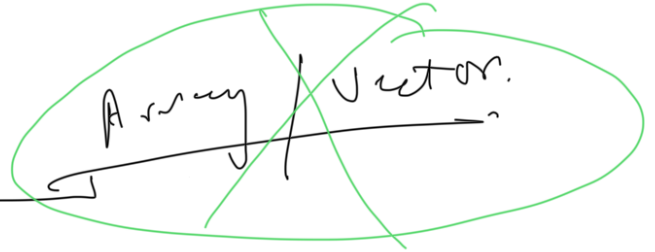


# Array

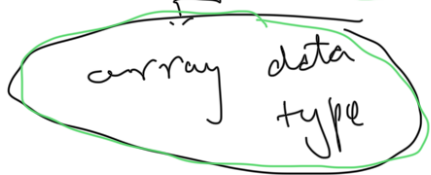


→ Array is a static data structure in which we have to predefine the size.

Initializing an Array



→ `int arr[1000]`



array name

Array size

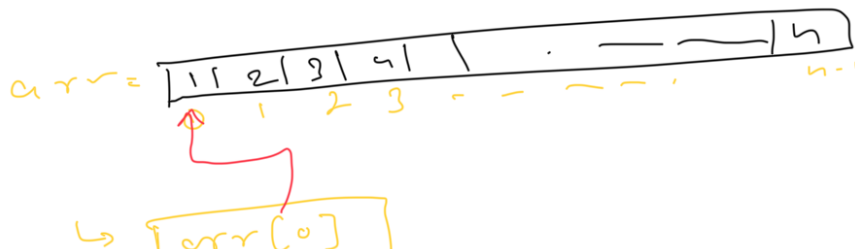
Ex: initializing an array of int, char, vector, string.

① `int arr1[0] = {1}`

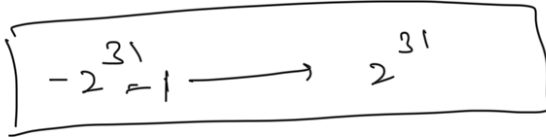
② `char arr2[02] = {'a', 'b'}`



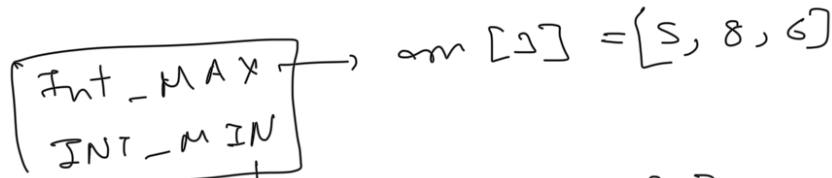
# Indexing in Array



To find min value in an Array.



Sign & unsigned



$arr[3] = \{5, 8, 9\}$

To include these we have lib. as,

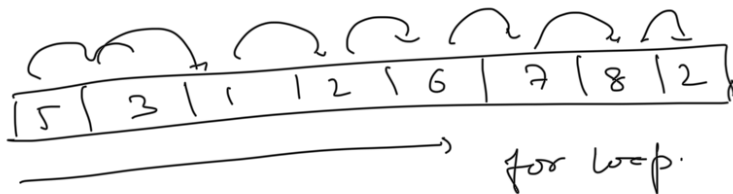
#include <limits.h>

Value of

① INT\_MAX = 2147483647

② INT\_MIN =  $-2147483648$   
 $= -2^{31}$

Ex. find min & Max Num in an Array



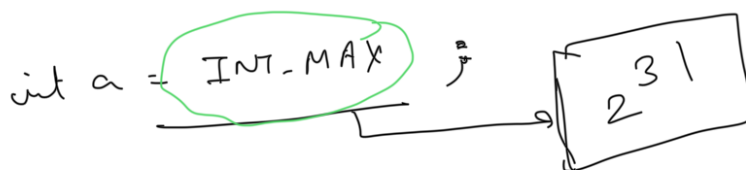
int a = 0



No. of elements in array

Code for finding min value,

→



for (int i = 0; i < arr.size(); i++) {  
    a = arr[i];

```

    if (arr[i] < min)
    {
        min = arr[i];
    }
    return min;
}

```

Code for Map Value

```

int a = INT_MIN;

```

```

if (arr[i] > a)

```

Q Reverse an Array.

int arr = [2, 1, 3, 4, 8, 9, 7]

output

0 1 2 3 4 5 6  
7 9 8 4 3 1 2

i = 0

j = n - 1

arr[i] = 9

4 1 6 7 8 2 3

0 1 2 3 4 5 6

arr[i] = 2

arr[j] = 7

$i = 0$

~~$j = 6$~~

Swap

1	4	8	9	7	6	4	3
---	---	---	---	---	---	---	---

$i$

$int a =$   
 $int i =$

~~$count = 1$~~

1	4	8	7	7	6	4	3
---	---	---	---	---	---	---	---

1	4	8	7	7	6	4	3
---	---	---	---	---	---	---	---

Count

8	7	7	6	4	3	2
---	---	---	---	---	---	---

Count = 1

$n - 1 - \text{Count}$

$int a = 1$

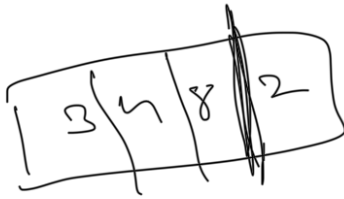
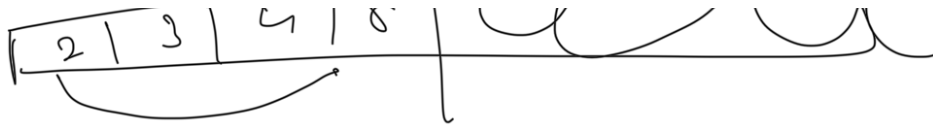
error

for (int i = 0;  $i < n$ ; i++) {

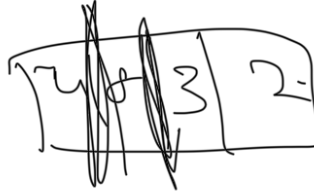
~~~~~

$i < n - \text{Count}$

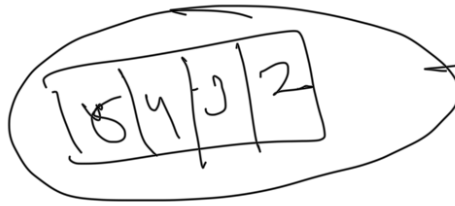
~~~~~



Count = 1  
Count of 2



Count = 3



return

## Boiler plate of Cpp.

```
#include <iostream>
using namespace std;
```

iostream lib  
input/output

```
int main() {
    return 0;
}
```

std lib.  
Standard

void

fn

for void fn  
return condition is  
not compulsory

array  
string  
graph  
dp

int  
void