Different exercises

1. Show how to implement a stack using two queues. Describe how the operations push and pop will be implemented using the queue operations enqueue() and dequeue(). Give the running time of each stack operation.

2. (a) What is a circular link list?

   (b) How to transform a singly link list into a circular link list?

   (c) How how to transform a doubly link list into a circular list?

3. Implement a stack using a singly linked list. The operations push() and pop() should still run in $O(1)$

4. Implement a queue using a singly linked list. The operations enqueue() and dequeue() should work in $O(1)$.

5. If there are n nodes in a binary tree, how many null pointers the tree has?