Stack, Queue and Heap

Basic Level Questions:

Stack:

- Implement a Stack Class with the following methods:
  - push()
  - pop()
  - peek()
  - empty()
  - search()

[Follow here: https://www.geeksforgeeks.org/stack-data-structure-introduction-program/]

- Reverse a String using Stack

[Follow here: https://www.geeksforgeeks.org/stack-set-3-reverse-string-using-stack/]

- Check the expression has valid or Balanced parenthesis or not.

[Follow here: https://www.geeksforgeeks.org/check-for-balanced-parentheses-in-an-expression/]

- Implement two Stacks in an array

[Follow here: https://www.geeksforgeeks.org/implement-two-stacks-in-an-array/]

Queue:

- Implement a Queue class(using arrays) with the following methods:
  - enqueue()
  - dequeue()
  - front()
  - display()

[Follow here: https://www.geeksforgeeks.org/array-implementation-of-queue-simple/]

- Implement a Circular queue with the same methods in the above problem statement

[Follow here: https://www.geeksforgeeks.org/circular-queue-set-1-introduction-array-implementation/]

- Implement a Deque (Doubly Ended Queue) with insertion and deletion allowed at both the ends.

[Follow here: https://www.geeksforgeeks.org/deque-set-1-introduction-applications/]

Heap:

- Implement a Maxheap using arrays and recursion.

[Follow here: https://www.geeksforgeeks.org/max-heap-in-java/]

- Implement a Minheap using arrays and recursion.

[Follow here: https://www.geeksforgeeks.org/min-heap-in-java/]

- Sort an Array using heap. (HeapSort)

[Follow here: https://www.geeksforgeeks.org/cpp-program-for-heap-sort/]

- Maximum of all subarrays of size k.

[Follow here: https://www.geeksforgeeks.org/sliding-window-maximum-maximum-of-all-subarrays-of-size-k/]