

## **06 - Strings in Python**

For example:

Input	Result
-------	--------

rec@123	
---------	--

3	
---	--

3	
---	--

1	
---	--

Ex. No. : 6.1

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### Count Chars

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

**Program:**

```
a=input()
count1=0
count2=0
count3=0
for i in range(0,len(a)):
    if(a[i].isalpha()):
        count1=count1+1
    elif(a[i].isdigit()):
        count2=count2+1
    else:
        count3=count3+1
print(count1)
print(count2)
print(count3)
```

Sample Input 1  
a2b4c6

Sample Output 1  
aabbbbcceccc

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### Decompress the String

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

**Program:**

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

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:

$2 \leq N \leq 10$   
 $2 \leq \text{Length of S1, S2} \leq 1000$

Example Input/Output 1:

Input:

```
abcbde  
cdefghbb  
3
```

Output:

```
bcd
```

Note:

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

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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.

**Program:**

```
s=input()
p=""
for i in range (len(s)):
    if(s[i] not in p):
        p=p+s[i]
x=0
s1=input()
N=int(input())
for i in p:
    for j in s1:
        if(i==j) and (x<N):
            x=x+1
            print(i,end="")
            break
```

Sample Input 1  
experience  
enc

Sample Output 1  
xpri



Ex. No. : 6.4

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### Remove Characters

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

Constraints

1<= string length <= 200

**Program:**

```
a=input()
```

```
b=input()
```

```
c=list(a)
```

```
d=list(b)
```

```
e=[]
```

```
for i in range(len(c)):
```

```
    if(c[i] not in d):
```

```
        e.append(c[i])
```

```
s=""
```

```
for j in range(len(e)):
```

```
    s+=e[j]
```

```
print(s)
```

For example:

Input	Expected
Malayalam is my mother tongue	is my mother tongue
He did a good deed	he good

Ex. No. : 6.5

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### 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:**

```
a=input()
l=a.lower()
b=l.split(' ')
c=[]
for i in range(len(b)):
    if b[i][::-1]!=b[i][:-1]:
        c.append(b[i])
for i in c:
    print(i,end=' ')
```

For example:

Input	Result
Wipro Technologies Bangalore	TECHNOLOGIES
Hello World	WORLD
Hello	LESS

Ex. No. : 6.6

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## **Return Second World in Uppercase**

Write a program that takes as input a string (sentence), and returns its second word in uppercase.

For example:

If input is “Wipro Technologies Bangalore” the function should return “TECHNOLOGIES”

If input is “Hello World” the function should return “WORLD”

If input is “Hello” the program should return “LESS”

NOTE 1: If input is a sentence with less than 2 words, the program should return the word “LESS”.

NOTE 2: The result should have no leading or trailing spaces.

**Program:**

```
sentence = input()
words = sentence.split()
if len(words) < 2:
    result = "LESS"
else:
    result = words[1].upper()
print(result)
```

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#	
------	--

Ex. No. : 6.7

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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.

**Program:**

```
s = input()
s = list(s)
start = 0
end = len(s) - 1
while start < end:
    if not s[start].isalpha():
        start += 1
    elif not s[end].isalpha():
        end -= 1
    else:
        s[start], s[end] = s[end], s[start]
        start += 1
        end -= 1
result = ''.join(s)
print(result)
```

For example:

Input	Result
Yn	
PYnative	
True	



Ex. No. : 6.8

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### **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".

**Program:**

```
a=input()
b=input()
if b.find(a)==-1:
    print("False")
else:
    print("True")
```

**Input:**

first  
second  
first  
third  
second

then your program should display:

**Output:**

first  
second  
third

Ex. No. : 6.9

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## 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:

**Program:**

```
l=[]
while(True):
    a=str(input())
    if a != " ":
        l.append(a)
    else:
        break
l1=[]
for i in range(len(l)):
    if l[i] not in l1:
        l1.append(l[i])
for i in range(len(l1)):
    print(l1[i])
```

Example Input/Output 1:

**Input:**

vijayakumar.r@rajalakshmi.edu.in

**Output:**

edu.in  
rajalakshmi  
vijayakumar.r

**Ex. No. : 6.10**

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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

**Program:**

```
s=input()
a=s.split("@")
b=a[1].partition(".")
c=list(b)
print(b[-1])
print(b[0])
print(a[0])
```

