Started on	Friday, 17 May 2024, 1:28 PM
State	Finished
Completed on	Friday, 17 May 2024, 8:21 PM
Time taken	6 hours 52 mins
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	NAVEEN RAJ B 2022-CSD-A

Question **1**

Correct

Mark 1.00 out of 1.00

Write a Python program that takes two lists and returns True if they have at least one common member.

First line of input contains List 1

Second line of input contains List 2

Output is True if there is atleast one common element, false if no common elements

For example:

Input	Result
10 20 30 40 50 12 25 85 40 21	True

Answer: (penalty regime: 0 %)

```
# Input the lists
list1 = input().split()
list2 = input().split()

# Convert lists to sets for efficient membership testing
set1 = set(list1)
set2 = set(list2)

# Check if there is any common element
if set1.intersection(set2):
    print(True)
else:
    print(False)

```

	Input	Expected	Got	
✔	10 20 30 40 50 12 25 85 40 21	True	True	✔
✔	1 2 3 4 5 7 8 9 10 11	False	False	✔
✔	10 20 30 20 20 30	True	True	✔

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 %)

```
def distinct_numbers_in_windows(arr, k):
    n = len(arr)
    result = []

    for i in range(n - k + 1):
        window = arr[i:i+k]
        distinct_count = len(set(window))
        result.append(distinct_count)

    return result

arr = [1, 2, 1, 3, 4, 3]
k = 3
output = distinct_numbers_in_windows(arr, k)
for count in output:
    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

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):
    List.append(int(input()))
result=list(set(List))
for i in result:
    print(i,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.

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 %)

```
n=1
l = []

while n != -99:
    x = int(input())
    if(x ==  -99):
      break
    l.append(x)

l.sort()

for i in range(len(l) - 1):
```

```
    if(l[i] < 0  and l[i + 1] < 0):
        if(abs(l[i]) > abs(l[i + 1])):
            l[i],l[i + 1] = l[i + 1],l[i]

for i in l:
    print(i)

```

	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

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 %)

```
def count_duplicates(arr):
    unique_elements = set()
    duplicate_count = 0

    for num in arr:
        if num in unique_elements:
            duplicate_count += 1
        else:
            unique_elements.add(num)

    return duplicate_count

def main():
    n = int(input())
    elements = list(map(int, input().split()))

    duplicate_count = count_duplicates(elements)

    print( duplicate_count)

if __name__ == "__main__":
    main()
```

	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.

◄ Week-05_MCQ

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