

```

1  #Dictionaries Challenge 24: Frequency Analysis App
2  from collections import Counter
3
4  print("Welcome to the Frequency Analysis App")
5
6  #List of elements to remove from all text for analysis
7  non_letters = ['1','2','3','4','5','6','7','8','9','0',' ','.',',','?','!','"',"'",':',';',',','(',')','%','$','&','#','\n','\t']
8
9  #Information for the first key key_phrase_1
10 key_phrase_1 = input("Enter a word or phrase to count the occurrence of each letter: ").lower().strip()
11
12 #Removing all non letters from key_phrase_1
13 for non_letter in non_letters:
14     key_phrase_1 = key_phrase_1.replace(non_letter, '')
15
16 total_occurrences = len(key_phrase_1)
17
18 #Create a counter object to tally the number of each letter
19 letter_count = Counter(key_phrase_1)
20
21 #Determine the frequency analysis for the message
22 print("\nHere is the frequency analysis from key phrase 1: ")
23 print("\n\tLetter\t\tOccurrence\tPercentage")
24 for key, value in sorted(letter_count.items()):
25     percentage = 100*value/total_occurrences
26     percentage = round(percentage, 2)
27     print("\t" + key + "\t\t" + str(value) + "\t\t" + str(percentage) + "%")
28
29 #Make a list of letters from highest occurrence to lowest
30 ordered_letter_count = letter_count.most_common()
31 key_phrase_1_ordered_letters = []
32 for pair in ordered_letter_count:
33     key_phrase_1_ordered_letters.append(pair[0])
34
35 #Print the list
36 print("\nLetters ordered from highest occurrence to lowest: ")
37 for letter in key_phrase_1_ordered_letters:
38     print(letter, end='')
39
40 #Information for the second key key_phrase_2
41 key_phrase_2 = input("\n\nEnter a word or phrase to count the occurrence of each letter: ").lower().strip()
42
43 #Removing all non letters from key_phrase_2
44 for non_letter in non_letters:
45     key_phrase_2 = key_phrase_2.replace(non_letter, '')
46
47 total_occurrences = len(key_phrase_2)
48
49 #Create a counter object to tally the number of each letter
50 letter_count = Counter(key_phrase_2)
51
52 #Determine the frequency analysis for the message
53 print("\nHere is the frequency analysis from key phrase 2: ")
54 print("\n\tLetter\t\tOccurrence\tPercentage")
55 for key, value in sorted(letter_count.items()):
56     percentage = 100*value/total_occurrences
57     percentage = round(percentage, 2)
58     print("\t" + key + "\t\t" + str(value) + "\t\t" + str(percentage) + "%")
59
60 #Make a list of letters from highest occurrence to lowest
61 ordered_letter_count = letter_count.most_common()

```

```
62 key_phrase_2_ordered_letters = []
63 for pair in ordered_letter_count:
64     key_phrase_2_ordered_letters.append(pair[0])
65
66 #Print the list
67 print("\nLetters ordered from highest occurrence to lowest: ")
68 for letter in key_phrase_2_ordered_letters:
69     print(letter, end='')
```