**SINGLETON PATTERN**

class Logger {

private static Logger instance;

private Logger() {

System.out.println("Logger initialized.");

}

public static Logger getInstance() {

if (instance == null) {

instance = new Logger();

}

return instance;

}

public void log(String message) {

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

}

}

public class Main {

public static void main(String[] args) {

Logger logger1 = Logger.getInstance();

Logger logger2 = Logger.getInstance();

logger1.log("First log message.");

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 (Singleton failed).");

}

}

}

