Started on	Thursday, 6 June 2024, 7:11 PM
State	Finished
Completed on	Thursday, 6 June 2024, 9:43 PM
Time taken	2 hours 32 mins
Marks	5.00/5.00
Grade	**100.00** out of 100.00

Question **1**

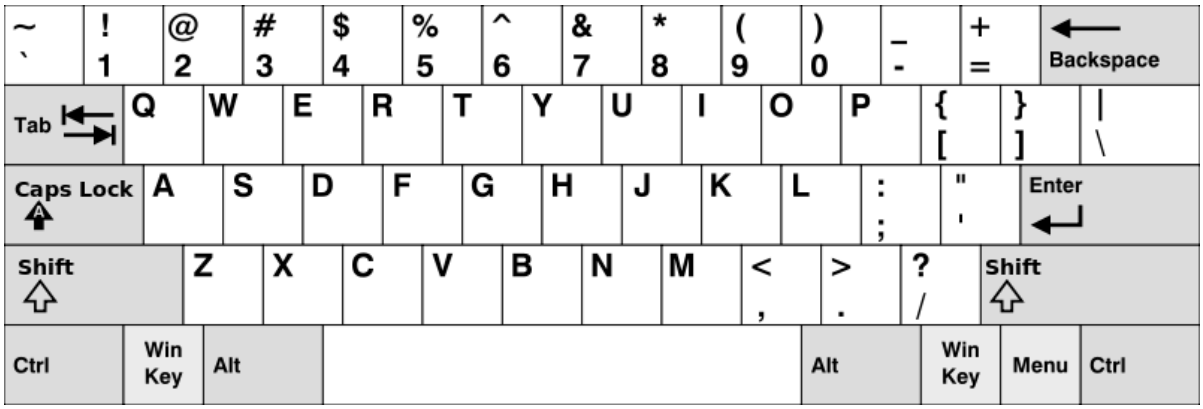
Correct

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 %)

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```
x=int(input())
y=[]
for i in range (x):
    str=input()
    y.append(str)
a=set("qwertyuiop")
b=set("asdfghjkl")
c=set("zxcvbnm")
ans=[]
for j in y:
    i=j.lower()
    if set(i)<=a or set(i)<=b or set(i)<=c:
        ans.append(j)
if len(ans)==0:
    print("No words")
else:
    for i in ans:
        print(i)
```

	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 **2**

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 %)

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```
x=input()
y=int(input())
a=x.split(',')
t=tuple(int(num) for num in a)
ans=set()
for i in range(len(t)):
    for j in range(i+1, len(t)):
        if t[i]+t[j]==y:
            pair=(min(t[i],t[j]),max(t[i],t[j]))
            if pair not in ans:
                ans.add((t[i],t[j]))
print(len(ans))
```

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

	Input	Expected	Got	
✓	1,2 0	0	0	✓

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 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 %)

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```
x=input()
y=x.split()
z=list(y)
a=[]
b=[]
for element in z:
    if element in a:
        b.append(element)
    else:
        a.append(element)
c=' '.join(map(str,b))
print(c)
```

	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 **4**

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 %)

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```
s=input()
substring_counts={}
for i in range(len(s)-9):
    substring=s[i:i+10]
    substring_counts[substring]=substring_counts.get(substring,0)+1
repeated_substrings=[substring for substring,count in substring_counts.items() if count>1]
for substring in repeated_substrings:
    print(substring)
```

	Input	Expected	Got	
✓	AAAAACCCCCAAAAACCCCCCAAAAAGGGTTT	AAAAACCCCCCCCCCAAAAA	AAAAACCCCCCCCCCAAAAA	✓
✓	AAAAAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **5**

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 %)

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```
a=input()
try:
    int(a)
    print("Yes")
except:
    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.

◄ Week7_MCQ

Jump to...

Dictionary ►