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## Maximum sum increasing subsequence

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Given an array of n positive integers. Write a program to find the sum of maximum sum subsequence of the given array such that the integers in the subsequence are sorted in increasing order.

### Input:

The first line of input contains an integer T denoting the number of test cases.

The first line of each test case is N,N is the size of array.

The second line of each test case contains N input A[].

### Output:

Print the sum of maximum sum sequence of the given array.

### Constraints:



$1 \leq T \leq 100$   
 $1 \leq N \leq 100$   
 $1 \leq A[i] \leq 1000$

**Example:****Input:**

2  
7  
1 101 2 3 100 4 5  
4  
10 5 4 3

**Output:**

106  
10

**Explanation:**

For input:

7  
1 101 2 3 100 4 5

All the increasing subsequences : (1,101); (1,2,3,100); (1,2,3,4,5), out of this (1,2,3,100) has maximum sum,i.e., 106. Hence the output is stated as 106.

**\*\* For More Input/Output Examples Use 'Expected Output' option \*\***

Author: rajatjha (<https://auth.geeksforgeeks.org/user/rajatjha/practice/>)

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```
1 for _ in range(int(input())):
2     n=int(input())
3     l=list(map(int,input().split()))
4     lis=l[:]
5     i=1
6     j=0
7     while(i<n):
8         while(j<i):
9             if l[j]<l[i]:
10                lis[i]=max(lis[i],l[i]+lis[j])
11                j+=1
12            i+=1
13            j=0
14     print(max(lis))
15
```

It is recommended to 'Compile & Test' your code before clicking 'Submit'!

[Compile & Test](#)[Submit](#)[Expected Output](#)

Compilation/Execution Result:

Correct Answer. ✓

Execution Time:0.05

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Need help with your code? Please use [ide.geeksforgeeks.org](https://ide.geeksforgeeks.org) (<https://ide.geeksforgeeks.org>), generate link and share the link here.

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**Kaushik Sarvesh** • 10 months ago

Please correct the description."It should be strictly increasing".

Otherwise this test case wont pass-

94

726 32 493 143 223 287 65 901 188 361 414 975 271 171 236 834 712 761 897 668 286 551 141 695 696 625 20 126 577 695

659 303 372 467 679 594 852 485 19 465 120 153 801 88 61 927 11 758 171 316 577 228 44 759 165 110 883 87 566 488 578

475 626 628 630 929 424 521 903 963 124 597 738 262 196 526 265 261 203 117 31 327 12 772 412 548 154 521 791 925

189 764 941 852 .

Strictly - 9788

Normal - 9794

8 ^ | v • Reply • Share ›



**Rohan Sharma** • 17 days ago

<https://ide.geeksforgeeks.o...> can anyone please tell me what is wrong with this code?

^ | v • Reply • Share ›



**Jyoti Nagwani** • 2 months ago

My code is failing for below test case:

42

468 335 501 170 725 479 359 963 465 706 146 282 828 962 492 996 943 828 437 392 605 903 154 293 383 422 717 719 896

448 727 772 539 870 913 668 300 36 895 704 812 323

Could anyone please help me figure out the problem .

<http://ide.geeksforgeeks.or...>

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**Jayesh Mishra** • 3 months ago

Did anyone got the test case "Answer to the Ultimate Question of Life, the Universe, and ...everything"?

^ | v • Reply • Share ›



**Deepak Gupta** • 3 months ago

<https://hackerranksolutionc...>

^ | v • Reply • Share ›



**Rushabha** • 3 months ago

This Test Case is not running with my program can somebody suggest where I am wrong

Input:

42

468 335 501 170 725 479 359 963 465 706 146 282 828 962 492 996 943 828 437 392 605 903 154 293 383 422 717 719 896

448 727 772 539 870 913 668 300 36 895 704 812 323

Its Correct output is:

6974

And Your Code's Output is:

10898

For checking my program click on the link:

<http://practice.geeksforgee...>

^ | v • Reply • Share ›



**spundir** → **Rushabha** • 2 months ago

I think you have to correct your code :  $t[i] = \max(t[i], t[i] + arr[j]);$

it should be  $t[i] = \max(t[i], t[j] + arr[i]);$

^ | v • Reply • Share ›



**Quandray** → **Rushabha** • 3 months ago

The link you provided doesn't work for me.

6974 is the sum of the subsequence

335 359 465 492 605 717 719 727 772 870 913.

How are you getting 10898?

^ | v • Reply • Share ›



**praveen chaudhary** • 3 months ago

Is this not in increasing order for this question?

[1,2,2,2,3]

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**Quandray** → **praveen chaudhary** • 3 months ago

No. The Expected Output for the following input is 6, which is the sum of 1+2+3

1

2

3

↕  
 1 2 2 2 3  
 ^ | v • Reply • Share ›



**Nishith Anand** • 4 months ago

<http://practice.geeksforgee...>

this is running for sample cases but giving a very absurd error when submitting the answe

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**Anmol Narang** • 4 months ago

If 42 case correct. My test cases are running fine but in 42 case it's showing the wrong answer. Below is the link to the code

<http://ide.geeksforgeeks.or...>

^ | v • Reply • Share ›



**spundir** → Anmol Narang • 2 months ago

Hi Anmol

I checked your code. Actually in your code sum [] does not have all the element from ar[]

You should have all the element by default:

```
for (int l=0; l<n;l++) sum[l]="ar[l];" try="" adding="" this="" code="">
```

^ | v • Reply • Share ›



**Ayushi Singh** • 5 months ago

<http://practice.geeksforgee...>

Segmentation fault !

Any suggestions ?

^ | v • Reply • Share ›



**Gaurav Hasiza** → Ayushi Singh • 5 months ago

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

```
cin>>a[i]
```

```
check condition i
```

^ | v • Reply • Share ›



**Ishan Tiwari** • 5 months ago

My code is running fine in my machine, but its giving wrong answer for the case

34

674 665 142 712 254 869 548 645 663 758 38 860 724 742 530 779 317 36 191 843 289 107 41 943 265 649 447 806 891 730

371 351 7 102

Link : <http://practice.geeksforgee...>

Please help

^ | v • Reply • Share ›



**Gaurav Hasiza** → Ishan Tiwari • 5 months ago

19 th line

```
a[i]>a[j] not a[i]>=a[j]
```

may be this will solve your purpose

^ | v • Reply • Share ›



**Evgeny Ratnikov** • 5 months ago

> the integers in the subsequence are sorted in increasing order

this description allows such sequence

1 1 2 2 3 3 etc

but the proper solution requires more strict approach

e.g. only 1 2 3 allowed

I think it would be better to change this phrase to smth like this

> the integers in the subsequence are unique and sorted in increasing order

^ | v • Reply • Share ›



**Shubham Soni** • 5 months ago

Is "42" case invalid....Please help

<http://ide.geeksforgeeks.or...>



^ | v • Reply • Share ›



**Nilesh Sinha** • 5 months ago

<http://ide.geeksforgeeks.or...> Abort Signal Error,Pls someone Help

^ | v • Reply • Share ›



**Mem** • 8 months ago

How do you run the test suite? Here is my function, works with the examples in the problem definition.

<http://ide.geeksforgeeks.or...>

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**Nithya** • a year ago

<http://code.geeksforgeeks.o...>

here is my code it passes the sample testcases.but when i submit it ,i m getting run time error.can anyone tell me why it happens??

^ | v • Reply • Share ›



**Dinesh Yadav** • a year ago

<http://code.geeksforgeeks.o...>

Why the 42nd test-case is failing, any issue with my code?

^ | v • Reply • Share ›



**Abhinav Gupta** • a year ago

My sample cases pass but not the '42' case. <http://code.geeksforgeeks.o...>

^ | v • Reply • Share ›



**heisenburg** • a year ago

make sure that the resulting sequence should be strictly increasing

^ | v • Reply • Share ›



**rajesh** • 2 years ago

why my code gives error like "correct 0.0376786876" <http://code.geeksforgeeks.o...>

^ | v • Reply • Share ›



**Himanshu Ramani** → rajesh • 2 years ago

It's just some bug in gfg. I also faced it many times, check in your profile you must have got score for it. So there is no error in your code.

Check it here <http://www.practice.geeksfo...>

^ | v • Reply • Share ›



**Shikhar** Mod → Himanshu Ramani • 2 years ago

We have updated our system. The browser that you are using must have cached some files. Try Ctrl + F5 to refresh.

Do let us know if that doesn't work.

1 ^ | v • Reply • Share ›



**Himanshu Ramani** → Shikhar • 2 years ago

Thanks! It worked... I think that numeral part was Time taken by program, it wasn't rendered by browser properly(due to cache).

1 ^ | v • Reply • Share ›



**Sruthi Talluri** • 2 years ago

I would like to request you to explain the question or the example in the question in a much detailed manner, as it is a little confusing. Though a very well thought question. Also the spelling of integers in the question is wrongly spelt as "intgers", I hope the change is in effect soon.

^ | v • Reply • Share ›



**Shikhar** Mod → Sruthi Talluri • 2 years ago

Thank you for your feedback. We have added explanation to the sample test case.

1 ^ | v • Reply • Share ›

