




TimeoutException

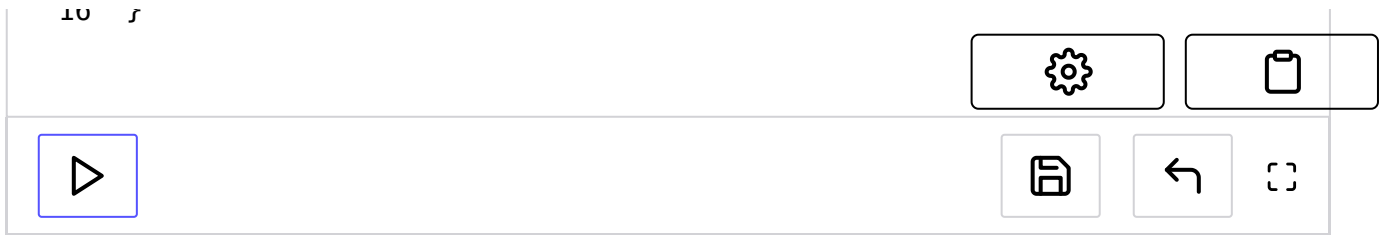
Learn the reasons that cause TimeoutException to be thrown.

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TimeoutException is used as a means to indicate that a blocking operation has timed-out. Consider the `CyclicBarrier` class (*read about cyclic barrier here (<https://bit.ly/3i7Cros>)*) which exposes the method `await()`, which takes in a timeout value. If a thread invokes this method on an object of `CyclicBarrier` and the barrier isn't reached by other threads within the specified timeout by the first thread then `TimeoutException` is thrown and the barrier is broken. In some cases, values such as boolean can be returned to indicate timeout rather than throwing the `TimeoutException`.

The program in the widget below demonstrates an instance of a `CyclicBarrier` throwing the `TimeoutException` when the main thread awaits at the barrier for 100 milliseconds.

```
1 import java.util.concurrent.CyclicBarrier;
2 import java.util.concurrent.TimeUnit;
3 import java.util.concurrent.TimeoutException;
4 import java.util.concurrent.BrokenBarrierException;
5
6 class Demonstration {
7     public static void main( String args[] ) throws TimeoutException, Interrupted
8
9         // create a barrier for two threads.
10        CyclicBarrier barrier = new CyclicBarrier(2);
11
12        // TimeoutException thrown after 100 ms elapse
13        barrier.await(100, TimeUnit.MILLISECONDS);
14
15    }
16 }
```



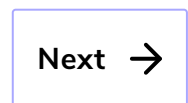
`TimeoutException` is a checked exception extending the `Exception` class and is part of the `java.util.concurrent` package. Some other Java classes that throw the `TimeoutException` are:

- `java.util.concurrent.AbstractExecutorService`
- `jdk.jshell.execution.JdiInitiator`
- `sun.nio.ch.PendingFuture`

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`IllegalMonitorStateException`



`CancellationException`

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