Started on	Wednesday, 20 March 2024, 10:34 PM
State	Finished
Completed on	Monday, 25 March 2024, 7:12 PM
Time taken	4 days 20 hours
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	SHEEBA SHARON A 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 <= 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())
diff=0
num1=int(input())
num2=int(input())
diff=num2-num1
num1=num2
m1=0
if(diff>0):
    m1=1
for i in range(n-2):
  num2=int(input())
  diff1=num2-num1
  m2=0
  if(diff1>0):
      m2=1
  if(diff1!=diff and (num1+diff>=num2 or num2+diff>=num1)):
      #print(diff," ",diff1)
      flag=1
  else:
      flag=0
  num1=num2
print(flag==0)
```

	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	✔
✔	3 2 1 4	False	False	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **2**

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 %)

```
n=input()
n=n.split(" ")
list1=[]
for li in n:
    list1.append(int(li))
k=int(input())
#print(list1)
length=len(list1)
for i in range(length-k+1):
    arr=[]
    for j in range(0,k):
        arr.append(list1[i+j])
    print(len(set(arr)),sep=" ")
```

	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

Given a list and we have to find the index/position of minimum and maximum elements of a list in Python.

```
if list = [10, 1, 2, 20, 3, 20]
```

then it must print

1

20

First line of input is no of elements in a list

Followed by n inputs one by one.

Output line 1 contains index of minimum element

Output line 2 contains index of maximum element

Note: if more than one element is minimum / maximum then first index will be considered.

For example:

Input	Result
3 10 20 15	0 1

Answer: (penalty regime: 0 %)

```
n=int(input())
list=[]
min=0
max=0
min_index=0
max_index=0
count=-1
for i in range(n):

    ele=int(input())
    if(min==0):
        min=ele
    list.append(ele)
for ele in list:
    count+=1
    if(ele>max):
        max_index=count
        max=ele
    elif(ele<min):
        min_index=count
        min=ele
print(min_index)
```

	Input	Expected	Got	
✔	3 10 20 15	0 1	0 1	✔
✔	5 12 15 85 65 11	4 2	4 2	✔
✔	6 6 5 4 3 2 1	5 0	5 0	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **4**

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 %)

```
list_neg=[]
list_pos=[]
n=0
while(n!=-99):
    n=int(input())
    if n!=-99:
        if n<0:
            list_neg.append(n)
        elif n>0:
            list_pos.append(n)
        elif n==0:
            zero=0
```

```
for li in list_neg:
    print(li,sep="\n")
print(zero)
for li in list_pos:
    print(li,sep="\n")
```

	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 **5**

Correct

Mark 1.00 out of 1.00

Program to print all the distinct elements in an array. Distinct elements are nothing but the unique (non-duplicate) elements present in the given array.

Input Format:

First line take an Integer input from stdin which is array length n.

Second line take n Integers which is inputs of array.

Output Format:

Print the Distinct Elements in Array in single line which is space Separated

Example Input:

5

1 2 2 3 4

Output:

1 2 3 4

Example Input:

6

1 1 2 2 3 3

Output:

1 2 3

For example:

Input	Result
5 1 2 2 3 4	1 2 3 4

Answer: (penalty regime: 0 %)

```
n=int(input())
list=[]
for i in range(n):
    ele=int(input())
    list.append(ele)
res=set(list)
for ele in res:
    print(ele,end=" ")

```

	Input	Expected	Got	
✔	5 1 2 2 3 4	1 2 3 4	1 2 3 4	✔
✔	6 1 1 2 2 3 3	1 2 3	1 2 3	✔
✔	5 11 22 11 22 11	11 22	11 22	✔
✔	10 1 2 3 4 5 1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

◄ Week-05_MCQ

Jump to...

WEEK-05-Extra ►