05 - Strings in Python

Ex. No. : 5.1 **Date: 17.04.24**

Register No.: 231801086 **Name: KRITHIKA.M.A**

String characters balance Test

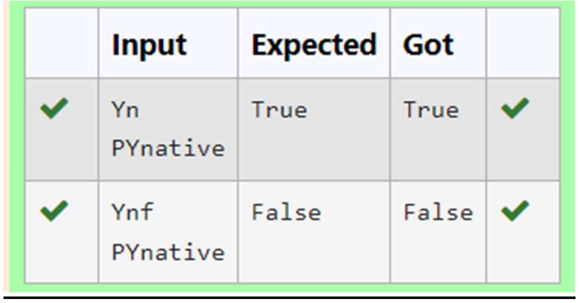
Write a program to check if two strings are balanced. For example, strings s1 and s2 are balanced if all the characters in the s1 are present in s2. The character's position doesn't matter. If balanced display as "true" ,otherwise "false".

For example:

Input	Result
Yn PYnative	True

Program:

```
a=input()
b=input()
if a in b or b in a:
    print("True")
else:
    print("False")
```



	Input	Expected	Got	
✓	Yn PYnative	True	True	✓
✓	Ynf PYnative	False	False	✓

Ex. No. : 5.2 **Date: 17.04.24**

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Decompress the String

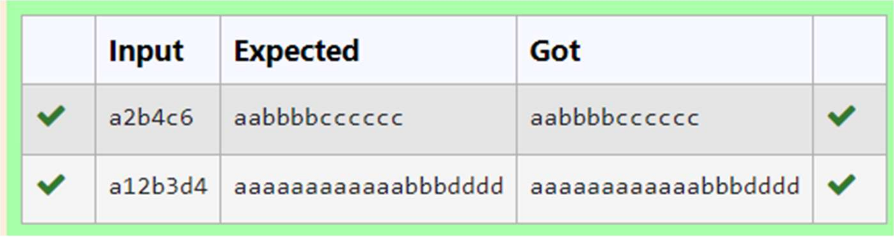
Assume that the given string has enough memory. Don't use any extra space(IN-PLACE)

Sample Input 1
a2b4c6

Sample Output 1
aabbbbcccccc

Program:

```
s=input()
r=""
i=0
while i< len(s):
    char=s[i]
    i+=1
    num=""
    while i<len(s) and s[i].isdigit():
        num+=s[i]
        i+=1
    r+=char*int(num)
print(r)
```



	Input	Expected	Got	
✓	a2b4c6	aabbbbcccccc	aabbbbcccccc	✓
✓	a12b3d4	aaaaaaaaaaaabbbdddd	aaaaaaaaaaaabbbdddd	✓

Ex. No. : 5.3 **Date: 17.04.24**

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First N Common Chars

Two string values S1, S2 are passed as the input. The program must print first N characters present in S1 which are also present in S2.

Input Format:

The first line contains S1.
The second line contains S2.
The third line contains N.

Output Format:

The first line contains the N characters present in S1 which are also present in S2.

Boundary Conditions:

2 <= N <= 10
2 <= Length of S1, S2 <= 1000

Example Input/Output 1:

Input:

abcbde
cdefghbb
3

Output:

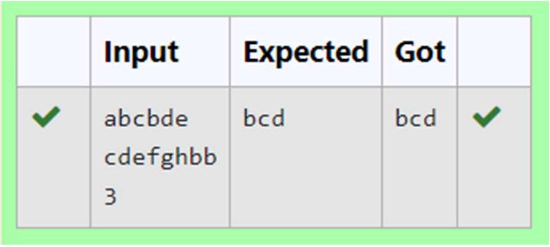
bcd

Note:

b occurs twice in common but must be printed only once.

Program:

```
a=input()
b=input()
n=int(input())
bset=set(b)
cc=[]
c=0
for i in a:
    if i in bset and i not in cc:
        cc.append(i)
        c=c+1
        if(c==n):
            break
s=''.join(cc)
print(s)
```



	Input	Expected	Got	
✓	abcbde cdefghbb 3	bcd	bcd	✓

Ex. No. : 5.4 Date: 17.04.24

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Username Domain Extension

Given a string S which is of the format USERNAME@DOMAIN.EXTENSION, the program must print the EXTENSION, DOMAIN, USERNAME in the reverse order.

Input Format:
The first line contains S.

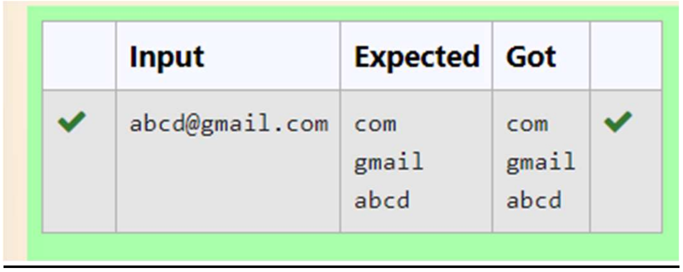
Output Format:
The first line contains EXTENSION.
The second line contains DOMAIN.
The third line contains USERNAME.

Boundary Condition:
1 <= Length of S <= 100

Example Input/Output 1:
Input:
vijayakumar.r@rajalakshmi.edu.in
Output:
edu.in
rajalakshmi
vijayakumar.r

Program:

```
s=input()
at=s.index('@')
dot=s.index('.')
username=s[:at]
domain=s[at+1:dot]
exten=s[dot+1:]
print(exten)
print(domain)
print(username)
```



	Input	Expected	Got	
✓	abcd@gmail.com	com gmail abcd	com gmail abcd	✓

Ex. No. : 5.5 **Date: 17.04.24**

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Count Chars

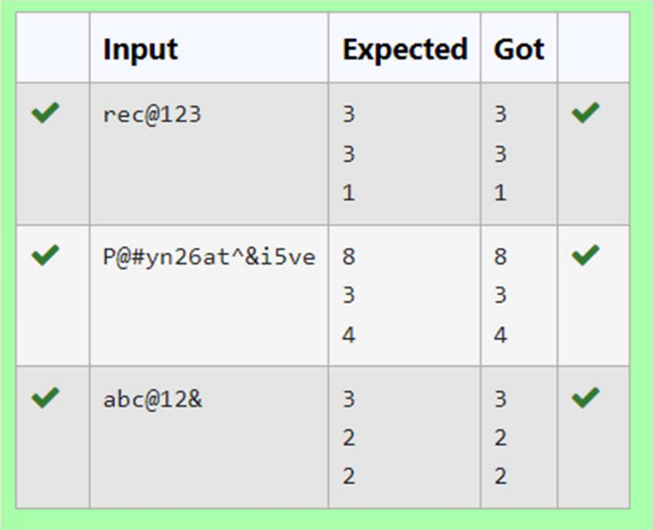
Write a python program to count all letters, digits, and special symbols respectively from a given string

For example:

Input	Result
rec@123	3 3 1

Program:

```
x=input()
a,b,c=0,0,0
for i in x:
    if(i.isalpha()):
        a+=1
    elif(i.isalnum()):
        b+=1
    else:
        c+=1
print(a,b,c,sep="\n")
```



	Input	Expected	Got	
✓	rec@123	3 3 1	3 3 1	✓
✓	P@#yn26at^&i5ve	8 3 4	8 3 4	✓
✓	abc@12&	3 2 2	3 2 2	✓

Ex. No. : 5.6 **Date: 17.04.24**

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Reverse String

Reverse a string without affecting special characters. Given a string S, containing special characters and all the alphabets, reverse the string without affecting the positions of the special characters.
Input:
A&B
Output:
B&A
Explanation: As we ignore '&' and
As we ignore '&' and then reverse, so answer is "B&A".

For example:

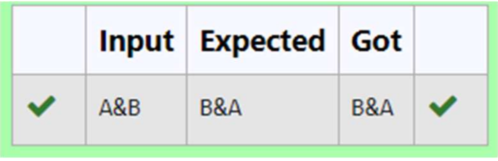
Input Result
A&x#
x&A#

Program:

```
s=input()

l=[]
```

```
for i in s:
    if(i.isalpha()):
        l.append(i)
l.reverse()
r=''
index=0
for i in s:
    if(i.isalpha()):
        r+=l[index]
        index+=1
    else:
        r+=i
print(r)
```



	Input	Expected	Got	
✓	A&B	B&A	B&A	✓

Ex. No. : 5.7 **Date: 17.04.24**

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Longest Word

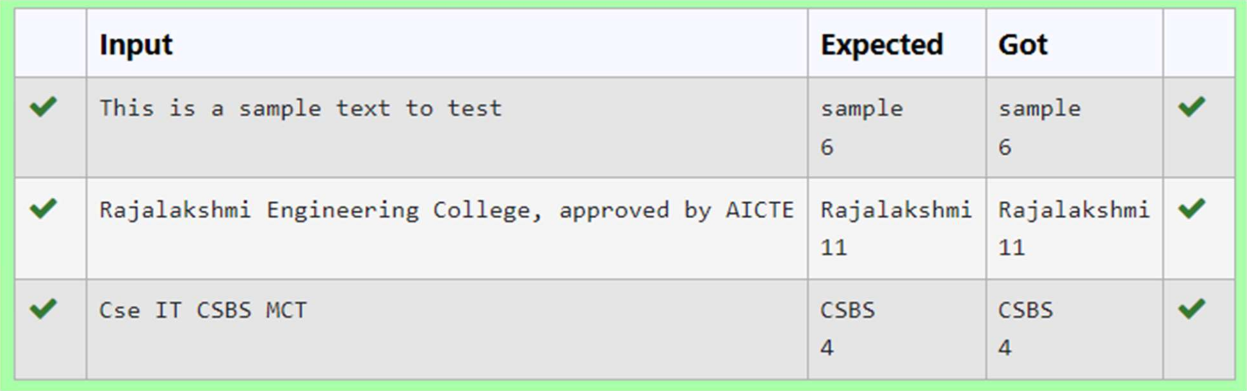
Write a python to read a sentence and print its longest word and its length

For example:

Input	**Result**
This is a sample text to test	sample 6

Program:

```
sen=input()
words=sen.split()
l=""
maxi=0
for word in words:
    if(len(word)>maxi):
        l=word
        maxi=len(word)
print(l,maxi,sep="\n")
```



	Input	**Expected**	**Got**	
✓	This is a sample text to test	sample 6	sample 6	✓
✓	Rajalakshmi Engineering College, approved by AICTE	Rajalakshmi 11	Rajalakshmi 11	✓
✓	Cse IT CSBS MCT	CSBS 4	CSBS 4	✓

Ex. No. : 5.8 **Date: 17.04.24**

Register No.: 231801086 **Name: KRITHIKA.M.A**

Remove Palindrome Words

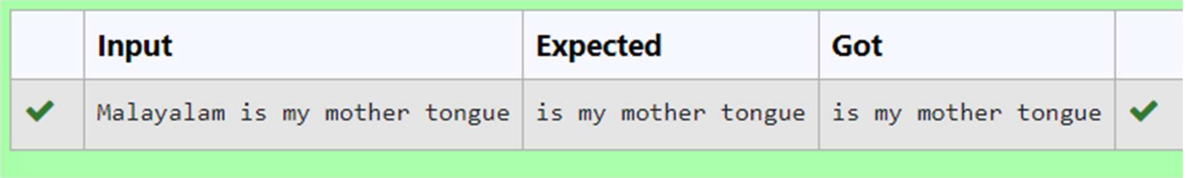
String should contain only the words are not palindrome.

Sample Input 1
Malayalam is my mother tongue

Sample Output 1
is my mother tongue

Program:

```
s=input()
words=s.split()
x=''
for word in words:
    word=word.lower()
    if (word!=word[::-1]):
        print(word,end=" ")
```



	Input	Expected	Got	
✓	Malayalam is my mother tongue	is my mother tongue	is my mother tongue	✓

Ex. No. : 5.9 **Date: 17.04.24**

Register No.: 231801086 **Name: KRITHIKA.M.A**

Remove Characters

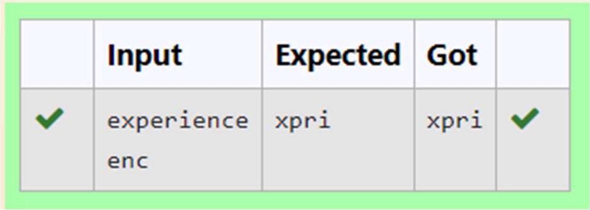
Given two Strings s1 and s2, remove all the characters from s1 which is present in s2.

Constraints
1<= string length <= 200

Sample Input 1
experience
enc
Sample Output 1
xpri

Program:

```
s1=input()
s2=input()
x=".join(char for char in s1 if char not in s2)
print(x)
```



	Input	Expected	Got	
✓	experience enc	xpri	xpri	✓

Ex. No. : 5.10 **Date: 17.04.24**

Register No.: 231801086 **Name: KRITHIKA.M.A**

Unique Names

In this exercise, you will create a program that reads words from the user until the user enters a blank line. After the user enters a blank line your program should display each word entered by the user exactly once. The words should be displayed in the same order that they were first entered. For example, if the user enters:

Input:

```
first
second
first
third
second
```

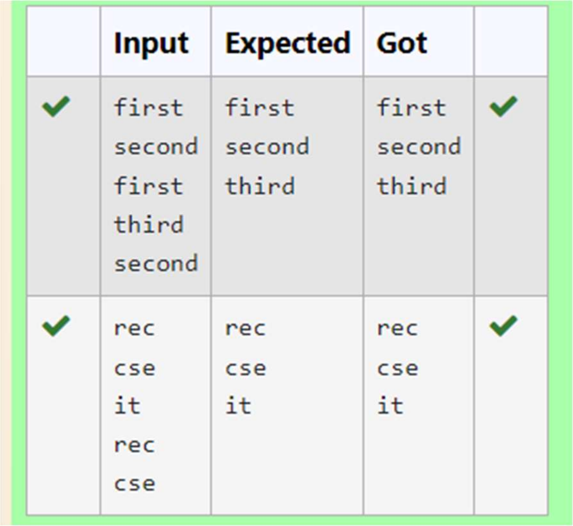
then your program should display:

Output:

```
first
second
third
```

Program:

```
l=[]
while(True):
    a=input()
    if a!=" ":
        l.append(a)
    else:
        break
l=dict.fromkeys(l)
for i in l:
    print(i)
```



	Input	Expected	Got	
✓	first second first third second	first second third	first second third	✓
✓	rec cse it rec cse	rec cse it	rec cse it	✓