CS23336-Introduction to Python Programming

Started on Monday, 21 October 2024, 10:17 PM

Finished

Completed on Monday, 21 October 2024, 11:18 PM

Time taken 1 hour 1 min Marks 10.00/10.00

> **Grade 100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00 Flag question

Question text

Given an array of strings words, return the words that can be typed using letters of the alphabet on only one row of American keyboard like the image below.

In the American keyboard:

- the first row consists of the characters "gwertyuiop",
- the second row consists of the characters "asdfghjkl", and
- the third row consists of the characters "zxcvbnm".



Example 1:

```
Input: words = ["Hello", "Alaska", "Dad", "Peace"]
Output: ["Alaska","Dad"]
Example 2:
Input: words = ["omk"]
Output: []
Example 3:
Input: words = ["adsdf","sfd"]
```

For example:

Output: ["adsdf","sfd"]

Input Result

```
Hello Alaska
Alaska Dad
Dad
Peace
         adsfd
adsfd
         afd
```

```
l=word.lower()
    if all(char in row for char in l):
```

Input Expected Got

```
Hello
Alaska
Dad
                  Alaska
                  Dad
Dad
Peace
1
       No words
                  No words
omk
2
       adsfd
                  adsfd
adsfd
                  afd
       afd
afd
```

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 2

Correct
Mark 1.00 or

Mark 1.00 out of 1.00

Flag question

Question text

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

12234

Output:

1234

Example Input:

6

112233

```
Output:
```

1 2 3

For example:

Input Result

5 1 2 1 2 3 4 3

```
Answer:(penalty regime: 0 %)

1    n=int(input())
  6 a=set(a)
```

Feedback

Input Expected Got

```
5
1
2
      1 2 3 4 1 2 3 4
3
4
6
1
1
2
2
3
      1 2 3 1 2 3
3
5
11
22
      11 22
               11 22
11
22
11
10
1 2 3
4
5
      1 2 3 4 5 1 2 3 4 5
2
```

```
4
5
```

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 3

Correct
Mark 1.00 out of 1.00

Flag question

Question text

Check if a set is a subset of another set.

Example:

Sample Input1:

mango apple

mango orange

mango

output1:

yes

set3 is subset of set1 and set2

input2:

mango orange

banana orange

grapes

output2:

no



For example:

Test Input Result

```
mango apple mango orange set3 is subset of set1 and set2

mango orange banana orange No grapes
```

Test	t Input	Expected	Got
1	mango apple mango orange mango	yes set3 is subset of set1 and set	yes t2 set3 is subset of set1 and set2
2	mango orange banana orange grapes	e No	No

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 4

Correct
Mark 1.00 out of 1.00

Flag question

Question text

Given a tuple and a positive integer k, the task is to find the count of distinct pairs in the tuple whose sum is equal to K.

Examples:

```
Input: t = (5, 6, 5, 7, 7, 8), K = 13

Output: 2

Explanation:

Pairs with sum K(=13) are \{(5, 8), (6, 7), (6, 7)\}.

Therefore, distinct pairs with sum K(=13) are \{(5, 8), (6, 7)\}.

Therefore, the required output is 2.
```

For example:

Input Result

```
1,2,1,2,5
3
1,2
0
```

Input Expected Got

Passed all tests!

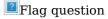
Correct

Marks for this submission: 1.00/1.00.

Question 5

Correct

Mark 1.00 out of 1.00



Question text

You are given an integer tuple nums containing distinct numbers. Your task is to perform a sequence of operations on this tuple until it becomes empty. The operations are defined as follows:

- 1. If the first element of the tuple has the smallest value in the entire tuple, remove it.
- 2. Otherwise, move the first element to the end of the tuple.

You need to return an integer denoting the number of operations required to make the tuple empty.

Constraints

- The input tuple nums contains distinct integers.
- The operations must be performed using tuples and sets to maintain immutability and efficiency.
- Your function should accept the tuple nums as input and return the total number of operations as an integer.

Example:

```
Input: nums = (3, 4, -1)
Output: 5

Explanation:

Operation 1: [3, 4, -1] -> First element is not the smallest, move to the end -> [4, -1, 3]

Operation 2: [4, -1, 3] -> First element is not the smallest, move to the end -> [-1, 3, 4]

Operation 3: [-1, 3, 4] -> First element is the smallest, remove it -> [3, 4]

Operation 4: [3, 4] -> First element is the smallest, remove it -> [4]

Operation 5: [4] -> First element is the smallest, remove it -> [1]

Total operations: 5
```

For example:

Test Result
print(count_operations((3, 4, -1))) 5

Reset answer

Test	Expected Got	
<pre>print(count_operations((3, 4, -1)))</pre>	5	5
<pre>print(count_operations((1, 2, 3, 4, 5)))</pre>	5	5
<pre>print(count_operations((5, 4, 3, 2, 1)))</pre>	15	15
<pre>print(count_operations((42,)))</pre>	1	1
<pre>print(count operations((-2, 3, -5, 4, 1)))</pre>	11	11

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 6

Correct
Mark 1.00 out of 1.00

Flag question

Question text

Write a program to eliminate the common elements in the given 2 arrays and print only the non-repeating elements and the total number of such non-repeating elements.

Input Format:

The first line contains space-separated values, denoting the size of the two arrays in integer format respectively.

The next two lines contain the space-separated integer arrays to be compared.

Sample Input:

5 4

12865

2 6 8 10

Sample Output:

1510

3

Sample Input:

```
5 5
```

12345

12345

Sample Output:

NO SUCH ELEMENTS

For example:

```
Input Result
```

```
5 4
1 2 8 6 5 1 5 10
2 6 8 10 3
5 5
1 2 3 4 5 NO SUCH ELEMENTS
1 2 3 4 5
```

Answer:(penalty regime: 0 %)

```
1 sl,s2=map(int,input().split())
2 al=list(map(int,input().split()))
3 a2=list(map(int,input().split()))
4 c=set(al+a2)
5 ce=set(al)&set(a2)
6 n=sorted(c-ce)
7 - if n:
8     print(*n)
9     print(len(n))
10 - else:
11     print("NO SUCH ELEMENTS")
```

Feedback

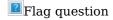
Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 7

Correct Mark 1.00 out of 1.00



Question text

There is a malfunctioning keyboard where some letter keys do not work. All other keys on the keyboard work properly.

Given a string text of words separated by a single space (no leading or trailing spaces) and a string brokenLetters of all distinct letter keys that are broken, return the number of words in text you can fully type using this keyboard.

Example 1:

Input: text = "hello world", brokenLetters = "ad"

Output:

Explanation: We cannot type "world" because the 'd' key is broken.

For example:

	Input	Result
hello world ad		1

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Answer:(penalty regime: 0 %)

```
1 - def function(a:str,b:str)->int:
       a=a.lower()
       b1=set(b)
   b=input()
print(function(a,b))
```

Feedback

Input	Expected	l Got
hello world ad	1	1
Welcome to REC e	1	1
Faculty Upskilling in Python Programmin ak	^g 2	2

Passed all tests!

Marks for this submission: 1.00/1.00.

Question 8

Correct
Mark 1.00 out of 1.00
Flag question

Question text

Given an array of integers nums containing n + 1 integers where each integer is in the range [1, n] inclusive. There is only **one repeated number** in nums, return this repeated number. Solve the problem using set.

Example 1:

Input: nums = [1,3,4,2,2]
Output: 2
Example 2:
Input: nums = [3,1,3,4,2]
Output: 3

For example:

Input Result

1 3 4 4 2 4

Answer:(penalty regime: 0 %)

Feedback

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 9

Correct
Mark 1.00 out of 1.00

Flag question

Question text

Coders here is a simple task for you, Given string str. Your task is to check whether it is a binary string or not by using python set.

Examples:

Input: str = "01010101010"

Output: Yes

Input: str = "REC101"

Output: No

For example:

Input Result

01010101010 Yes

010101 10101 No

Feedback

Input Expected Got

01010101010 Yes Yes

REC123 No No
010101 10101 No No

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 10

Correct
Mark 1.00 out of 1.00

Flag question

Question text

The DNA sequence is composed of a series of nucleotides abbreviated as 'A', 'C', 'G', and 'T'.

• For example, "ACGAATTCCG" is a **DNA sequence**.

When studying DNA, it is useful to identify repeated sequences within the DNA.

Given a string s that represents a **DNA sequence**, return all the 10-letter-long sequences (substrings) that occur more than once in a DNA molecule. You may return the answer in any order.

Example 1:

Input: s = "AAAAACCCCCAAAAACCCCCCAAAAAGGGTTT" Output: ["AAAAACCCCC", "CCCCCAAAAA"]

Example 2:

Input: s = "AAAAAAAAAAA" Output: ["AAAAAAAAA"]

For example:

Input Result

AAAAACCCCCAAAAAGGGTTT AAAAACCCCCC

Answer:(penalty regime: 0 %)

```
3 p=set()
```

Feedback

Input **Expected** Got AAAAACCCCCAAAAAACCCCCCAAAAAAGGGTTT AAAAAACCCCC AAAAAACCCCC

AAAAAAAAAAA ΑΑΑΑΑΑΑΑΑ ΑΑΑΑΑΑΑΑΑ

CCCCCAAAAA CCCCCAAAAA

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

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