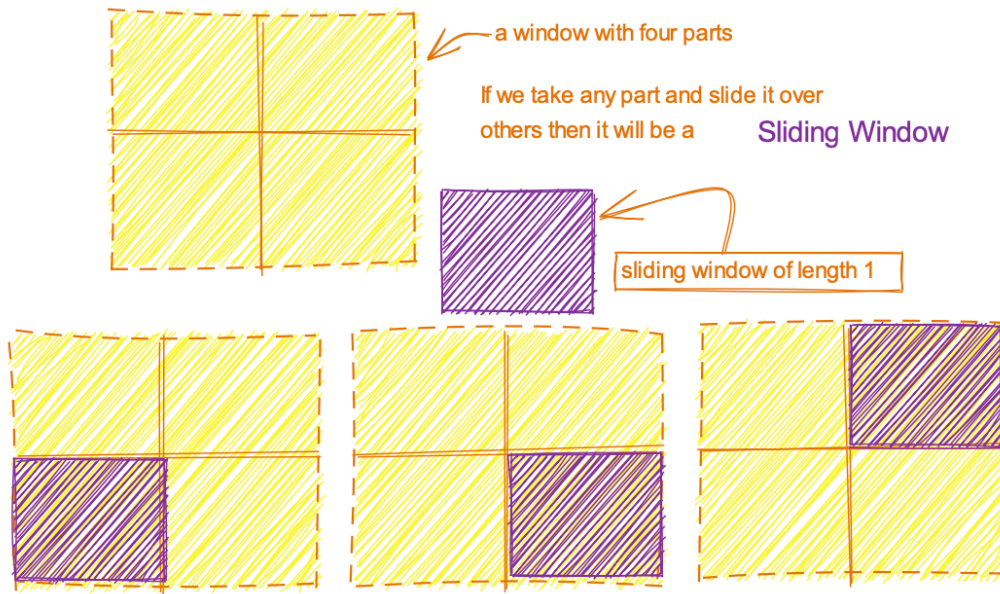


Sliding Window Technique

A sliding window is a sublist or subarray that runs over an underlying data structure. The data structure is iterable and ordered, such as an array or a string. At a high level, you can think of it as a subset of the two pointers method. It normally encompasses searching for a longest, shortest or optimal sequence that satisfies a given condition.



A Bird's Eye View into Sliding Windows



Most sliding windows problems can be solved in $O(N)$ time and $O(1)$ space complexity.

When to Use A Sliding Window

To identify problems where a sliding window can be helpful, look for a few properties:

- Whenever you need to calculate running average
- If you want to formulate a set of adjacent pairs
- The problem involves an ordered data structure
- If you need to identify a target value in an array
- If you need to identify a longest, shortest, or most optimal sequence that satisfies a given condition in a collection

Lets say we had a string and some characters.