75% completed

Search Course

- CountDownLatch
- CyclicBarrier
- Concurrent Collections
- ConcurrentHashMap
- ConcurrentModificationException

Practice Mock Interview →

BrokenBarrierException

Understand the causes of BrokenBarrierException with runnable code examples in the browser.

*If you are interviewing, consider buying our **number#1** course for **Java Multithreading Interviews**.*

Overview

The `BrokenBarrierException` is usually an indication of a programming flaw. It occurs when:

1. A thread is already waiting on a barrier and the barrier enters the broken state.
2. A thread attempts to wait on a barrier that is in the broken state.

Example

Consider the program below that submits two tasks to the executor. Both the tasks `await()` on a `CyclicBarrier` object, which is initialized with a count of 3, i.e. three threads must `await()` the barrier object before they can proceed forward. The main thread `cancel()`-s one of the tasks. The thread executing the task is already waiting on the barrier and experiences an `InterruptedException`. At this point the barrier is broken and the second task throws `BrokenBarrierException`. This sequence of events manifests the first condition described above i.e. `BrokenBarrierException` is thrown when a barrier is broken and there are threads already waiting on the barrier object.

The other condition when a `BrokenBarrierException` is thrown, is when a thread attempts to an `InterruptedException`. At this point the barrier is broken and the second task throws `BrokenBarrierException`. This sequence of events manifests the first condition described above i.e. `BrokenBarrierException` is thrown when a barrier is broken and there are threads already waiting on the barrier object.

The other condition when a `BrokenBarrierException` is thrown, is when a thread attempts to `await()` an already broken barrier. This is showcased by the main thread when it `await()`-s the broken barrier object on **line#55** and the program exits with the `BrokenBarrierException`.

Java

the broken barrier object on **line#55** and the program exits with the `BrokenBarrierException`.

Java

Press ⇧ + ↵ to interact

main.java Saved

```java
import java.util.concurrent.*;

class Demonstration {

    public static void main( String args[] ) throws InterruptedException, BrokenBarrierExcep

        CyclicBarrier barrier = new CyclicBarrier(3);
        ExecutorService executorService = Executors.newFixedThreadPool(5);

        Runnable task1 = new Runnable() {
            @Override
            public void run() {
```

Run

← Back lesson
CompletionException

Mark As Completed

Next →
Annotations