

STACK & QUEUE - SET 1 QUESTIONS

Question 1:

- ❖ Problem link: <https://leetcode.com/problems/valid-parentheses/>
- ❖ Difficulty level: Easy
- ❖ Expected Complexity:
 - Time: $O(n)$
 - Extra space: $O(n)$

Question 2:

- ❖ Problem link: <https://leetcode.com/problems/remove-all-adjacent-duplicates-in-string/>
- ❖ Difficulty level: Easy
- ❖ Expected Complexity:
 - Time: $O(n)$
 - Extra space: $O(n)$

Question 3:

- ❖ Problem link: <https://leetcode.com/problems/implement-stack-using-queues/>
- ❖ Difficulty level: Easy
- ❖ Expected Complexity:
 - Time: One of the operations 'push' or 'pop' may take $O(1)$ time and the other may take $O(n)$ time.
 - Extra space: $O(n)$

Question 4:

- ❖ **Problem link:** <https://leetcode.com/problems/implement-queue-using-stacks/>
- ❖ **Difficulty level:** Easy
- ❖ **Expected Complexity:**
 - Time: One of the operations 'enqueue' or 'dequeue' may take $O(1)$ time and the other may take $O(n)$ time.
 - Extra space: $O(n)$

Question 5:

- ❖ **Problem link:** <https://leetcode.com/problems/design-circular-queue/>
- ❖ **Difficulty level:** Medium
- ❖ **Expected Complexity:**
 - Time: Each of the operations should take $O(1)$ time.
 - Extra space: $O(k)$
'k' is the size of the circular queue.

Question 6:

- ❖ **Problem link:** <https://leetcode.com/problems/basic-calculator-ii/>
- ❖ **Difficulty level:** Medium
- ❖ **Expected Complexity:**
 - Time: $O(n)$
 - Extra space: $O(n)$

Question 7:

- ❖ **Problem link:** <https://leetcode.com/problems/132-pattern/>
- ❖ **Difficulty level:** Medium
- ❖ **Expected Complexity:**
 - Time: $O(n)$
 - Extra space: $O(n)$

Question 8:

- ❖ **Problem link:** <https://leetcode.com/problems/maximum-frequency-stack/>
- ❖ **Difficulty level:** Hard
- ❖ **Expected Complexity:**
 - Time: Each of the operations should take $O(1)$ time.