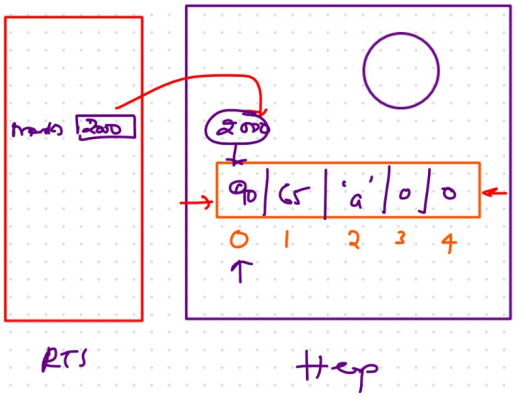
Arrays

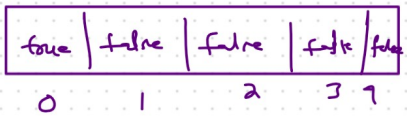
pc ⟶ `int marks[] = new int[5];`



def: Array is a collection of homogeneous type of data

↑ Same type

`boolean yesNo[] = new boolean[5]`



Note:

(1) We can create array of any data type [i.e primitive as well as non-primitive] ⟶ String, Class, `int a = 10`

(2) In Java, Array is an object

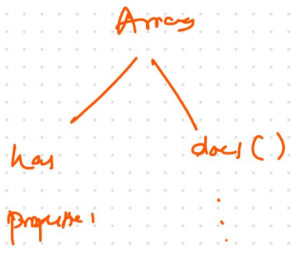
(3) We can access the elements of an array with the help of name & index values

(4) The index values of an array always starts from "0".

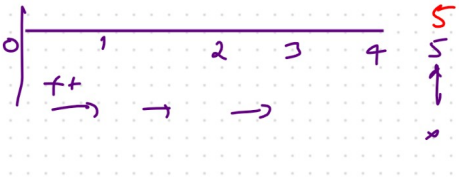
(5) If we try to access the elements beyond the size of memory allocation it gives an exception saying: ArrayIndexOutOfBoundException

(6) We can get the array length with help of of variable length (i.e marks.length)

(7) While creating an array it is compulsory to mention the size of the array i.e new int[5]



8. The max size of array is +ve integer



Passing an array as argument & return an array

Memory Mapping

```
class MyArray{
    int[] input() {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the size of array:");
        int n = sc.nextInt();
        int arr[] = new int[n];
        int intial_value = 1;
        for(int i=0;i<arr.length;i++) {
            System.out.println("Enter value for index "+i);
            arr[i] = sc.nextInt();
        }
        return arr;
    }
    void display(int x[]) {
        System.out.println("Displaying the elements in the array.");
        for (int i=0;i<x.length;i++) {
            System.out.print(x[i]+" ");
        }
    }
}
public class ArrayProgram {
    public static void main(String[] args) {
        MyArray obj = new MyArray();
        int result[] = obj.input();
        obj.display(result);
    }
```