

Started on Tuesday, 19 March 2024, 8:55 PM

State Finished

Completed on Sunday, 24 March 2024, 3:11 PM

Time taken 4 days 18 hours

Marks 5.00/5.00

Grade **50.00** out of 50.00 (**100%**)

Name [ABINAUV R 2022-CSD-A](#)

Question **1**

Correct

Mark 1.00 out of 1.00

An array is monotonic if it is either **monotone increasing** or **monotone decreasing**.

An array A is monotone increasing if for all $i \leq j$, $A[i] \leq A[j]$. An array A is monotone decreasing if for all $i \leq j$, $A[i] \geq A[j]$.

Write a program if n array is monotonic or not. Print "True" if is monotonic or "False" if it is not. Array can be monotone decreasing.

Input Format:

First line n-get number of elements

Next n Lines is the array of elements

Output Format:

True ,if array is monotone increasing or decreasing.

otherwise False is printed

Sample Input1

4

5

6

7

8

Sample Output1

True

Sample Input2

4

6

5

4

3

Sample Output2

True

Sample Input 3

4

6

7

8

7

Sample Output3

False

For example:

Input	Result
4 6 5 4 3	True

Answer: (penalty regime: 0 %)

```

1 |
2 | n = int(input())
3 | arr = [int(input()) for _ in range(n)]
4 | increasing = True
5 | decreasing = True
6 |
7 | for i in range(len(arr) - 1):
8 |     if arr[i] > arr[i + 1]:
9 |         increasing = False
10 |    elif arr[i] < arr[i + 1]:
11 |        decreasing = False
12 | print(increasing or decreasing)

```

	Input	Expected	Got	
✓	4 6 5 4 3	True	True	✓
✓	4 3 5 7 9	True	True	✓
✓	4 1 6 9 2	False	False	✓
✓	4 9 6 4 2	True	True	✓

Question **2**

Correct

Mark 1.00 out of 1.00

You are given an array of N integers, A_1, A_2, \dots, A_N and an integer K. Return the of count of distinct numbers in all wir

Input :

1 2 1 3 4 3

3

Output :

2

3

3

2

Explanation

All windows of size K are

[1, 2, 1]

[2, 1, 3]

[1, 3, 4]

[3, 4, 3]

Answer: (penalty regime: 0 %)

```
1 arr = list(map(int, input().split()))
2 k = int(input())
3 distinct_counts = []
4 n = len(arr)
5
6 for i in range(n - k + 1):
7     window = arr[i:i + k]
8     distinct_count = len(set(window))
9     distinct_counts.append(distinct_count)
10 for count in distinct_counts:
11     print(count)
```

	Input	Expected	Got	
✓	1 2 1 3 4 3 3	2 3 3 2	2 3 3 2	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 3

Correct

Mark 1.00 out of 1.00

A teacher in a school entered marks in an array. But mistakenly the teacher repeated the marks twice in between the array to find how many elements are duplicated in an array

Input:

n – number of elements and the elements to be stored in an array.

Output:

d- number of duplicate elements

Sample Test Case**Input**

8

21 35 56 67 67 89 89 90

Output

2

Explanation

The numbers 67 and 89 are repeated , so count is 2

Answer: (penalty regime: 0 %)

```
1 n = int(input())
2 marks = list(map(int, input().split()))
3 duplicates = len(marks) - len(set(marks))
4 print(duplicates)
```

	Input	Expected	Got	
✓	8 21 35 56 67 67 89 89 90	2	2	✓
✓	12 56 56 78 78 90 90 95 97 97 99 99 89	5	5	✓
✓	4 67 67 89 90	1	1	✓

Passed all tests! ✓

Question **4**

Correct

Mark 1.00 out of 1.00

Consider the following program statement:

One needs to first input a set of N number of ALPHABETIC Strings each representing a name of a student in an array st. Assume each string can be Max. 40 Character Long. Subsequently, one needs to input Marks obtained by those students in an array marks [N]. Assume that studname[I] i.e. ith student in the list of student names has obtained Marks [I] in the Marks array. Need to find out and print the Max Marks obtained by a student and also print the name of the student who has obtained the Max Marks. Considering here both the arrays of size 5. Complete the program by filling up required code in the editable section.

Sample Test Cases

Test Case 1

Input

Amit

Bratin

Sandip

Sundar

Patrick

34

48

23

16

45

Output

48

Bratin

Test Case 2

Input

Amit

Bratin

Sandip

Sundar

Patrick

49

48

34

23

45

Output

49

Amit

For example:

Input	Result
Amit	90
Bratin	Bratin
Sandip	
Sundar	
Patrick	
89	
90	
45	
67	
82	

Answer: (penalty regime: 0 %)

```
1 studname = [input() for _ in range(5)]
2 marks = [int(input()) for _ in range(5)]
3 max_marks = max(marks)
4 max_index = marks.index(max_marks)
5 max_student_name = studname[max_index]
6 print(max_marks)
7 print(max_student_name)
```

	Input	Expected	Got	
✓	Amit	90	90	✓
	Bratin	Bratin	Bratin	
	Sandip			
	Sundar			
	Patrick			
	89			
	90			
	45			
	67			
	82			

Question **5**

Correct

Mark 1.00 out of 1.00

Write a program that reads integers from the user and stores them in a list. Your program should continue reading values until the user enters 0. Then it should display all of the values entered by the user (except for the 0) in ascending order, with one value appearing on each line. Use either the sort method or the sorted function to sort the list.

Sample Input

```
20
30
40
50
10
0
```

Sample Output

```
10
20
30
40
50
```

For example:

Input	Result
20	10
30	20
40	30
50	40
10	50
0	

Answer: (penalty regime: 0 %)

```
1 integer_list = []
2 while True:
3     value = int(input())
4     if value == 0:
5         break
6     integer_list.append(value)
7 integer_list.sort()
8
9 for value in integer_list:
10    print(value)
```

	Input	Expected	Got	
✓	20	10	10	✓
	30	20	20	
	40	30	30	
	50	40	40	
	10	50	50	
	0			
✓	22	11	11	✓
	33	22	22	
	44	33	33	
	11	44	44	
	55	55	55	
	0			

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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