07 – Tuple, Set and Dictionary and its Operations

Ex. No.: 7.1 Date:

Register No.: 2116231501105 Name: Nandhini Prakash

```
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]

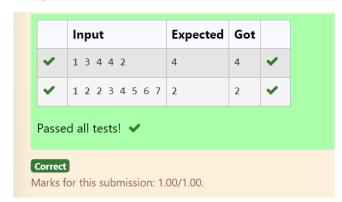
Output: 3

For example:

Input Result

1 3 4 4 2 4
```

Output:



Ex. No.: 7.2

Register No.: 2116231501105

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

Answer: (penalty regime: 0 %)

```
1  a = list(set(input()))
2 v if ' ' in a:
3     print("No")
4 v elif '1' in a and '0' in a:
5     print("Yes")
6 v else:
7     print("No")
```

Output:

	Input	Expected	Got	
~	01010101010	Yes	Yes	~
~	REC123	No	No	~
~	010101 10101	No	No	~
Passe	ed all tests! 🗸			
Correct Marks t	for this submission	n: 1.00/1.00.		

Date:

Name: Nandhini Prakash

Ex. No.: 7.3 Date:

Register No.: 2116231501105 Name: Nandhini Prakash

```
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 = "AAAAAACCCCCAAAAACCCCCCAAAAAAGGGTTT"
Output: ["AAAAAACCCCC", "CCCCCAAAAA"]

Example 2:

Input: s = "AAAAAAAAAAAAAA"
Output: ["AAAAAAAAAAAAAA"]
```

Program:

```
a = input()
 1
    res = [a[i:j] for i in range(len(a))
           for j in range(i+1, len(a)+1)]
 3
   res = list(set(res))
 4
    r = []
 5
 6 v for i in res:
        if(len(i) == 10):
 7 🔻
             if(i[::-1] in res):
 8 v
                 r.append(i)
 9
                 r.append(i[::-1])
10
11
                 break
12
   r.sort()
13 \vee if(r[0] == r[1]):
        print(r[0])
14
15 v else:
        for i in r:
16 🔻
             print(i)
17
```

Output:

	Input	Expected	Got	
~	AAAAACCCCCAAAAACCCCCCAAAAAGGGTTT	AAAAACCCCC CCCCCAAAAA	AAAAACCCCC CCCCCAAAAA	~
~	АААААААААА	АААААААА	АААААААА	~

Passed all tests! 🗸

Correct

Marks for this submission: 1.00/1.00.

Ex. No.: 7.4 Date:

Register No.: 2116231501105 Name: Nandhini Prakash

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:

1

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

For example:

Input	Result
hello world ad	1
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```
1 a = input()
2 b = list(input())
3 1 = a.split()
   c = 0
    f = 0
6 v for i in 1:
        for j in b:
 7 🔻
            if j not in i.lower():
8 v
 9
                 f = 1
10 🔻
            else:
11
                 f = 0
12
                 break
        if(f == 1):
13 v
            c = c + 1
14
   print(c)
15
```

Output:

	Input	Expected	Got	
~	hello world ad	1	1	~
~	Welcome to REC	1	1	~
~	Faculty Upskilling in Python Programming ak	2	2	~

Correct

Marks for this submission: 1.00/1.00.

Ex. No.: 7.5

Register No.: 2116231501105

Date:

Name: Nandhini Prakash

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 \mathbf{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	1
1,2	0

Program:

Output:

	Input	Expected	Got	
~	5,6,5,7,7,8 13	2	2	~
~	1,2,1,2,5	1	1	~
~	1,2	0	0	~
Passed all tests! ✔				
Correct Marks for this submission: 1.00/1.00.				