated configuration");

logger.info("Application finished");

}

private static void simulateBusinessLogic() throws Exception {

logger.debug("Simulating business logic...");

// Simulating a failure

throw new Exception("Simulated database failure");

}

}

**🟩 STEP 4: (Optional) Add logback.xml Configuration**

1. Right-click src/main/resources → New > File → Name: logback.xml
2. Paste:

xml

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<configuration>

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

<encoder>

<pattern>%date [%level] %logger - %msg%n</pattern>

</encoder>

</appender>

<root level="debug">

<appender-ref ref="STDOUT" />

</root>

</configuration>

**🟩 STEP 5: Run the Program**

1. Right-click LoggerDemo.java
2. Click **Run As > Java Application**

**OUTPUT:**

