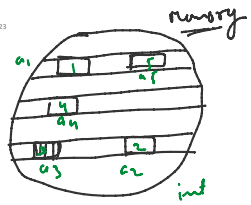
Arrays

09 June 2023 19:23

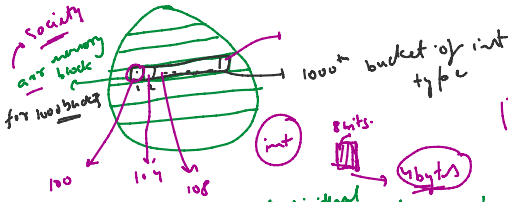


int a1, a2, a3, a4, a5;

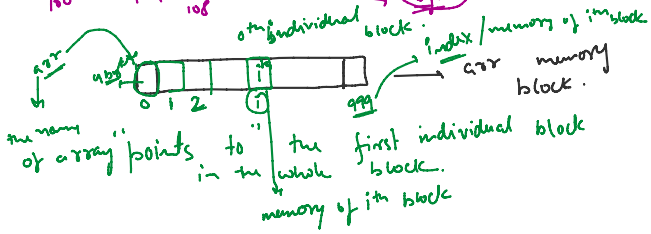
1, 2, 3, 4, 5

int 1000 values.

1000 x 4 = bytes for my array it reserved.

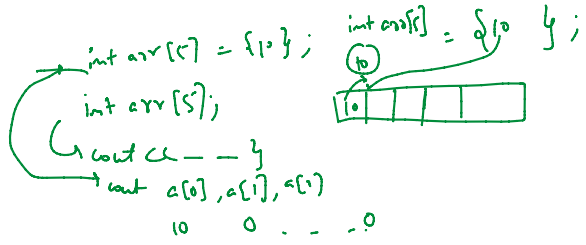


0th individual block.



the name of array "points to" the first individual block in the whole block.

memory of ith block



0 . . . 0

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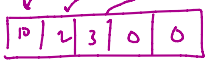
int arr[5] = {10, 2, 3};



arr[5] = {-};

Ques arr = {2, 3, 6, 7, 4, 9, 11, 13}

you have to find out whether 5 exists or not in this array, if exists find, at what index it appears.

Ques Find largest element in array

{2, 3, 6, 7, 4, 9, 11, 13}

o/p = 13

---

arr = {2, 3, 6, 7, 4, 9, 11, 13}

sort → to put elements in ascending / descending order.

= {2, 3, 4, 6, 7, 9, 11, 13}

(1) selection

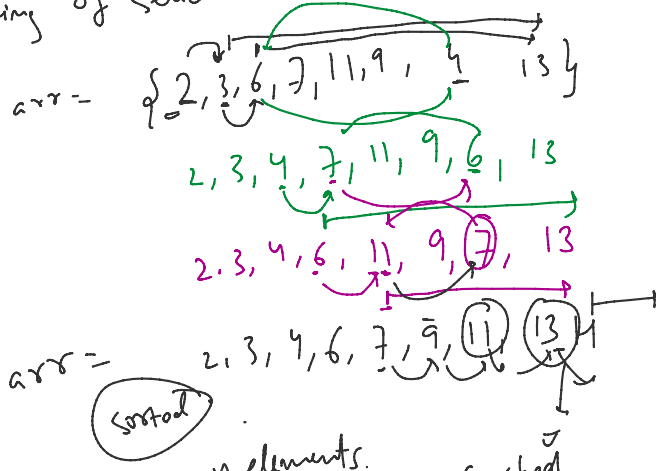
(2) Bubble

(3) Insertion sort.

(1) selection sort (2) Bubble sort (3) Insertion sort.

arr = {13, 3, 6, 7, 11, 9, 4, 2}

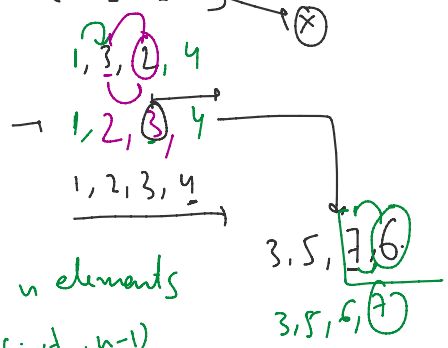
working of selection sort.



n elements. (n-1) times Sorted

---

arr = {4, 3, 2, 1} = (4) (3)



if array has n elements
give me first (n-1) smallest elements

nth element → largest? Yes/No

9, 7, 5, 4, 1 = (5)

4 smallest elem. 4

1, 4, 5, 7

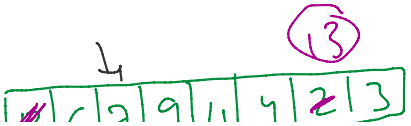
---

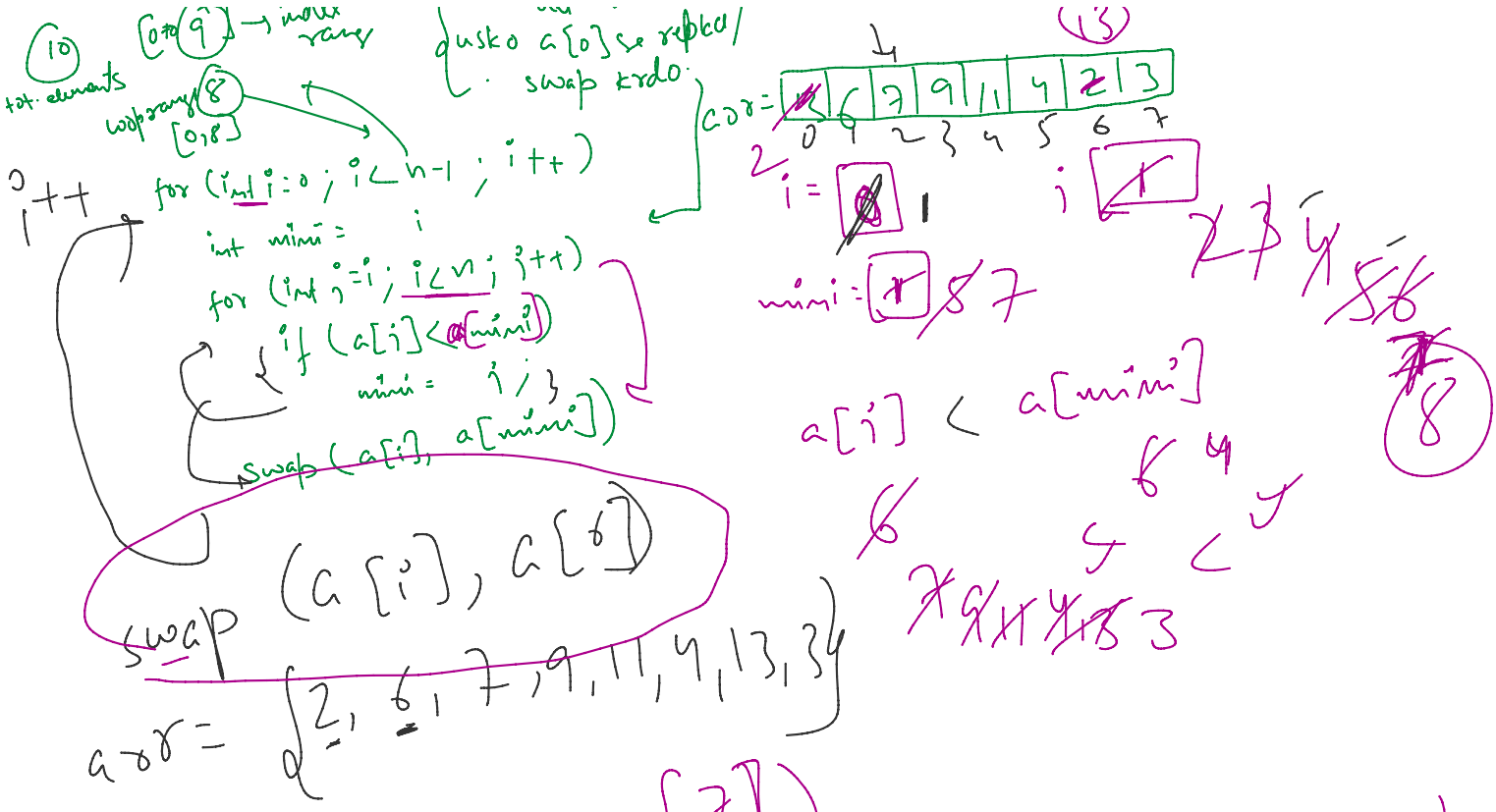
arr = {13, 6, 7, 9, 11, 4, 2, 3}

index = 0.

0 → n-1 element or smallest element find out karo aur usko a[0] se replace/swap karo.

(10) elements [0 to 9] → index range





swap (a[1], a[7])

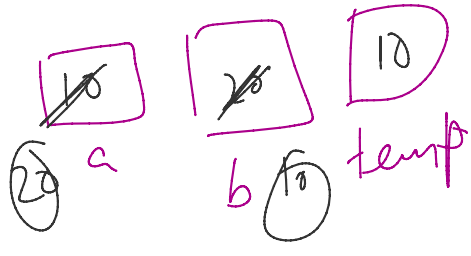
swap (6, 3) ⇒ {2, 3, 7, 9, 11, 4, 13, 6}

```
int a = 10;
int b = 20;
```

a → b

b → a

I have to swap a & b.



(1)

```
int temp = a;
a = b;
b = temp;
```

b = temp;

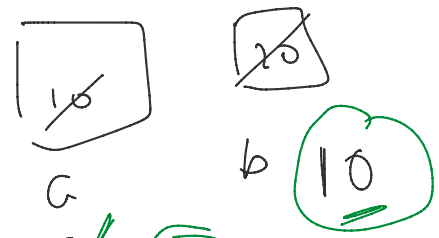
cout << a << b;

20 10

---

(2) Another method for swapping values of variables (without using another variable)

```
int a = 10;
int b = 20;
```




```
a = a+b;
b = a-b;
a = a-b;
```

30 - 20 = 10

30 - 10 = 20

30 ~~30~~ 20

Interview question.

swap using 1 line:

```
a = a+b; b = a-b; a = a-b;
```

3 ~~3~~

new line

1 line ✓

'=' assignment operator

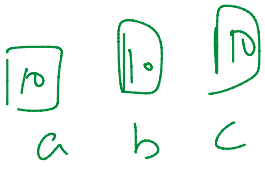
'=' assignment operator
ye jo value assign karta hai
, usi value ko return karta hai

int a = 10

int b, c;

b = (c = 10) ✓ c++ valid

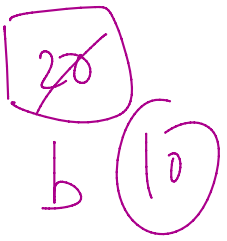
b = 10



a = 10, b = 20

b = (a + b) - (a = b);

10 20



20

b = (10 + 20) - 20

b = 30 - 20

b = 10