**Find the smallest missing number**

Given a **sorted**array of n distinct integers where each integer is in the range from 0 to m-1 and m > n. Find the smallest number that is missing from the array.

**Examples:**

**Input:** {0, 1, 2, 6, 9}, n = 5, m = 10

**Output:** 3

**Input:** {4, 5, 10, 11}, n = 4, m = 12

**Output:** 0

**Input:** {0, 1, 2, 3}, n = 4, m = 5

**Output:** 4

**Input:** {0, 1, 2, 3, 4, 5, 6, 7, 10}, n = 9, m = 11

**Output:** 8

#include <iostream>

using *namespace* std;

// Given a sorted array of n distinct integers where each integer is in the range from 0 to m-1 and m > n. Find the smallest number that is missing from the array.

*int* findNumber(*int* *arr*[], *int* *size*)

{

    // find max

*int* max=arr[0];

    for (*int*  i = 0 ; i<size;i++)

    {

        if (arr[i]>max)

        max=arr[i];

    }

*int* fa[size+1]={0};

    for (*int* i  = 0 ; i<size;i++)

    {

        fa[arr[i]]++;

    }

    for (*int* i=0;i<=max+1;i++)

    {

        if (fa[i]<1)

        return i ;

    }

    }

*int* main(){

*int* size;

    cin>>size ;

*int* arr[size];

    for (*int* i = 0 ; i< size ;i++)

    cin>>arr[i];

    cout<<findNumber(arr,size)<<endl;

}