Started on	Friday, 24 May 2024, 7:30 PM
State	Finished
Completed on	Saturday, 25 May 2024, 9:51 AM
Time taken	14 hours 20 mins
Marks	5.00/5.00
Grade	**100.00** out of 100.00

Question **1**

Correct

Mark 1.00 out of 1.00

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

1 2 8 6 5

2 6 8 10

Sample Output:

1 5 10

3

Sample Input:

5 5

1 2 3 4 5

1 2 3 4 5

Sample Output:

NO SUCH ELEMENTS

For example:

Input	Result
5 4 1 2 8 6 5 2 6 8 10	1 5 10 3

Answer: (penalty regime: 0 %)

```
def eliminate_common_elements(arr1, arr2):
    non_repeating_elements = set(arr1) ^ set(arr2)
    return non_repeating_elements, len(non_repeating_elements)

def main():
    size1, size2 = map(int, input().split())
    arr1 = list(map(int, input().split()))
    arr2 = list(map(int, input().split()))

    non_repeating_elements, count = eliminate_common_elements(arr1, arr2)

    print(*non_repeating_elements)
    print(count)

if __name__ == "__main__":
    main()
```

	Input	Expected	Got	
✓	5 4 1 2 8 6 5 2 6 8 10	1 5 10 3	1 5 10 3	✓
✓	3 3 10 10 10 10 11 12	11 12 2	11 12 2	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **2**

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 %)

```
def find_duplicate(nums):
    seen = set()
    for num in nums:
        if num in seen:
            return num
        else:
            seen.add(num)


nums = list(map(int, input("").split()))


duplicate_number = find_duplicate(nums)


print(duplicate_number)
```

	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 **3**

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 %)

```
s = input()
A = set()
B = set()
for i in range(len(s) - 9):
    C = s[i:i + 10]
    if C in A:
        B.add(C)
    else:
        A.add(C)
for seq in B:
    print(seq)
```

	Input	Expected	Got	
✓	AAAAACCCCCAAAAACCCCCCAAAAAGGGTTT	AAAAACCCCC CCCCCAAAAA	AAAAACCCCC CCCCCAAAAA	✓

	Input	Expected	Got	
✓	AAAAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

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:

1

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 %)

```
def countWords(text, brokenLetters):
    brokenSet = set(brokenLetters)
    words = text.split(' ')
    count = 0
    for word in words:
        if not set(word) & brokenSet:
             count += 1
           #if any(letter in word for letter in brokenLetters):
              #continue
           #else:
            #count += 1
    return count
text = input().lower()
brokenLetters = input()
print(countWords(text, brokenLetters))
```

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

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 %)

```
def check_binary(str):
    # Create a set of characters in the string
    char_set = set(str)

    # Check if the set contains only '0' and '1'
    for char in char_set:
        if char not in {'0', '1'}:
            return "No"
    return "Yes"

str = input()

# Test the function
print(check_binary(str))  # Output: Yes
```

	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

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Dictionary ►