Missed Signals

Missed Signals

A missed signal happens when a signal is sent by a thread before the other thread starts waiting on a condition. This is exemplified by the following code snippet. Missed signals are caused by using the wrong concurrency constructs. In the example below, a condition variable is used to coordinate between the **signaller** and the **waiter** thread. The condition is signaled at a time when no thread is waiting on it causing a missed signal.

In later sections, you'll learn that the way we are using the condition variable's `await` method is incorrect. The idiomatic way of using `await` is in a while loop with an associated boolean condition. For now, observe the possibility of losing signals between threads.

Java

main.java

Saved

```java
import java.util.concurrent.locks.Condition;
import java.util.concurrent.locks.ReentrantLock;

class Demonstration {

    public static void main(String args[]) throws InterruptedException {
        MissedSignalExample.example();
    }
}

class MissedSignalExample {
```

Press + to interact

Java

main.java

Saved

```java
import java.util.concurrent.locks.Condition;
import java.util.concurrent.locks.ReentrantLock;

class Demonstration {

    public static void main(String args[]) throws InterruptedException {
        MissedSignalExample.example();
    }
}

class MissedSignalExample {

```

Run

Missed Signal Example

The above code when ran, will never print the statement `Program Exiting` and execution would time out. Apart from refactoring the code to match the idiomatic usage of condition variables in a while loop, the other possible fix is to use a **semaphore** for signalling between the two threads as shown below

Java

Press + to interact

main.java

Saved

```java
import java.util.concurrent.Semaphore;

class Demonstration {

    public static void main(String args[]) throws InterruptedException {
        FixedMissedSignalExample.example();
    }
}

class FixedMissedSignalExample {

    public static void example() throws InterruptedException {
```

Run

Fixed Missed Signal