**Exercise 1: Logging Error Messages and Warning Levels**

* 1. **Code:**

**‘pom.xml’ file:**

<project xmlns="http://maven.apache.org/POM/4.0.0"  
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
 xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">  
  
 <modelVersion>4.0.0</modelVersion>  
  
 <groupId>com.example</groupId>  
 <artifactId>LoggingApp</artifactId>  
 <version>1.0-SNAPSHOT</version>  
 <name>SLF4J Logging Example</name>  
  
 <properties>  
 <maven.compiler.source>1.8</maven.compiler.source> <!-- or 11/17 based on your JDK -->  
 <maven.compiler.target>1.8</maven.compiler.target>  
 </properties>  
  
 <dependencies>  
 <!-- SLF4J API -->  
 <dependency>  
 <groupId>org.slf4j</groupId>  
 <artifactId>slf4j-api</artifactId>  
 <version>1.7.30</version>  
 </dependency>  
  
 <!-- Logback Classic (SLF4J implementation) -->  
 <dependency>  
 <groupId>ch.qos.logback</groupId>  
 <artifactId>logback-classic</artifactId>  
 <version>1.2.3</version>  
 </dependency>  
 </dependencies>  
  
</project>

**LoggingExample.java:**

package com.example;  
  
import org.slf4j.Logger;  
import org.slf4j.LoggerFactory;  
  
public class LoggingExample {  
 // Create a logger instance for this class  
 private static final Logger *logger* = LoggerFactory.*getLogger*(LoggingExample.class);  
  
 public static void main(String[] args) {  
 // Logging messages at different severity levels  
 *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");  
 }  
}

**1.2 Output:**