

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/>]