Lab 04 – Queue

1. Write a simple JAVA program implementing a Queue as a data structure.

2. **Circular Queue:** Implement a Circular queue in a single array.

3. **2-Circular Queues:** Implement two Circular queues in a single array.

4. **Queue Searching:** Write a JAVA function that takes a queue and an element and returns true if the queue contains this element or false if not. The elements in the queue must remain in their original order once this method is complete.

5. **Lazy Evaluation - Queue using Two Stacks with a condition:** Implement a queue with two stacks **without** transferring the elements of the second stack back to first.

    Stack1 – Input Stack; Stack2 – Output Stack

6. **N Queues in a single array:** Implement N-Queues within a single array.