**SOURCE CODE:**

package assisted;

import java.util.Scanner;

public class LIS {

static int max;

static int longestIncreasingSubsequence(int arr[], int n)

{

if (n == 1)

return 1;

int res, max\_ending\_here = 1;

for (int i = 1; i < n; i++) {

res = longestIncreasingSubsequence(arr, i);

if (arr[i - 1] < arr[n - 1] && res + 1 > max\_ending\_here)

max\_ending\_here = res + 1;

}

if (max < max\_ending\_here)

max= max\_ending\_here;

return max\_ending\_here;

}

static int lis(int arr[], int n)

{

max = 1;

longestIncreasingSubsequence(arr, n);

return max;

}

public static void main(String args[])

{

Scanner sc= new Scanner(System.in);

System.out.println("enter n");

int n=sc.nextInt();

int arr[]= new int[n];

System.out.println("enter elements");

for(int i=0;i<n;i++)

{

arr[i]=sc.nextInt();

}

System.out.println("Length of longest increasing subsequence : "

+ lis(arr, n) + "\n");

}

}