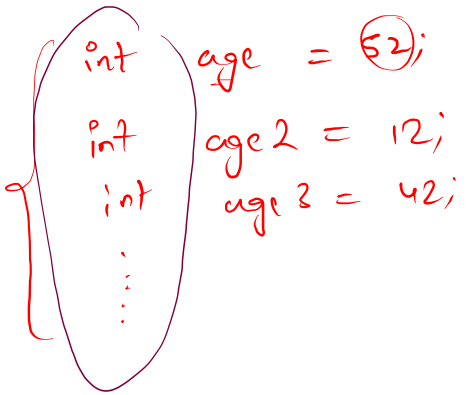
Arrays

- collection of similar data.
  - contiguous.
  - store multiple & similar data with one name.

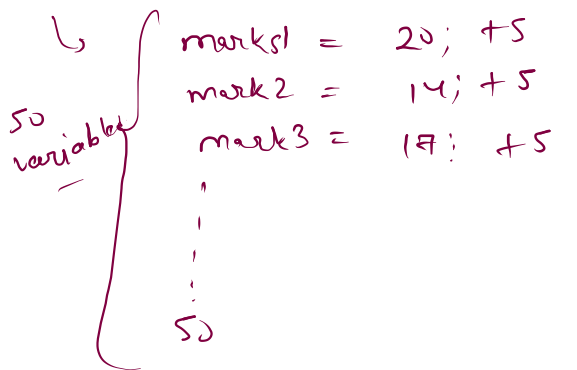
Variable

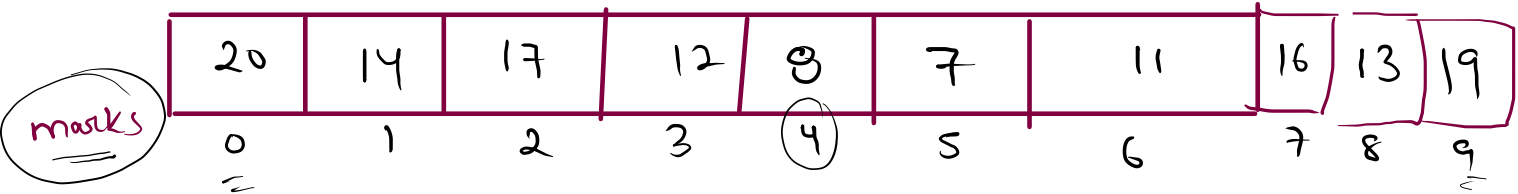
store info

int, String, boolean.



eg. 50 students.





length = 10

str = geek(s)ter

0 1 2 3 4 5 6 7

0 - 9

10 elements

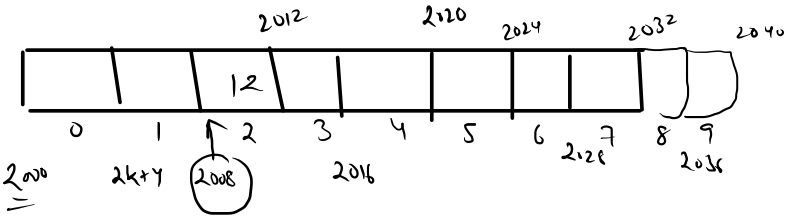
marks[4];

str.charAt(4) → s

Stack
- less
- more expensive

Heap
- new
- less
- more expensive

int = 4 byte



marks → int[]
= 2000

[ ]

Syso (marks [2]);
17

marks + 2 × 4
2000

marks [2] = 12;
2008 =

= 2008

learn any Data Structure.

1. Initialize.
2. add / update.
3. get
4. print

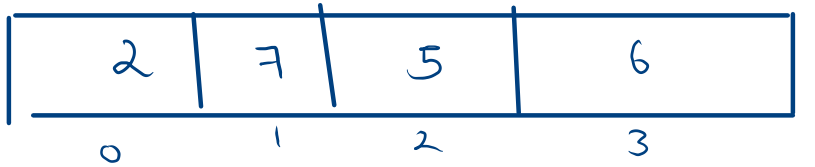
```java
public class Main
{
    public static void main(String[] args) {


        //how to initialize array

        int [] marks  = new int[4];

        System.out.println(marks.length);


        marks[1] = 18;
        marks[1] = 2000;
//      marks[9] = 22;
        System.out.println(marks[1]);
//      System.out.println(marks[9]);

    }
}
```

Print the array elements linewise

Take **n** as an integer input. Declare an array of size n that stores value of int data-type.

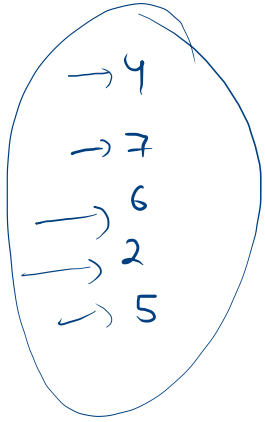
Then take **n** integer inputs and store them in the array one by one.

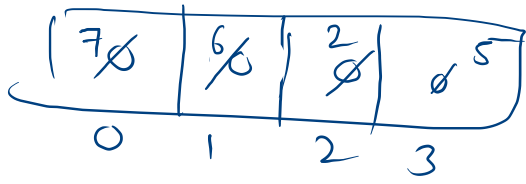
And print each integer in each line.



2
7
5
6

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);

    int n = scn.nextInt(); //4

    int [] arr = new int[n];

    for(int i = 0; i < n; i++){
        arr[i] = scn.nextInt();
    }
    for(int i = 0; i < n; i++){
        System.out.println(arr[i]);
    }


}
```

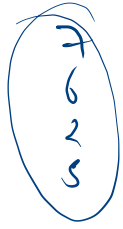




i=4 1

0<4

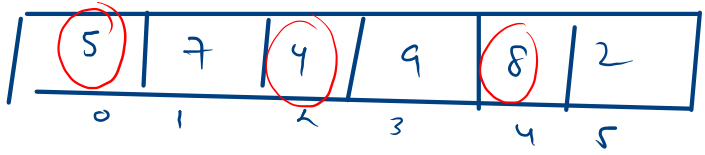
1<4



Print Alternate Array Elements Linewise

6 → size

5
7
4
9
8
2

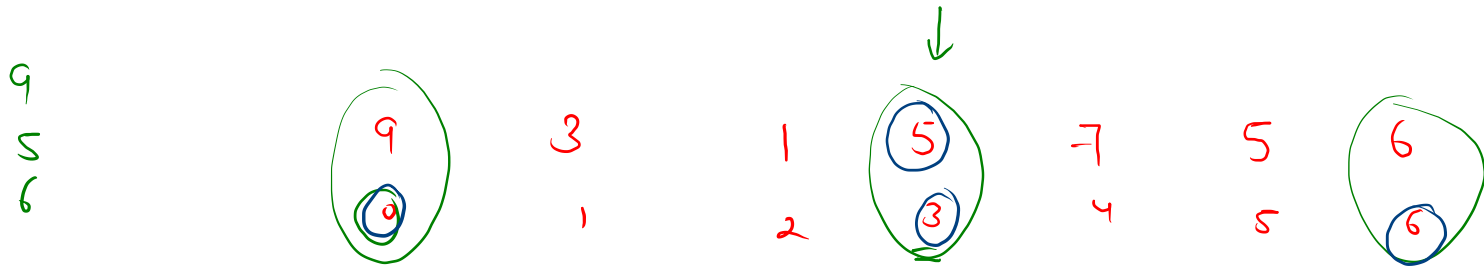


odd even

i += 2

5
4
8

Print Array element if index divisible by 3




```
if ( i % 3 == 0)
{
    Sysout (A[i]);
}
```

4

1 2 4 8

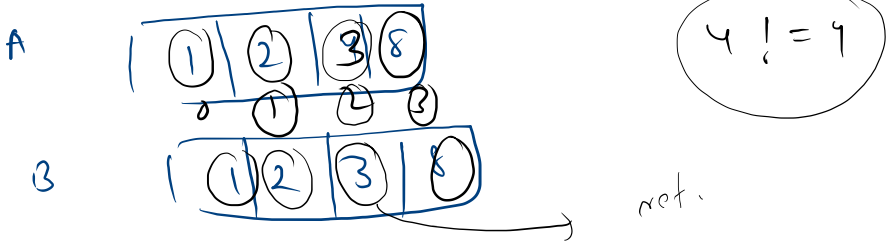
4

1 2 3 8

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
    int [] A = new int[n];

    for(int i = 0; i < n; i++){
        A[i] = scn.nextInt();
    }

    int m = scn.nextInt();
    int [] B = new int[m];
    for(int i = 0; i < m; i++){
        B[i] = scn.nextInt();
    }

    boolean ans = checkIdentical(A, B);
    System.out.println(ans);
}
```

```java
public static boolean checkIdentical(int [] A, int [] B){
    if(A.length != B.length){
        return false;
    }

    // length is same
    for(int i = 0; i < A.length; i++){
        if(A[i] != B[i]){
            return false;
        }
    }

    return true;
}
```

A(i) != B(i)



4 != 4