package binarysearch;

import java.util.Arrays;

import java.util.Scanner;

class BinarySearch

{

public static void main(String args[])

{

int c, d, first, last, middle, n, search, array[];

Scanner in = new Scanner(System.in);

System.out.print("Masukkan ukuran array : ");

n = in.nextInt();

array = new int[n];

System.out.println("Masukkan " + n + " bilangan bulat.");

for (c = 0; c < n; c++)

array[c] = in.nextInt();

// Mengurutkan array.

Arrays.sort(array);

System.out.println("Data yang telah terurut : ");

// Mencetak array terurut.

for (d=0; d<n; d++)

System.out.print(" " + array[d] + " ");

System.out.print("\nMasukkan nilai yang akan dicari : ");

search = in.nextInt();

// Binary Search

first = 0;

last = n - 1;

middle = (first + last)/2;

while( first <= last )

{

if ( array[middle] < search )

first = middle + 1;

else if ( array[middle] == search )

{

System.out.println(search + " ketemu di lokasi " + (middle +1) + ".");

break;

}

else

last = middle - 1;

middle = (first + last)/2;

}

if ( first > last )

System.out.println(search + " tidak ada dalam array.\n");

}

}