Expt. No. 4 Page No. 9

Expt. Name. Count the special character, alphabets, digits, lowercase, char Date : 07-01-2021

Aim:

To write a program on counting the special character, alphabets, digits, lowercase and uppercase character

Algorithm:

step 1 : start
step 2: Get the string input from the user
step 3: initialize upper, lower, special_char and digit to zero
step 4: for loop for the length of the string
step 4.1 : check if the char is between A and Z, then increment upper to one else go to step 4.2
step 4.2 : check if the char is between a and z, then increment lower to one else go to step 4.3
step 4.3 : check if the char is between 0 to 9, then increment digit to one else increment special_char to 1
step 5: print upper, lower, special_char, digit, Alphabets
step 6: stop

Program:

```
def count_char(str):
    upper, lower, special_char, digit = 0,0,0,0
    for i in range(len(str)):
        if str[i]>='A' and str[i]<='Z':
            upper = upper+1
        elif str[i]>='a' and str[i]<='z':
            lower = lower+1
        elif str[i]>='0' and str[i]<='9':
```

```
            digit = digit + 1
        elif str[i] != " ":
            special_char = special_char + 1
    print("Upper case chars : ", upper)
    print ("Lower case chars : ", lower)
    print ("special chars: ", special_char)
    print ("Digits: ", digit)
    print ("Alphabets : ", upper + lower)
str = input()
count_chars (str)
```

Result:

The above program is executed successfully and the output is attached.

Expt. No. 5 Page No. 11

Expt. Name. Wrap the string into a paragraph of width Date : 07-01-2022

Aim:

To write a python program for given input string (s) and width(w). Wrap the string into a paragraph of width w.

Algorithm:

step 1: start
step 2: import textwrap library
step 3: Get the string input from the user
step 4: Get the width input from the user
step 5: print the output using .fill function
step 6: stop

Program:

```
import textwrap
s = input("Input a string:")
w = int(input("Input the width of the paragraph:").strip())
print("Result:")
print(textwrap.fill(s,w))
```

Result:

The above code is executed successfully and the output is attached.

Expt. No. 6

Page No. 12

Expt. Name. Print a string, matrix size NxM, should use '.', and '-'

Date : 07-01-2022

Aim:

To write a python program to print the string "Welcome", Matrix size should NxM, where N is odd number and M is 3 times of N). The design should have 'Welcome' in the center. The design should have only use |, . and - characters

Algorithm:

step 1: start

step 2: Get the string input from the user

~~n, m = map(int, input("value of n and m: ").split())~~

step 3: Get the value of n and m from the user

step 4: Calculate the pattern

step 5: print the pattern

step 6: Stop

Program:

```
a= int(input("Enter the string:"))
n, m = map(int, input("value of n m:").split())
pattern = [('|,.' * (2*i+1)).center(m, '-') for i in range(n//2)]
print('\n'.join(pattern + [a.center(m, '-')] + pattern[::-1]))
```

Result:

The above code is executed successfully and the output is attached.