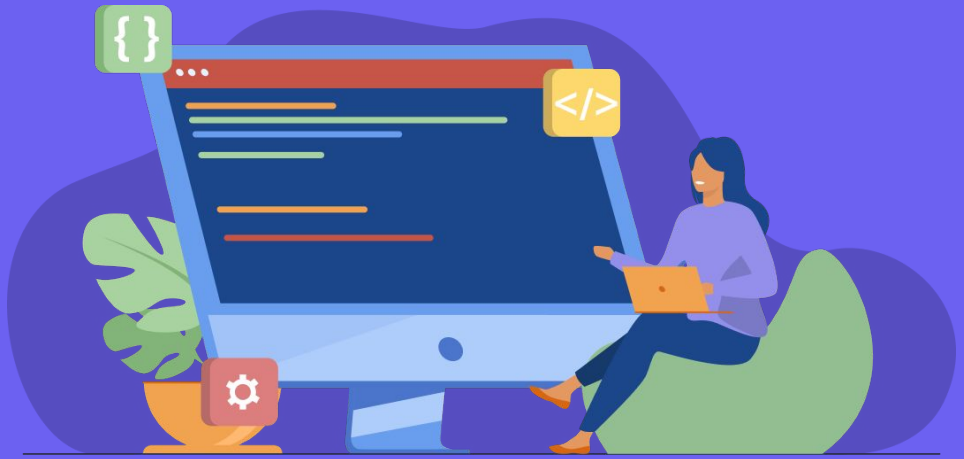
Problem Solving on Queues



Relevel
by Unacademy

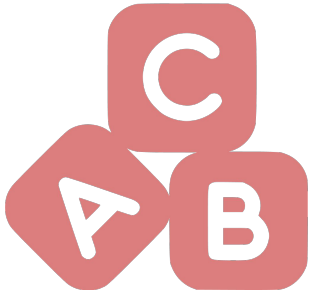
Problem 1: First Non-Repeating Character

Given a stream of characters, find the first non repeating characters from the stream.

Example:

```
Input: abab
Output: a a b -1

Input: abacacb
Output: a a b b b b -1
```



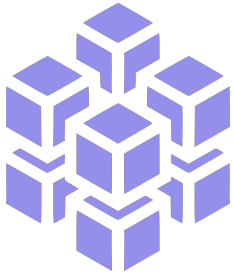
Problem 2: Sliding Window Maximum

Given an array arr and an integer K, find the maximum for each and every contiguous subarray of size k.

Example:

```
Input: nums = [1,3,-1,-3,5,3,6,7], K = 3
Output: [3,3,5,5,6,7]

Input: nums = [1, 2, 3, 1, 4, 5, 2, 3, 6], K = 3
Output: [3,3,4,5,5,5,6]
```



Problem 3: Implement Stack Using Queues

Problem 4: Implement Queues Using Stacks

Problem 5: Implement LRU Cache

First, let's talk about, what is LRU Cache?

The Least Recently Used (LRU) cache is a cache replacement algorithm that organizes elements in order of use.
In LRU, as the name suggests, the element that hasn't been used for the longest time will be evicted from the cache.

For example, if we have a cache with a capacity of three items: