**Exercise 1: Implementing the Singleton Pattern**

**Code:**

class Logger {

private static Logger instance;

private Logger() {

}

public static Logger getInstance() {

if (instance == null) {

instance = new Logger();

}

return instance;

}

public void log(String message) {

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

}

}

public class SingletonPatternExample {

public static void main(String[] args) {

Logger logger1 = Logger.getInstance();

Logger logger2 = Logger.getInstance();

logger1.log("First log message");

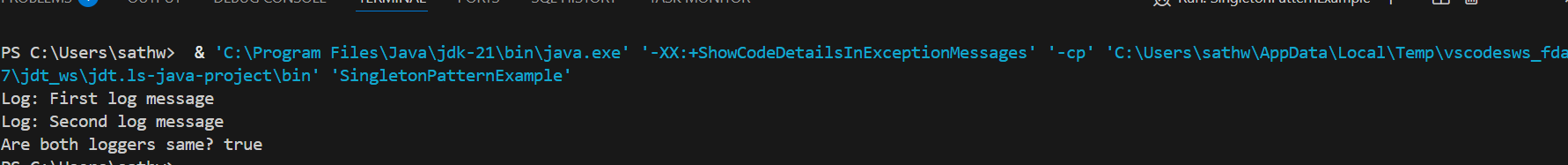
logger2.log("Second log message");

System.out.println("Are both loggers same? " + (logger1 == logger2));

}

}

**Output:**

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