Delivery

* Create a java program to address the problem statement below
* Please use **java threads** to implement the program.
* Create a comprehensive Junit test suite

Problem Statement

Develop a Java implementation of a one-lane bridge. Cars coming from the north and the south arrive at a one-lane bridge and only one car in the same direction can pass through.

* Start with Southbound: 4 cars
* Start with Northbound: 3 cars

Rules

* Cars >= 3 or the direction with higher number of cars lined up has priority to cross the bridge
* If car numbers are equal on both directions, the priority switches to opposite side
* Each side will have a car added every 3 seconds
* After entering the bridge, a simulated car should leave it after 1 second.
* Program can break if queue on either side becomes zero.

Output

Please provide log output such that you can observe what happens on the one-lane bridge. This output could for instance look as follows:

* **southbound > northbound : Priority is southbound**
* 3 southbound cars remain, 3 northbound cars
* **northbound = southbound: Priority is northbound**
* 2 northbound cars remain, 3 southbound cars
* 3 seconds done. One car added to each direction.
* **Total southbound: 4** **Total northbound 3**
* **southbound > northbound. Priority changes to southbound**
* 3 southbound cars remain, 3 northbound cars
* **northbound = southbound: Priority is northbound**
* 2 northbound cars remain, 3 southbound cars
* ...
* ...

**Please Note: Java Concurrency APIs not to be used in the solution**