

ChatGPT

Explore GPTs

Today

Sliding Window Patterns

SQL Window Functions Explained

ACID Properties Explained

New chat

SQL Query Performance Tips

Views vs Stored Procedures

Yearly Profit Report SQL

New chat

Defining Actions in Odoo

Efficient Profit and Loss Report

ChatGPT

sliding window pattern based problem that are mostly asked in interview question

The sliding window pattern is a useful technique for solving problems involving arrays or lists where you need to maintain a subset of the elements and adjust its size or position. Here are some common sliding window problems often asked in interviews:

1. Maximum Sum Subarray of Size K

Problem: Given an array of integers and a number `k`, find the maximum sum of a contiguous subarray of size `k`.

Example:

Input: `arr = [1, 2, 3, 4, 5]`, `k = 3`

Output: `12` (since the subarray `[3, 4, 5]` has the maximum sum)

Get citation

2. Minimum Window Substring

Problem: Given two strings `s` and `t`, find the minimum window in `s` which will contain all the characters of `t`.

Example:

Input: `s = "ADOBECODEBANC"`, `t = "ABC"`

Output: `"BANC"`

3. Longest Substring Without Repeating Characters

Problem: Given a string, find the length of the longest substring without repeating characters.

Example:

Input: `s = "abcabcbb"`

Output: `3` (The longest substring is `"abc"`)

4. Find All Anagrams in a String

Problem: Given two strings `s` and `p`, find all start indices of `p`'s anagrams in `s`.

Example:

Input: `s = "cbaebabacd"`, `p = "abc"`

Output: `[0, 6]` (The anagrams of `"abc"` are `"cba"` and `"bac"`)

5. Longest Substring with At Most K Distinct Characters

Problem: Given a string and an integer `k`, find the length of the longest substring that contains at most `k` distinct characters.

Example:

Input: `s = "eceba"`, `k = 2`

Output: `4` (The longest substring is `"eceb"`)

6. Subarrays with Sum K

Problem: Given an array of integers and an integer `k`, find the number of subarrays that sum up to `k`.

Example:

Input: `arr = [1, 1, 1]`, `k = 2`

Output: `2` (The subarrays `[1, 1]` are the ones that sum up to `2`)

7. Longest Repeating Character Replacement

Problem: Given a string and an integer `k`, find the length of the longest substring that can be achieved by replacing at most `k` characters.

Example:


- Input: `s = "ABAB"`, `k = 2`
- Output: `4` (The longest substring after replacing at most `2` characters is `"BBBB"`)

These problems vary in complexity but share the common theme of using a sliding window to maintain a subset of elements and make decisions based on that subset.



Efficient Python and C++ reports

 **Upgrade plan**
Get GPT-4, DALL-E, and more



Message ChatGPT



ChatGPT can make mistakes. Check important info.

?