Day-1

Introduction to Arrays

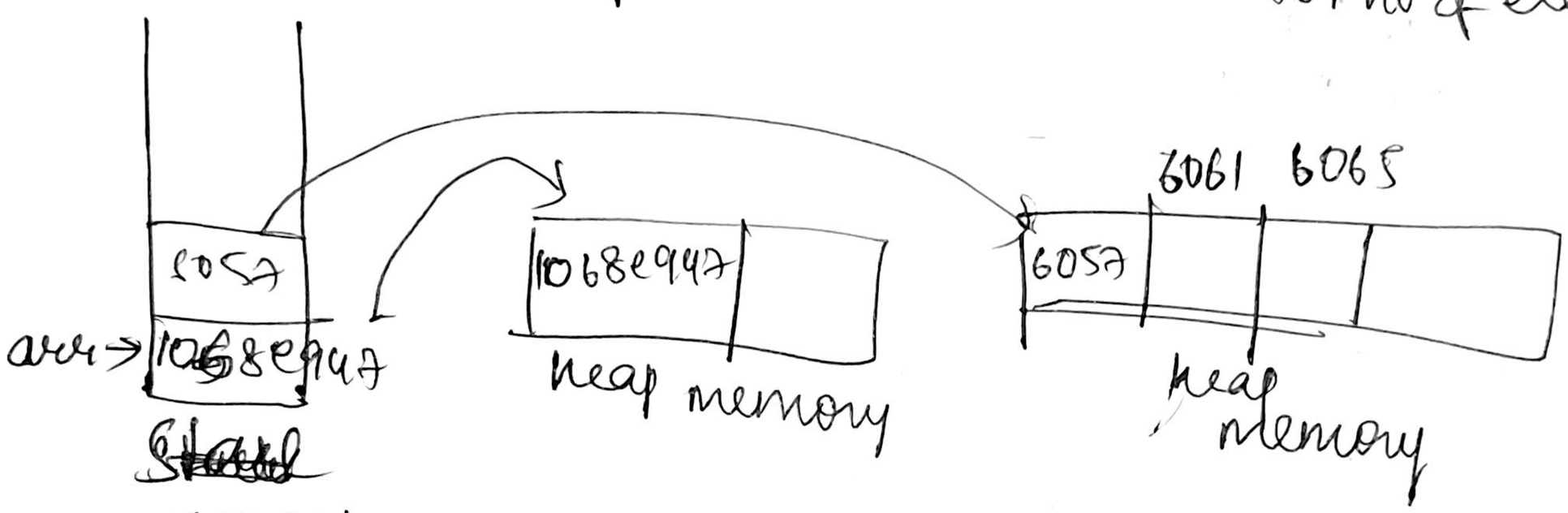
Arrays are used to store multiple values in a single variable.

75	11	33	95	69	38	61	80

int[] arr; → how to declare an array
int []arr;
int arr[];

arr[] = new int[10];

int[] num = new int[10];
↑ type of each element array
↑ name of array
↑ subscript (integer or constant expression for no of elements)



Accessing individual elements ⇒

Array of size 5 [5, 1, 2, 4, 10]

arr[0] ⇒ 1st element
[element at index 0]

arr[1] ⇒ 2nd element
(element at index 1)

arr[2] ⇒ 3rd element
(element at index 2)

arr[3] ⇒ 4th element
(element at index 3)

arr[4] ⇒ 5th element
(element at index 4)

// length of array
S.o.pln(arr.length);

exp → 100
bri →

Camera ⇒ Format_mov | comp

record ⇒ 4K to 60 fps HDR ⇒ on
record slow mo ⇒ Auto fps ⇒ off
Show pal formats ⇒ on

```
for(int i=0;i<arr.length;i++)
    S.o.pln(arr[i]+" ");
```

(or)

other way to print value

```
int arr2[]={5,1,-5,7,10,20};
for(int x:arr2){
    S.o.pln(x+" ");
}
```

→ A few useful function from Arrays class

1) toString
2) sort
3) fill

S.o.pln(arr2) → 5 1 -5 7 10 1

① toString ⇒ S.o.pln(Arrays.toString(arr2));
↳ [5,1,-5,7,10,1]

② Sort ⇒ Arrays.sort(arr2);
S.o.pln(Arrays.toString(arr2));
↳ [-5,1,1,5,7,10]

③ fill →
Arrays.fill(arr2,1);
S.o.pln(Arrays.toString(arr2)); → [1,1,1,1,1,1]

→ Difference b/w Array & others

```
int a=5;
int b=5;
(a==b) → true
```

```
int arr1[]={1,2,3,4};
int arr2[]={1,2,3,4};
(arr1==arr2) → false
```

↓ Address of location of arr[0]

↓ Address of location of arr2[0]

→ making a copy and compare

compare ⇒ Arrays.equals(arr1,arr2);

copy ⇒ arr2 = Arrays.copy(arr1,arr1.length);

```
class className {
    public static void main (String[] args) {
        Scanner sc = new Scanner (System.in);
        int N = sc.nextInt();
        int arr[] = new int[N];
        for(int i=0; i<N; i++) {
            arr[i] = sc.nextInt();
        }
        int target_num = sc.nextInt();
        boolean ans = false;
        for(int val: arr) {
            if(val == target_num) {
                ans = true;
                break;
            }
        }
        S.o.pln(ans);
    }
}
```

Introduction

Arrays are

int[]

int

int

a

type

eac

arr →

Ac

In codeforces

↓

we have to add

public final class className {

}

→ codechef

Car