

L7

Arrays

Introduction to Arrays

```
int roll-no;
```

```
cin >> roll-no;
```

```
int roll_numbers[50];
```

Syntax

→ square bracket

→ size

Creating arrays with different datatypes

```
int arr[50];
```

```
char ch_array[10];
```

```
bool b_array[5];
```

Indexing in Arrays

`int ar[50];` `cin >> ar[0];` `cin >> ar[1];`
`cout << ar[0];` `cout << ar[1];`



50 integers / 50 cells

`int a`



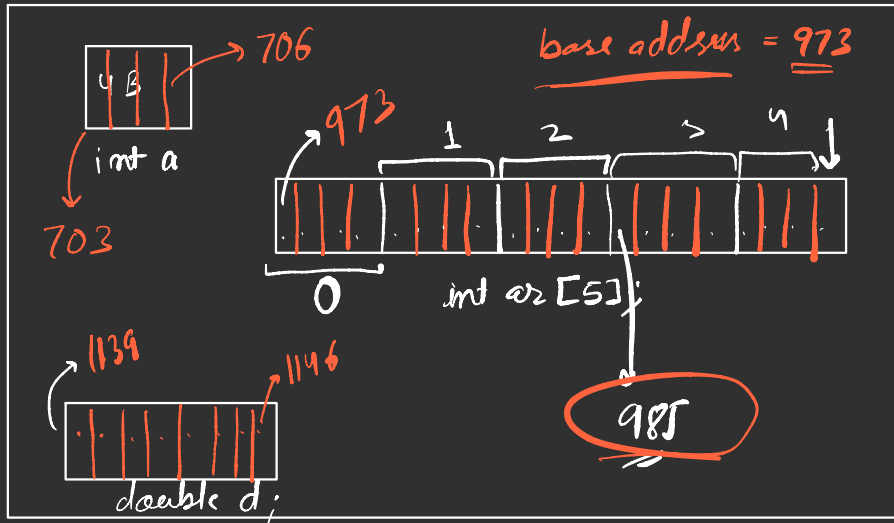
`cin >> a;`
`cout << a;`

Printing Arrays

$$973 + 3 \times 4$$

Memory Allocation in Arrays

$$5 \times 4 = 20$$



$$973 + 4$$

$$973 + 8$$

$$973 + 12$$

$$973 + 16$$

base address = 7615 int as [50];

7615

196

7811

7615

198

7763

find the starting address of 0th cell 7615

5th cell 7635

37th cell 7763

49th cell 7811

$$7615 + 5 \times 4$$

$$\begin{array}{r} 20 \\ 7635 \end{array}$$

$$7615 + 37 \times 4$$

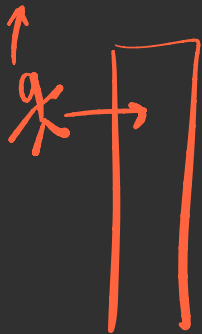
198

3

49

$\times 4$

196



Pointers ↙

int a;

cout << a;

int *ptr = &a;

cout << a; \longleftrightarrow cout << *ptr; value
cout << &a; \longleftrightarrow cout << ptr; address

Question : Check if a element is present in array or not

Question : Find maximum and minimum in a array

Question : Check if array is sorted or not

Extra question [Missing number on Leetcode]

<https://leetcode.com/problems/missing-number/description/?ref=read.learnyard.com>

Practice and Homework Questions

Homework questions -

[https://leetcode.com/problems/missing-number/description/?
ref=read.learnyard.com](https://leetcode.com/problems/missing-number/description/?ref=read.learnyard.com)

Read these articles -

<https://read.learnyard.com/traversals-1/>
<https://read.learnyard.com/traversals-2/>
<https://read.learnyard.com/traversals-3>

<https://leetcode.com/problems/intersection-of-two-arrays/>
<https://leetcode.com/problems/two-sum-ii-input-array-is-sorted/>

<https://codeforwin.org/c-programming/c-program-to-put-even-and->

Thank You!

Please practice more questions and examples as above !!