L41
Stack : Intuition & Implementation

Join Discord - https://bit.ly/ly-discord

RECAP

Ever heard of the word ‘Stack’?

LearnYard

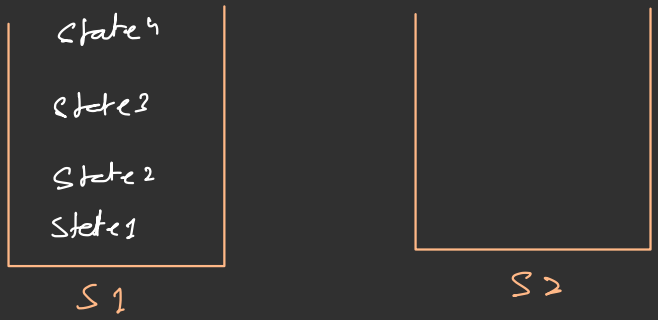
Works on a principle called LIFO

LAST IN FIRST OUT

Some Real Life Examples?

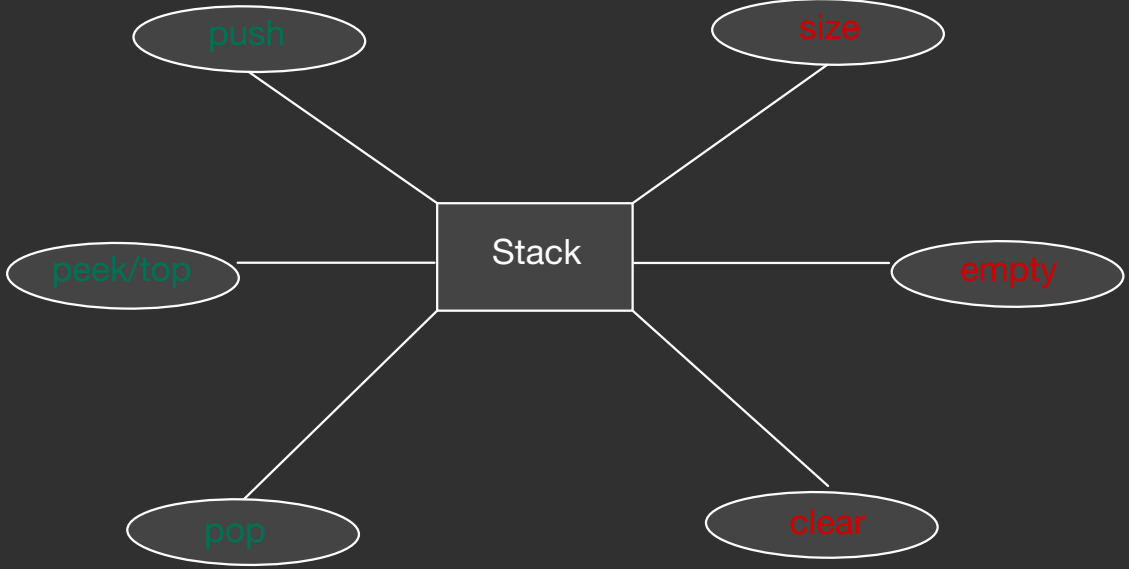
1. Undo Operation

2. Can we do Redo as well?



LearnYard

3. Our very own Call Stack



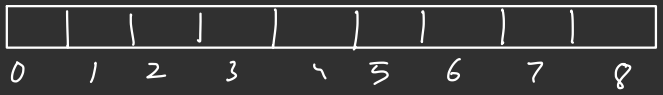
LearnYard

How to implement?

Arrays

$n = 9$

$i = -1$



Push

```
if (i == n-1) return 0;
i++;
ar[i] = ele;
return 1;
```

Pop

```
if (empty()) return -1;
int ele = ar[i];
i--;
return ele;
```

top

```
return ar[i];
```

size

```
return i+1;
```

empty

```
return i == -1;
```

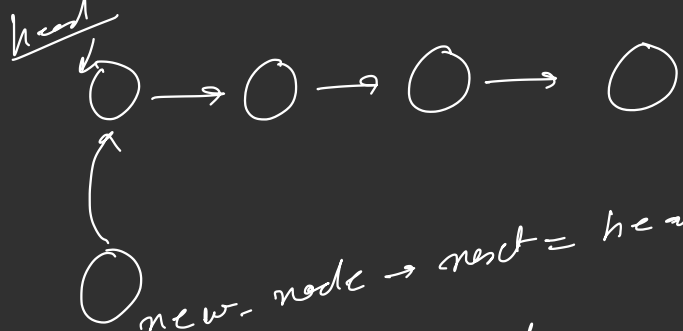
clear

```
i = -1;
```

LearnYard

1. Using a Dynamic Array

2. Using a Linked List



LearnYard

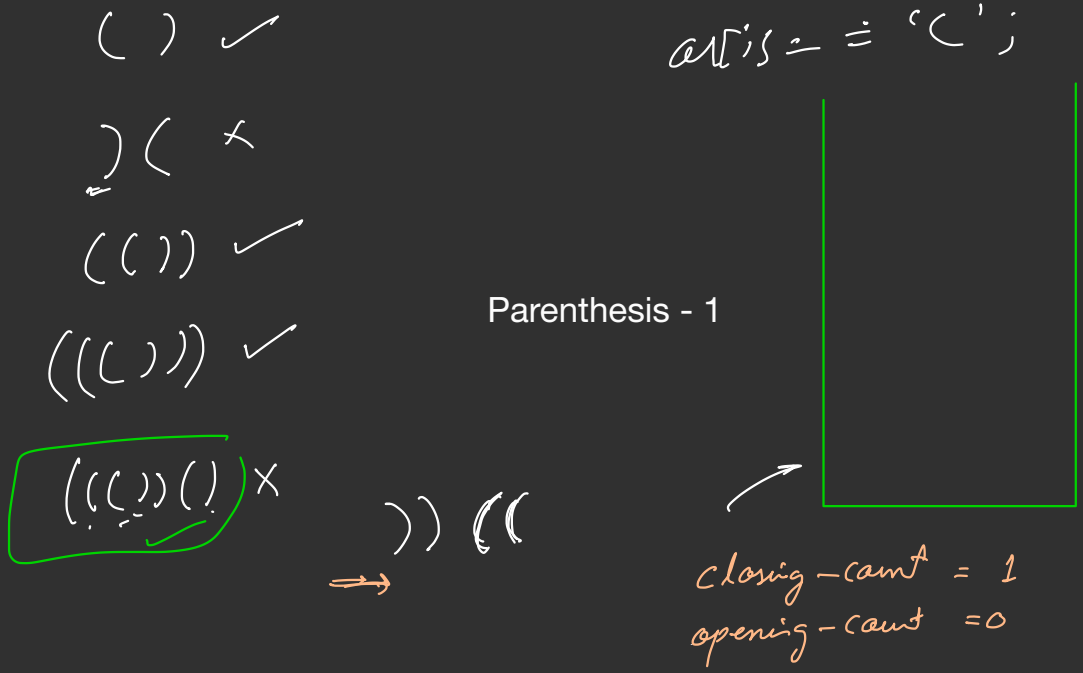
Time Complexity Analysis of different functions

What exactly is a Stack?
A data structure?
A concept?

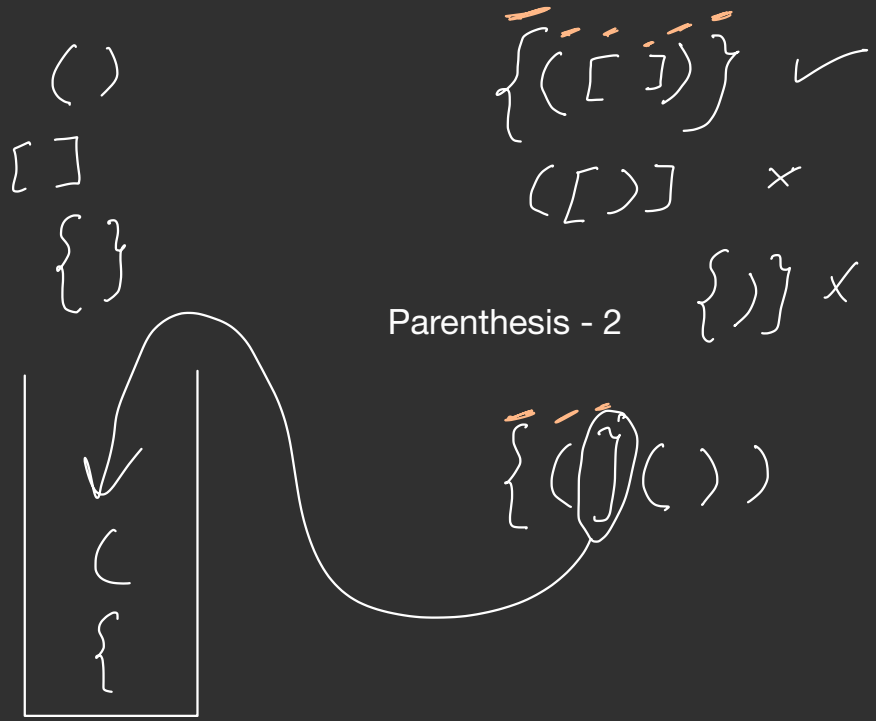
There is stack in-built also.
Both in C++ & Java

Let’s do some practice

Parenthesis - 1

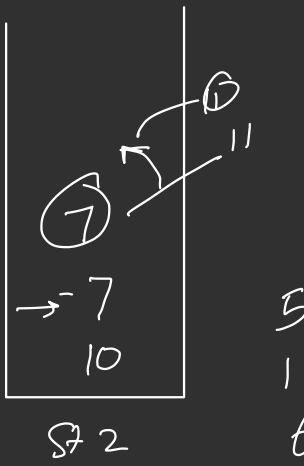


LearnYard



LearnYard

Min Stack



5
11
6

5 5
6 11 6 6

LearnYard

Thank You!

Reminder: Going to the gym & observing the trainer work out can help you know the right technique, but you'll muscle up only if you lift some weights yourself.

So, PRACTICE, PRACTICE, PRACTICE!