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PYTHON PROGRAMMING

LAB-9 ANSWERS

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

Code:

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

# Initialize counts for letters, digits, and symbols

letter\_count = 0

digit\_count = 0

symbol\_count = 0

for char in input\_string:# Iterate through each character in the input string.

    if char.isalpha(): # Check if the character is a letter.

        letter\_count += 1

      elif char.isdigit():  # Check if the character is a digit.

        digit\_count += 1

        else: # If not a letter or digit, consider it as a special symbol.

        symbol\_count += 1

# Print the counts

print("Chars =", letter\_count, "Digits =", digit\_count, "Symbols =", symbol\_count) # Print the counts.

Output:

Chars = 8 Digits = 3 Symbols = 4

2. Write a Python program to remove duplicate characters of a given string.

Input = “String and String Function”

 Output: String and Function

Code:

input\_string = "String and String Function" #input string.

output\_string = ""

unique\_chars = set() # Initialize an empty set to keep track of unique characters encountered.

for char in input\_string: # Iterate through each character in the input string.

        if char not in unique\_chars: # Check if the character is not already in the set of unique characters.

                unique\_chars.add(char) # Add the character to the set of unique characters.

        output\_string += char # Append the character to the output string.

print("Output:", output\_string) # Print the output string without duplicate characters.

Output:

String and Function

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

Code:

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

# Initialize counts for uppercase, lowercase, numeric, and special characters

upper\_count = 0

lower\_count = 0

number\_count = 0

special\_count = 0

for char in input\_string: # Iterate through each character in the input string.

        if char.isupper():# Check if the character is an uppercase letter.

        upper\_count += 1

    elif char.islower():# Check if the character is a lowercase letter.

        lower\_count += 1

    elif char.isdigit():# Check if the character is a digit

        number\_count += 1

    else: # If the character is not a letter or digit, consider it as a special character.

        special\_count += 1

# Print the counts

print("UpperCase:", upper\_count)

print("LowerCase:", lower\_count)

print("NumberCase:", number\_count)

print("SpecialCase:", special\_count)

Output:

UpperCase: 5

LowerCase: 18

NumberCase: 5

SpecialCase: 11

4. Write a Python Count vowels in a string

input= “Welcome to Python Assignment”

 Output: Total vowels are: 8

Code:

input\_string = "Welcome to Python Assignment" #input string.

vowel\_count = 0 # Initialize count for vowels.

vowels = {'a', 'e', 'i', 'o', 'u', 'A', 'E', 'I', 'O', 'U'} # Define a set of vowels.

for char in input\_string: # Iterate through each character in the input string.

    if char in vowels:   # Check if the character is a vowel.

        vowel\_count += 1

print("Total vowels are:", vowel\_count) # Print the total count of vowels.

Output:

Total vowels are: 8