Started on	Friday, 24 May 2024, 9:09 AM
State	Finished
Completed on	Saturday, 25 May 2024, 2:14 PM
Time taken	1 day 5 hours
Marks	5.00/5.00
Grade	**100.00** out of 100.00

Question **1**

Correct

Mark 1.00 out of 1.00

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 = "AAAAAAAAAAAAA"
Output: ["AAAAAAAAAA"]
```

For example:

Input	Result
AAAAACCCCCAAAAACCCCCCAAAAAGGGTTT	AAAAACCCCC CCCCCAAAAA

Answer: (penalty regime: 0 %)

```
def Sequences(s):
    if len(s) < 10:
        return []
    count = {}
    result = []
    for i in range(len(s) - 9):
        sequence = s[i:i+10]
        if sequence in count:
            count[sequence] += 1
        else:
            count[sequence] = 1
    for sequence, c in count.items():
        if c > 1:
            result.append(sequence)
    return result
s = input()
result = Sequences(s)

for sequence in result:
    print(sequence)
```

	Input	Expected	Got	
✓	AAAAACCCCCAAAAACCCCCCAAAAAGGGTTT	AAAAACCCCC CCCCCAAAAA	AAAAACCCCC CCCCCAAAAA	✓
✓	AAAAAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

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 %)

```
n=str(input())
l=[]
for i in n:
    if i=="0" or i=="1":

        l.append(i)

if len(l)==len(n):
    print("Yes")
else:
    print("No")

```

	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 **3**

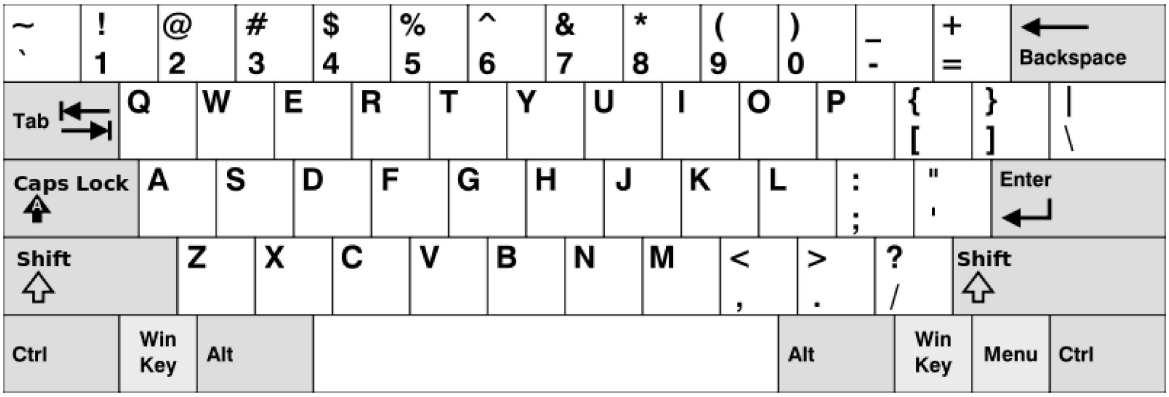
Correct

Mark 1.00 out of 1.00

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 `"qwertyuiop"`,
- 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"]
Output: ["adsdf","sfd"]
```

For example:

Input	Result
4 Hello Alaska Dad Peace	Alaska Dad
2 adsfd afd	adsfd afd

Answer: (penalty regime: 0 %)

```
n=int(input())

words=[]
for i in range(n):
    words.append(input())



row1 = set("qwertyuiop")
row2 = set("asdfghjkl")
row3 = set("zxcvbnm")

```

```
13
14 result = []
15
16 for word in words:
17     lower_word = set(word.lower())  # Convert word to lowercase and create a set of characters
18     if lower_word <= row1 or lower_word <= row2 or lower_word <= row3:
19         result.append(word)
20 if result != []:
21     for i in range(0,int(len(result))):
22         y="".join(result[i])
23         print(y)
24 else:
25     print("No words")
26
27
```

	Input	Expected	Got	
✓	4 Hello Alaska Dad Peace	Alaska Dad	Alaska Dad	✓
✓	1 omk	No words	No words	✓
✓	2 adsfd afd	adsfd afd	adsfd afd	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

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 %)

```
a=[]
b = input()
a.append(b)
b = str(a)
b.split()
c=[]
d = []
for i in b:
    if i not in c:
        if chr(48)<i<chr(57):
            c.append(i)
    elif i in c:
        if chr(48)<i<chr(57):
            d.append(i)
print("".join(d))
```

	Input	Expected	Got	
✓	1 3 4 4 2	4	4	✓
✓	1 2 2 3 4 5 6 7	2	2	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

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
1,2 0	0

Answer: (penalty regime: 0 %)

```
n=input()
k=int(input())
lst=()
for i in str(n):
    if i != ",":
        lst+=(i,)
tup=lst


seen = set()
pairs = set()

for number in tup:
    for j in range(1,len(tup)):
        if k== int(number)+ int(tup[j]):


            # Add the pair as a sorted tuple to ensure uniqueness
            seen.add(number)
            seen.add(tup[j])


print(int(len(seen))//2)
```

	Input	Expected	Got	
✓	5,6,5,7,7,8 13	2	2	✓
✓	1,2,1,2,5 3	1	1	✓
✓	1,2 0	0	0	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◄ Week7_MCQ

Jump to...

Dictionary ►