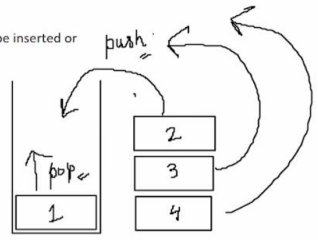
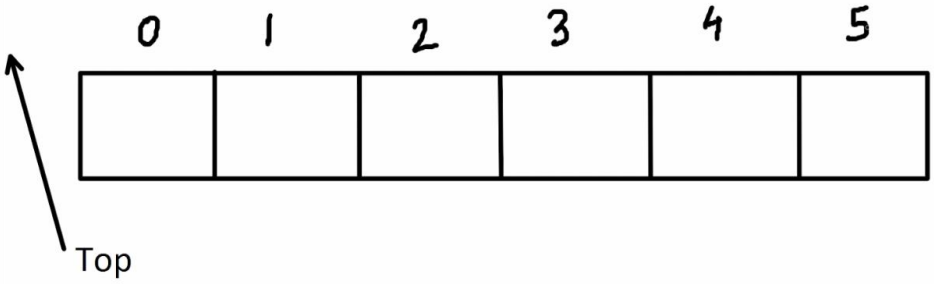
Stack Using An Array

Stack is a collection of elements following LIFO. Items can be inserted or removed only from one end



Algorithms & Data... > Implementing Stack Using an Array

Stack Using An Array



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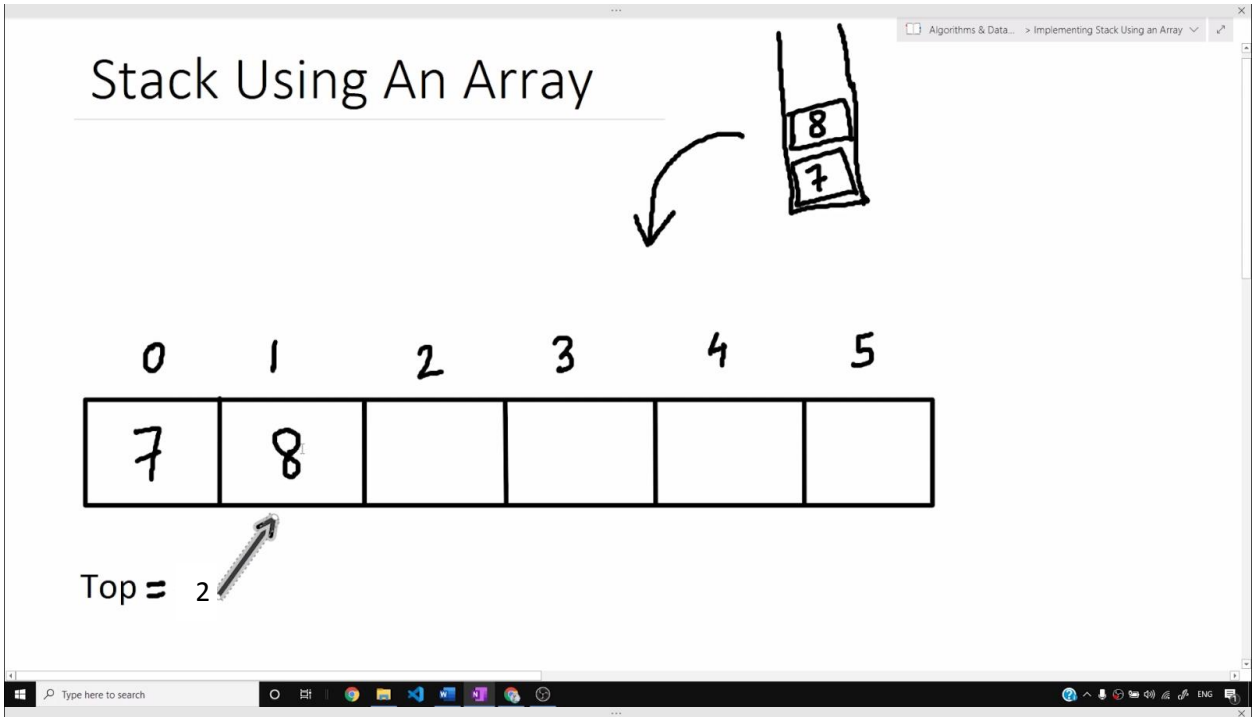
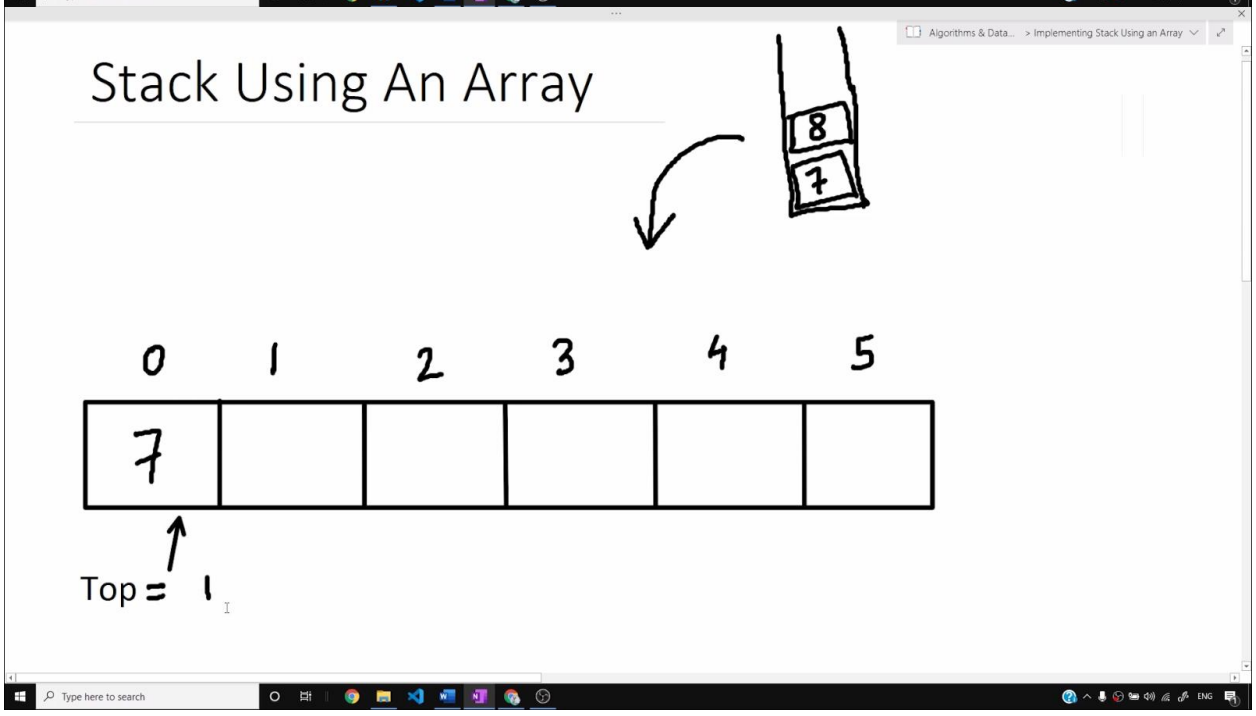
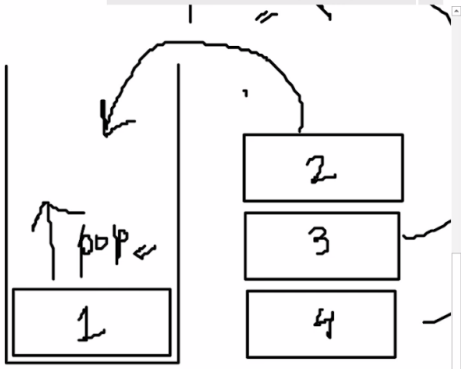

Algorithms & Data... > Implementing Stack Using an Array
Stack Using An Array
8
7
0 1 2 3 4 5
7 8
Top = 2
Type here to search
ENG


Algorithms & Data... > Implementing Stack Using an Array
Stack Using An Array
8
7
0 1 2 3 4 5
7
Top = 1
Type here to search
ENG

Stack is a collection of elements following LIFO. Items can be inserted removed only from one end



Implementing Stack using Arrays

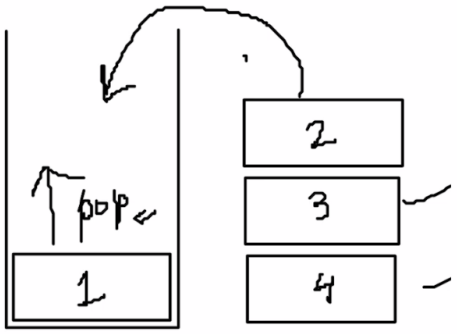
→ Fixed size array creation ✓

→ Top Element ✓

```
struct stack {
    int size;
    int top;
    int *arr;
};
```

Since it is a array so it request memory in heap

removed only from one end



Implementing Stack using Arrays

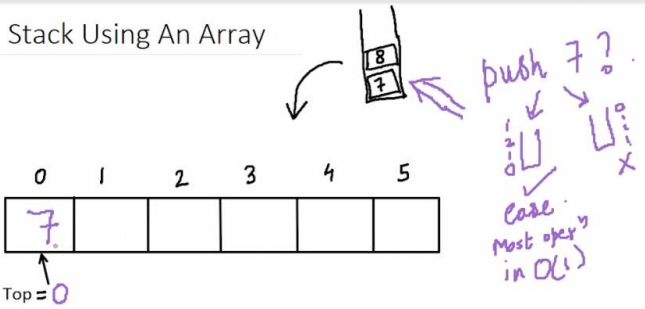
→ Fixed size array creation ✓

→ Top Element ✓

```
struct stack {
    int size;
    int top;
    int *arr;
};
```

```
struct stack s;
s.size = 80;
s.top = -1;
s.arr = (int *) malloc(s.size * sizeof(int));
```

Stack Using An Array



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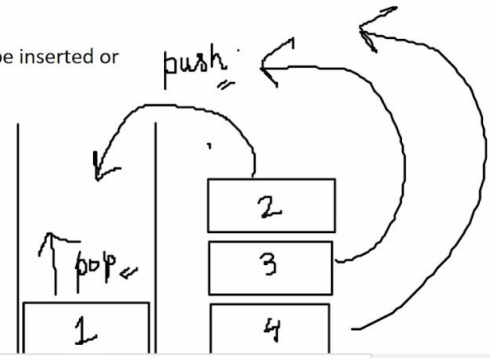


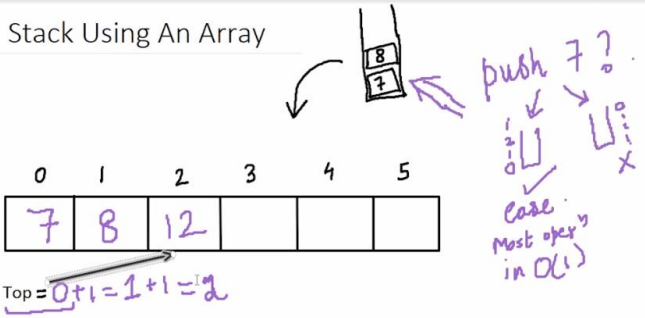
Implementing Stack using Arrays

→ Fixed size array creation ✓

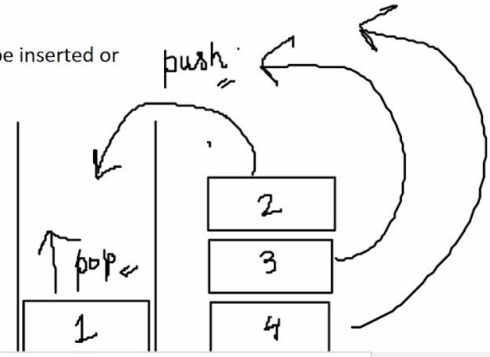
→ Top Element ✓

Algorithms & Data... > Implementing Stack Using an Array

Stack Using An Array



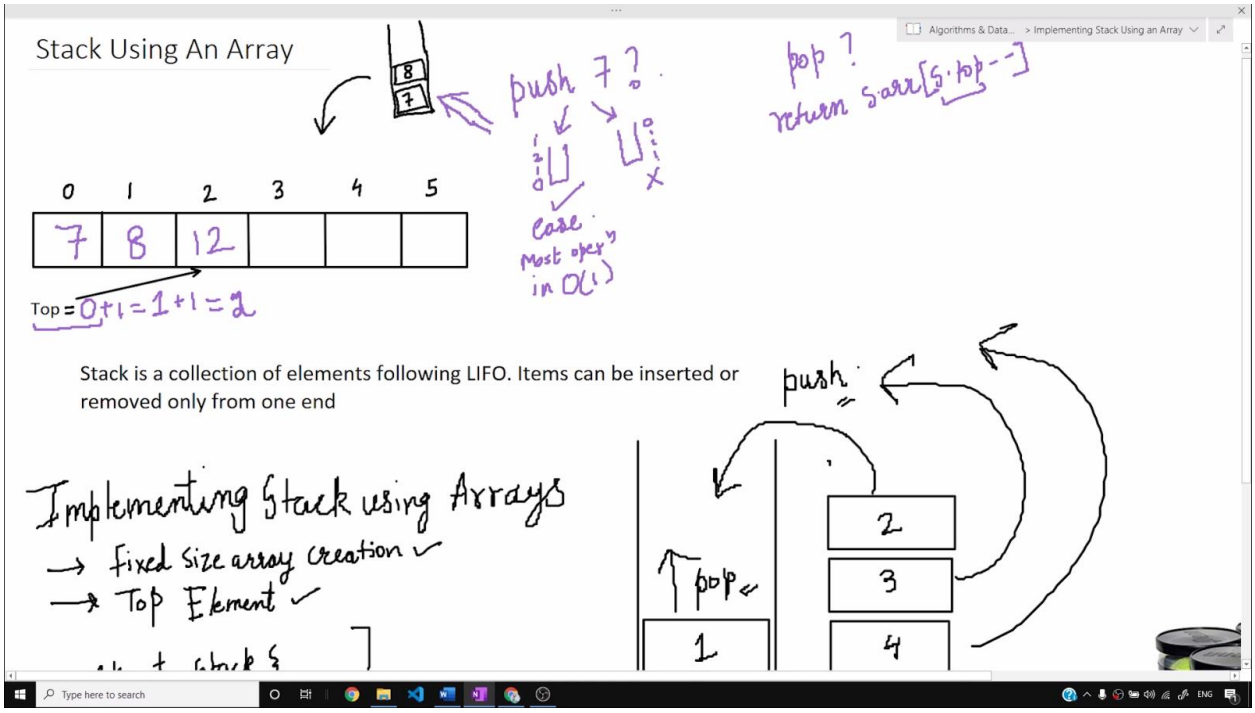
Stack is a collection of elements following LIFO. Items can be inserted or removed only from one end



Implementing Stack using Arrays

→ Fixed size array creation ✓

→ Top Element ✓


Algorithms & Data... > Implementing Stack Using an Array
Stack Using An Array
push 7 ?
pop ?
return s.arr[s.top--]
0 1 2 3 4 5
7 8 12
Top = 0+1 = 1+1 = 2
case
Most oper" in O(1)
Stack is a collection of elements following LIFO. Items can be inserted or removed only from one end
Implementing Stack using Arrays
→ fixed size array creation
→ Top Element
push
pop
2
3
1
4
Type here to search
ENG