A2SV Community Stack Resource

Stack Introduction

Stack

- A **stack** is a linear data structure that stores items in a **Last in first out** or First-In/Last-Out (FILO) manner. In stack, a new element is added at one end and an element is removed from that end only. The insert and delete operations are often called push and pop.

Reading Options

- [Stack data structure](#)
- [Hackerearth: Basics of Stack](#)

Implementation of stack

- As most of programming problems the implementation of stack can be solved in several ways
- In python stacks can be implemented using python list
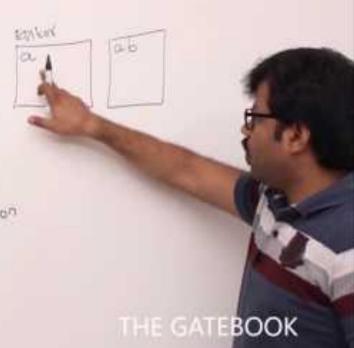
Reading Options

- **Stack implementation**

Application of stacks

- Stacks can be used to solve different kind of problems ranging from reversing a string to evaluating expression with operands and operations and many more

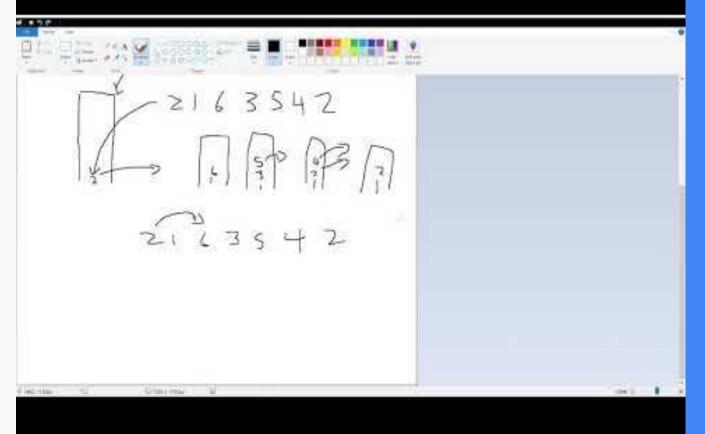- Some of the application of stack is mentioned in the next video

Practice Problems

- Valid-parentheses
- Next greater element I
- Baseball_Game
- Min stack
- Evaluate-reverse-polish-notation
- Reverse-substrings-between-each-pair-of-parentheses

Monotonic Stack

Monotonic Stack

- A monotonic stack is a stack whose elements are monotonically increasing or decreasing. In other words, *a stack is called a monotonic stack if all the elements starting from the bottom of the stack is either in increasing or in decreasing order.*

Reading Options

- **Monotonic-stack**
- **Monotonic Stack**
- **Monotonic Stacks**

Interview Question

Daily Temperatures

This video solves a problem mentioned in practice problems section,make sure that you tried the problem before checking out this video

Practice Problems

- final-prices-with-a-special-discount-in-a-shop
- Daily temperatures
- Remove-k-digits
- Next greater element ii
- Largest-rectangle-in-histogram