Lab-9

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:

```
input_string = "P@#yn26at^&i5ve"


chars = 0
digits = 0
symbols = 0

for char in input_string:
    if char.isalpha():
        chars += 1
    elif char.isdigit():
        digits += 1
    else:
        symbols += 1

print(f"Chars = {chars} Digits = {digits} Symbol = {symbols}")
```

Result:

```
Chars = 8 Digits = 3 Symbol = 4
```

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

Input = “String and String Function”

Output: String and Function

Program:

```
input_string = "String and String Function"
```

```
words = input_string.split()


unique_words = []

for word in words:
    if word not in unique_words:
        unique_words.append(word)


output_string = ' '.join(unique_words)

# Display the result
print(output_string)
```

Result:

```
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

Program:

```
input_string = "Hell0 W0rld ! 123 * # welcome to pYtHoN"


uppercase_count = 0
lowercase_count = 0
numeric_count = 0
special_count = 0

for char in input_string:
    if char.isupper():
        uppercase_count += 1
```

```
    elif char.islower():
        lowercase_count += 1
    elif char.isdigit():
        numeric_count += 1
    else:
        special_count += 1


print(f"UpperCase : {uppercase_count}")
print(f"LowerCase : {lowercase_count}")
print(f"NumberCase : {numeric_count}")
print(f"SpecialCase : {special_count}")
```

Result:

```
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

Program:

```
input_string = "Welcome to Python Assignment"


vowels = "aeiouAEIOU"

vowel_count = 0

for char in input_string:
    if char in vowels:
        vowel_count += 1

print(f"Total vowels are: {vowel_count}")
```

Result:

```
Total vowels are: 8
```