

```

import java.util.Scanner;

public class SingletonComparison {

    static class CorrectLogger {

        private static CorrectLogger singleInstance = new CorrectLogger();

        private CorrectLogger() {

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

        }

        public static CorrectLogger getInstance() {

            return singleInstance;

        }

        public void log(String message) {

            System.out.println("[CorrectLogger]: " + message);

        }

    }

    static class BrokenLogger {

        public BrokenLogger() {

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

        }

        public void log(String message) {

            System.out.println("[BrokenLogger]: " + message);

        }

    }

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.println("===== CORRECT Singleton Example =====");

        CorrectLogger logger1 = CorrectLogger.getInstance();

        System.out.print("Enter message for logger1: ");

        String msg1 = scanner.nextLine();
    }
}

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logger1.log(msg1);
CorrectLogger logger2 = CorrectLogger.getInstance();
System.out.print("Enter message for logger2: ");
String msg2 = scanner.nextLine();
logger2.log(msg2);
if (logger1 == logger2) {
    System.out.println(" logger1 and logger2 are the SAME instance.");
} else {
    System.out.println(" logger1 and logger2 are DIFFERENT instances.");
}
System.out.println("\n===== BROKEN Singleton Example =====");
BrokenLogger broken1 = new BrokenLogger();
System.out.print("Enter message for broken1: ");
String msg3 = scanner.nextLine();
broken1.log(msg3);
BrokenLogger broken2 = new BrokenLogger();
System.out.print("Enter message for broken2: ");
String msg4 = scanner.nextLine();
broken2.log(msg4);
if (broken1 == broken2) {
    System.out.println("broken1 and broken2 are the SAME instance.");
} else {
    System.out.println(" broken1 and broken2 are DIFFERENT instances.");
}
scanner.close();
}
}

```

```
SingletonComparis...
17 public void log(String message) {
18     System.out.println("[CorrectLogger]: " + message);
19 }
20 }
21
22 static class BrokenLogger {
23     public BrokenLogger() {
24         System.out.println("BrokenLogger initialized.");
25     }
26
27     public void log(String message) {
28         System.out.println("[BrokenLogger]: " + message);
29     }
30 }
31
32
33 public static void main(String[] args) {

===== CORRECT Singleton Example =====
CorrectLogger initialized.
Enter message for logger1: hello
[CorrectLogger]: hello
Enter message for logger2: world
[CorrectLogger]: world
logger1 and logger2 are the SAME instance.

===== BROKEN Singleton Example =====
BrokenLogger initialized.
Enter message for broken1: hello
[BrokenLogger]: hello
BrokenLogger initialized.
Enter message for broken2: world
[BrokenLogger]: world
broken1 and broken2 are DIFFERENT instances.
```

