```
#1. Write a proram to count and display the number of capital letters in a given string.
x = input("Enter a string:")
c = 0
for i in x:
  if i.isupper():
   c+=1
print(c)
```

```
Enter a string:Roushan
1
```

```
#2. Count total number of vowels in a given string.
x = input("Enter a string:")
c=0
for i in x:
  if i in "aeiouAEIOU":
    c+=1
print(c)
```

```
Enter a string:I Love Youtube
7
```

```
#3. Input a sentence and print words in separate lines.
x = input("Enter a Sentence:")
words = x.split()
for word in words:
  print(word)
```

```
Enter a Sentence:I love Youtube
I
love
Youtube
```

```
#3.Input a sentence and print words in separate lines.
 #(Other Method)
s = input("Enter a sentence:")
s+=' '
a=0
for i in range(len(s)):
  if s[i]==' ':
    print(s[a:i])
    a = i+1
```

```
Enter a sentence:I love Youtube
I
love
Youtube
```

```
#4. WAP to enter a string and a substring. You have to print the number of times that the substring occurs in the given str
#   String traversal will take place from left to right, not right to left.
# Sample Input
#ABCDCDC
#CDC
#Sample Output
#2


# Taking input from the user
main_string = input("Enter the main string: ").strip()
sub_string = input("Enter the substring: ").strip()

count = 0
start_index = 0

# Loop until find() can no longer find the substring
while True:
    # Search for substring starting from the current start_index
    index = main_string.find(sub_string, start_index)

    # find() returns -1 if the substring is not found
    if index == -1:
```

```
        break


    count += 1
    start_index = index + 1

# Display the final count
print(count)
```

```
Enter the main string: ABCDCDC
Enter the substring: CDC
2
```

```
#5.Given a string containing both upper and lower case alphabets. Write a Python program to count the number of occurrences
# (case insensitive) and display the same.
#Sample Input : ABaBCbGc
# Sample Output
#2A
#3B
#2C
#1G
text = input().upper()
checked = ""

for char in text:
    if char not in checked:
        count = text.count(char)

        print(str(count) + char)

        checked = checked + char
```

```
ABaBCbGc
2A
3B
2C
1G
```

```
#6.Program to count number of unique words in a given sentence using sets
x = input("Enter a sentence:")
words = x.split()
unique_words = set(words)
c = len(unique_words)
print(c)
```

```
Enter a sentence:I Love YOUTUBE
3
```

```
#7.Create 2 sets s1 and s2 of n fruits each by taking input from user and find:
#a) Fruits which are in both sets s1 and s2
#b) Fruits only in s1 but not in s2
#c) Count of all fruits from s1 and s2

n = int(input("Enter number of fruits: "))

# Creating empty sets
s1 = set()
s2 = set()

print("Enter fruits for S1:")
for i in range(n):
    s1.add(input())

print("Enter fruits for S2:")
for i in range(n):
    s2.add(input())


print(s1 & s2) # a) Fruits in both (Intersection)
print(s1 - s2) # b) Fruits only in s1 (Difference)
print(len(s1 | s2)) # c) Count of all unique fruits (Union length)
```

```
Enter number of fruits: 2
Enter fruits for S1:
Apple
Kiwi
```

```
Enter fruits for S2:
Mango
Kiwi
{'Kiwi'}
{'Apple'}
3
```

```
#8.Take two sets and apply various set operations on them :
#S1 = {Red ,yellow, orange , blue }
#S2 = {violet, blue , purple}

S1 = {"Red","orange","yellow","blue","black"}
S2 = {"Voilet","blue","purple","black"}
print(S1 | S2)#Union
print(S1 & S2)# Intersection
print(S1 - S2)#Differnce
print(S1 ^ S2)#Symmetric Differnce
```

```
{'orange', 'blue', 'purple', 'yellow', 'Red', 'black', 'Voilet'}
{'blue', 'black'}
{'orange', 'yellow', 'Red'}
{'orange', 'purple', 'yellow', 'Red', 'Voilet'}
```

Start coding or generate with AI.

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GITHUB LINK = https://github.com/vinxtluvvv/python-