**CODING:**

**Logger.java**

package singletonPatternExample;

public class Logger {

private static Logger *singleInstance* = null;

private Logger() {

System.*out*.println("Logger Initialized!");

}

public static Logger getInstance() {

if (*singleInstance* == null) {

*singleInstance* = new Logger();

}

return *singleInstance*;

}

public void log(String message) {

System.*out*.println("LOG: " + message);

}

}

**LoggerTest.java**

package singletonPatternExample;

public class LoggerTest {

public static void main(String[] args) {

Logger logger1 = Logger.*getInstance*();

logger1.log("First log message");

Logger logger2 = Logger.*getInstance*();

logger2.log("Second log message");

if (logger1 == logger2) {

System.*out*.println("Both logger1 and logger2 are the same instance.");

} else {

System.*out*.println("Different instances found (Singleton failed).");

}

}

}

**OUTPUT:**

