PYTHON PROGRAMMING

LAB-9 ANSWERS

HAREESHA H M
AF0364330

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