# **Assignment: Exercise 1 – Singleton Pattern Example: Logger Utility**

Logger.java

public class Logger {

private static Logger singleInstance;

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);

}

}

Main.java

public class Main {

public static void main(String[] args) {

Logger logger1 = Logger.getInstance();

logger1.log("This is the first log");

Logger logger2 = Logger.getInstance();

logger2.log("This is the second log");

if (logger1 == logger2) {

System.out.println("Both are the same instance");

} else {

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

}

}

}

## **Output**

