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

**LoggingDemo.java :-**

package org.example1;  
  
import org.slf4j.Logger;  
import org.slf4j.LoggerFactory;  
  
public class LoggingDemo {  
  
  
 private static final Logger *logger* = LoggerFactory.*getLogger*(LoggingDemo.class);  
  
 public static void main(String[] args) {  
 *logger*.debug("This is a DEBUG level message.");  
 *logger*.info("This is an INFO level message.");  
 *logger*.warn("This is a WARN level message.");  
 *logger*.error("This is an ERROR level message.");  
 }  
}

**logback.xml :-**

<configuration>  
  
 <appender name="STDOUT" class="ch.qos.logback.core.ConsoleAppender">  
 <encoder>  
 <pattern>%d{HH:mm:ss} [%thread] %-5level %logger{36} - %msg%n</pattern>  
 </encoder>  
 </appender>  
  
 <!-- Root logger configuration -->  
 <root level="debug">  
 <appender-ref ref="STDOUT" />  
 </root>  
  
</configuration>

**pom.xml:-**

<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>org.example1</groupId>  
 <artifactId>LoggingExample</artifactId>  
 <version>1.0-SNAPSHOT</version>  
  
 <properties>  
 <maven.compiler.source>1.8</maven.compiler.source>  
 <maven.compiler.target>1.8</maven.compiler.target>  
 </properties>  
  
 <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>  
  
 <build>  
 <plugins>  
 <plugin>  
 <groupId>org.codehaus.mojo</groupId>  
 <artifactId>exec-maven-plugin</artifactId>  
 <version>3.1.0</version>  
 <configuration>  
 <mainClass>org.example1.LoggingDemo</mainClass>  
 </configuration>  
 </plugin>  
 </plugins>  
 </build>  
</project>

**Output :-**

