**Source Code of Longest Increasing Subsequence**

package longestincreasesequence;

import java.util.Scanner;

public class LIS {

static int longsubseq(int arr[], int arr\_len){

int a[] = new int[arr\_len];

int i, j, max = 0;

// a[] = [1 1 1 1 ...]

for (i = 0; i < arr\_len; i++){

a[i] = 1;

}

for (i = 1; i < arr\_len; i++){

for (j = 0; j < i; j++){

if (arr[i] > arr[j] && a[i] < a[j] + 1)

a[i] = a[j] + 1;

}

}

for (i = 0; i < arr\_len; i++){

if (max < a[i])

max = a[i];

}

return max;

}

public static void main(String[] args) {

Scanner scn = new Scanner(System.in);

int index;

System.out.println("Enter the no. of elements to be entered into the array");

index=scn.nextInt();

int[] arr = new int[index];

System.out.println("Enter the elements in the array");

for(int i=0;i<index;i++){

arr[i]=scn.nextInt();

}

int arrlen=arr.length;

System.out.println("The length of the longest increasing subsequence is "

+ longsubseq(arr,arrlen));

}

}

GitHub Link:

https://github.com/ashwinbalaji44/Assignment.git