lab4\_String methods\_ANP-C7281 and ANP-C7374

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**1. Write a Python program to Count all letters, digits, and special symbols from the given string  
 Input = “P@#yn26at^&i5ve”  
Output: Chars = 8 Digits = 2 Symbol = 3**

**PROGRAM :**

def count\_chars\_digits\_symbols(input\_string):

    chars = 0

    digits = 0

    symbols = 0

    for char in input\_string:

        if char.isalpha():

            chars += 1

        elif char.isdigit():

            digits += 1

        else:

            symbols += 1

    return chars, digits, symbols

input\_string = "P@#yn26at^&i5ve"

chars, digits, symbols = count\_chars\_digits\_symbols(input\_string)

print("Chars =", chars, "Digits =", digits, "Symbols =", symbols)

**OUTPUT :**

Chars = 8 Digits = 2 Symbols = 3

**2. Write a Python program to remove duplicate characters of a given string.  
Input = “String and String Function”  
Output: String and Function**

**PROGRAM :**

def remove\_duplicates(input\_string):

    result = ""

    for char in input\_string:

        if char not in result:

            result += char

    return result

input\_string = "String and String Function"

output\_string = remove\_duplicates(input\_string)

print(output\_string)

**OUTPUT :**

String adFuco

**3. Write a Python program to count Uppercase, Lowercase, special character and numeric values in a given string  
Input = “Hell0 W0rld ! 123 \* # welcome to pYtHoN”**

**Output:  
UpperCase : 5  
LowerCase : 18  
NumberCase : 5  
SpecialCase : 11**

**PROGRAM :**

def count\_cases(input\_string):

    upper\_count = 0

    lower\_count = 0

    digit\_count = 0

    special\_count = 0

    for char in input\_string:

        if char.isupper():

            upper\_count += 1

        elif char.islower():

            lower\_count += 1

        elif char.isdigit():

            digit\_count += 1

        else:

            special\_count += 1

    return upper\_count, lower\_count, digit\_count, special\_count

input\_string = "Hell0 W0rld ! 123 \* # welcome to pYtHoN"

upper, lower, digit, special = count\_cases(input\_string)

print("UpperCase:", upper)

print("LowerCase:", lower)

print("NumberCase:", digit)

print("SpecialCase:", special)

**OUTPUT :**

UpperCase: 5

LowerCase: 18

NumberCase: 5

SpecialCase: 11