Started on	Wednesday, 10 April 2024, 10:50 AM
State	Finished
Completed on	Friday, 12 April 2024, 12:52 PM
Time taken	2 days 2 hours
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	AVULA SNEYA DRITI 2022-CSD-A

Question **1**

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 studname [N]. Assume each string can be Max. 40 Character Long. Subsequently, one needs to input Marks obtained by those students in another array marks [N]. Assume that studname[I] i.e. ith student in the list of student names has obtained Marks [I] in the Marks List. You need to find out and print the Max Marks obtained by a student and also print the name of the student who has obtained this marks. Considering here both the arrays of size 5. Complete the program by filling up required code in 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 Bratin Sandip Sundar Patrick 89 90 45 67 82	90 Bratin

Answer: (penalty regime: 0 %)

```
# Input student names
studname = []
for i in range(5):
    studname.append(input())

# Input marks obtained by students
marks = []
for i in range(5):
    marks.append(int(input()))

# Find max marks and corresponding student name
max_marks = max(marks)
max_index = marks.index(max_marks)
max_student_name = studname[max_index]

# Print max marks and corresponding student name
print(max_marks)
print(max_student_name)
```

	Input	Expected	Got	
✔	Amit Bratin Sandip Sundar Patrick 89 90 45 67 82	90 Bratin	90 Bratin	✔
✔	Amit Bratin Sandip Sundar Patrick 34 48 23 16 45	48 Bratin	48 Bratin	✔

	Input	Expected	Got	
✔	Amit Bratin Sandip Sundar Patrick 49 48 34 23 45	49 Amit	49 Amit	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **2**

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 <= j, **A[i] <= A[j]**. An array A is monotone decreasing if for all i <= j, **A[i] >= 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 increasing or 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 %)

```
n=int(input())
arr= []
for i in range(0,n):
    x= int(input())
    arr.append(x)
sort = sorted(arr)
rev = sort.reverse()
if(sort==arr):
    print("True")
elif(rev==arr):
    print("True")
else:
    print("False")
```

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

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

Create a program that reads integers from the user until a -99 is entered. Once all of the integers have been read your program should display all of the negative numbers, followed by all of the zeros, followed by all of the positive numbers. Within each group, the numbers should be displayed in the same order that they were entered by the user. For example, if the user enters the values 3, -4, 1, 0, -1, 0, and -2 then your program should output the values -4, -1, -2, 0, 0, 3, and 1. Your program should display each value on its own line.(-99 is not included in the final display)

Sample Input

0

5

10

-15

-20

-99

Sample Output

-15

-20

0

5

10

For example:

Input	Result
0 5 10 -15 -20 -99	-15 -20 0 5 10

Answer: (penalty regime: 0 %)

```
numbers = []
while True:
    num = int(input(""))
    if num == -99:
        break
    numbers.append(num)
negative_numbers = [num for num in numbers if num < 0]
zeros = [num for num in numbers if num == 0]
positive_numbers = [num for num in numbers if num > 0]

for num in negative_numbers:
    print(num)
```

```
13
14 for num in zeros:
15     print(num)
16
17 for num in positive_numbers:
18     print(num)
```

	Input	Expected	Got	
✔	0 5 10 -15 -20 -99	-15 -20 0 5 10	-15 -20 0 5 10	✔
✔	10 20 30 -40 -50 0 -99	-40 -50 0 10 20 30	-40 -50 0 10 20 30	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **4**

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. Help the teacher 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 %)

```
n = int(input(""))
arr = [int(x) for x in input("").split()]

frequency = {}
duplicates = 0

for num in arr:
    if num in frequency:
        frequency[num] += 1
    else:
        frequency[num] = 1

for count in frequency.values():
    if count > 1:
        duplicates += 1
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! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

You are given an array of N integers, A1, A2, . . . , AN and an integer K. Return the of count of distinct numbers in all windows of size K.

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 %)

```
from collections import Counter

arr = [1, 2, 1, 3, 4, 3]
k = 3
n = len(arr)

for i in range(n - k + 1):
    window = arr[i:i+k]
    distinct_count = len(Counter(window))
    print(distinct_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.

◄ Week-05_MCQ

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