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

import java.util.logging.Level;

import java.util.logging.Logger;

public class LoggingExample {

private static final Logger logger = Logger.getLogger(LoggingExample.class.getName());

public static void main(String[] args) {

logger.setLevel(Level.ALL);

logger.severe("This is a severe message");

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

logger.info("This is an info message");

logger.fine("This is a fine message");

logger.finer("This is a finer message");

logger.finest("This is a finest message");

try {

int x = 10 / 0;

} catch (ArithmeticException e) {

logger.log(Level.SEVERE, "Exception occurred", e);

}

}

}

Output :

Jun 29, 2025 7:35:29 AM LoggingExample main

SEVERE: This is a severe message

ERROR!

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WARNING: This is a warning message

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INFO: This is an info message

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SEVERE: Exception occurred

java.lang.ArithmeticException: / by zero

at LoggingExample.main(Main.java:18)

at java.base/jdk.internal.reflect.DirectMethodHandleAccessor.invoke(DirectMethodHandleAccessor.java:103)

at java.base/java.lang.reflect.Method.invoke(Method.java:580)

at jdk.compiler/com.sun.tools.javac.launcher.Main.execute(Main.java:484)

at jdk.compiler/com.sun.tools.javac.launcher.Main.run(Main.java:208)

at jdk.compiler/com.sun.tools.javac.launcher.Main.main(Main.java:135)

=== Code Execution Successful ===

