

Examples:

Input: str = "0101010101010"

Output: Yes

Input: str = "REC101"

Output: No

Input	Result
01010101010	Yes
010101 10101	No

Ex. No.	:	8.1	Date:
Register No	.:		Name:

Binary String

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.

PROGRAM:

```
a=input()
```

```
if all(i in '10' for i in a):
    print("Yes")
else:
    print("No")
```

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.

Input	Result
1,2,1,2,5	1
1,2	0

Ex. No. : 8.2 Date:

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Check Pair

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.

Program:

t=tuple(input().split(','))
k=int(input())
d=[]
for i in t:
for j in t:
if int(i)+int(j)==k:
if (i,j) not in d:
d.append((i,j))
print(len(d)//2)

 $\textbf{Input:} \ \mathbf{s} = \texttt{"AAAAACCCCCAAAAAACCCCCCAAAAAGGGTTT"}$

Output: ["AAAAACCCCC","CCCCCAAAAA"]

Example 2:

Input: s = "AAAAAAAAAAAA" Output: ["AAAAAAAAA"]

Input	Result
AAAAACCCCCAAAAACCCCCCAAAAAGGGTTT	AAAAACCCCC CCCCCAAAAA

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DNA Sequence

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**.

Program:

```
s=input()
sub={}
r=[]
for i in range(len(s)-9):
str=s[i:i+10]
if str in sub:
sub[str]+=1
else:
sub[str]=1
if(sub[str]==2):
r.append(str)

for x in r:
print(x)
```

Input: nums = [1,3,4,2,2]

Output: 2

Example 2:

Input: nums = [3,1,3,4,2]

Output: 3

Input	Result
13442	4

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Print repeated no

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 \underline{set} .

Program:

n=input().split()

for i in n:

<u>if n.count(i)>=2:</u>

print(i)

break

Sample Input:

5 4

12865

26810

Sample Output:

15 10

3

Sample Input:

5 5

 $1\ 2\ 3\ 4\ 5$

 $1\ 2\ 3\ 4\ 5$

Sample Output:

NO SUCH ELEMENTS

Input	Result
54 12865 26810	1 5 10 3

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Remove repeated

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.

Program:

```
sizes = input().split()
size1 = int(sizes[0])
size2 = int(sizes[1])
array1 = input().split()
array2 = input().split()
array1 = list(map(int, array1))
array2 = list(map(int, array2))
set1 = set(array1)
set2 = set(array2)
common_elements = set1.intersection(set2)
unique_set1 = set1 - common_elements
unique_set2 = set2 - common_elements
unique_elements = unique_set1.union(unique_set2)
if unique_elements:
```

```
unique_elements_list = sorted(list(unique_elements))
print(" ".join(map(str, unique_elements_list)))
print(len(unique_elements_list))
else:
print("NO SUCH ELEMENTS")
```

Input: text = "hello world", brokenLetters = "ad"

Output:

1

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

Input	Result
hello world ad	1

Ex. No. : 8.6 Date:

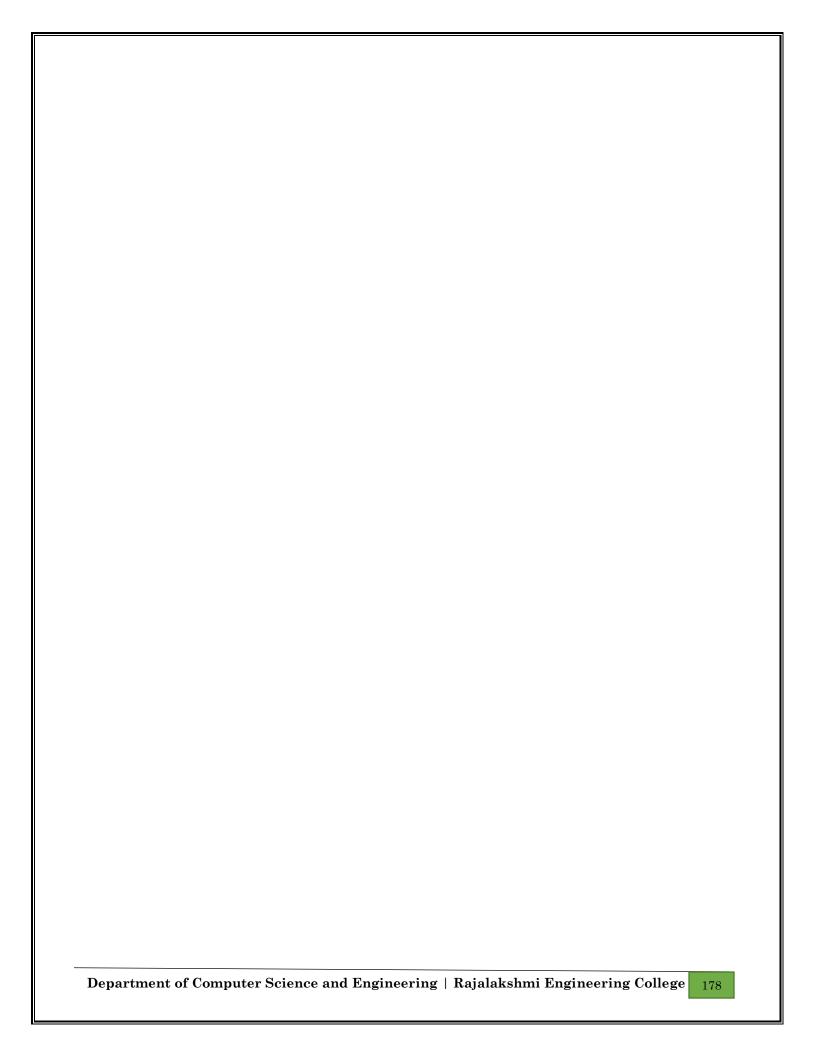
Register No.: Name:

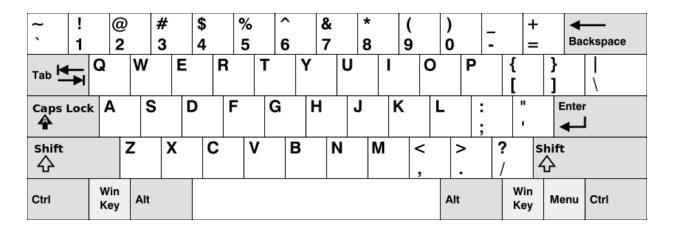
Malfunctioning Keyboard

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.

```
Program:
a=input().lower().split()
b=input()
c=0
for i in a:
flag=0
for j in i:
if j in b:
flag=1
break
if(flag==0):
c+=1
print(c)
```





Input: words = ["Hello","Alaska","Dad","Peace"]

Output: ["Alaska","Dad"]

Example 2:

Input: words = ["omk"]

Output: []
Example 3:

Input: words = ["adsdf","sfd"]
Output: ["adsdf","sfd"]

Input	Result
4 Hello Alaska Dad Peace	Alaska Dad

Ex. No. : 8.7 Date:

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American keyboard

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".

Program:

```
n=int(input())
f=0
a=[input() for i in range(n)]
l1=['qwertyuiop','asdfghjkl','zxcvbnm']
l=[[j for j in i] for i in l1]
for i in a:
n=[j for j in i.lower()]
#print(sorted(set(l[1]) | set(n))==sorted(set(l[1])))
#print(set(l[1]),set(n))
if set(n) | set(l[0])==set(l[0]):
f=1
print(i)
continue
elif set(n) | set(l[1])==set(l[1]):
```

```
f=1
print(i)
continue
elif set(n) | set(l[2])==set(l[2]):
f=1
print(i)
continue
if not f:
print('No words')
```

