https://course.acciojob.com/idle?question=98e9bbba-6f59-4585-a38c-6f9bd3cd972a

- EASY
- Max Score: 20 Points

# Count 1 in sorted binary array

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**Given a binary sorted non-increasing array `arr` of size `N`. You need to print the count of 1 in the binary array.**

**Try to solve the problem using binary search**

## Input Format

**Each test case contains two lines. The first line contains `N` (size of binary array). The second line contains `N` elements of binary array separated by space.**

## Output Format

**In new line, print the count of 1 in binary array.**

## Example 1

Input

```
8
1 1 1 1 1 0 0 0
```

Output

```
5
```

Explanation

Number of 1 in given binary array : 1 1 1 1 1 0 0 0 is 5.

## Example 2

Input

```
4
1 1 1 1
```

Output

```
4
```

Explanation

Number of 1 in given binary array : 1 1 1 1 is 4.

## Constraints

**1 <= N <= 10^6**

**arr[i] = 0,1**

**Topic Tags**

- **Binary Search**
- **Arrays**

# My code

```
// in java
import java.util.*;
import java.lang.*;
import java.io.*;

public class Main
{
```

```
    public static void main (String[] args) throws java.lang.Exception
    {
            //your code here
   Scanner s=new Scanner(System.in);
   int n=s.nextInt();
   int arr[]=new int[n];
   for (int i=0;i<n;i++)
    arr[i]=s.nextInt();
   int i=0,j=n-1;
  if(arr[j]==1) {System.out.print(n);return;}
   while(i<j)
    {
     int mid =(i+j)/2;
     if(arr[mid]==1 && arr[mid+1]==0)
     {
      System.out.print(mid+1);
      return;
     }
     if(arr[mid]==1 && arr[mid+1]==1)   i=mid;
      if(arr[mid]==0 ) j=mid;
    }
   System.out.print("0");
    }
}
```