

Lab 10

Threads

Goal for Today

- Create 2 threads that both modify the same data structure in distinct ways.
- Specifically Create 2 threads that both modify an `ArrayList<Integer>` object. One thread will add the numbers 1 to n to the ArrayList, the other will add the number -1 to -n to the ArrayList. It will then print out the ArrayList once both threads have finished executing.
- You will run this with the size of $n = \{10, 100, 10000, 100000\}$
- Since these are threads, for the larger values of n you will see the threads interleaving.

Helpful Tools

- Class `CountDownLatch` :
 - The `CountDownLatch` will allow you to block the main thread's execution until the two other threads have finished.
 - `await()` and `countDown()` methods
- Your `Lab10` class should implement `Runnable` so you can use the `start` method in `Thread`:
 - `new Thread(new Lab10(buffer, 100000, true)).start();`
- For more help see: <http://java.sun.com/docs/books/tutorial/essential/concurrency/procthread.html>