St. Francis Institute of Technology

Department of Computer Engineering

Academic Year: 2021-2022 **Semester: VIII**

Subject: Natural Language Processing **Class/Branch/: BE/CMPNA**

Name :- Nithin Menezes **Roll Number: 56**

Inbuilt functions

```
import string
print(string.ascii_letters , string.ascii_lowercase , string.ascii_uppercase , string.digits)
```

```
abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz ABCDEFGH
```

```
print(string.hexdigits ,  string.octdigits,string.punctuation , string.printable)
```

```
0123456789abcdefABCDEF 01234567 !"#$%&'()*+,-./:;<=>?@[\]^_`{|}~ 0123456789abcdefghijklm
```

```
string1="How are you"
x,y,z=string1.endswith("you"), string1.startswith("How"),string1.isdigit()
print(x,y,z)
```

```
True True False
```

```
string2="How ar3 y0u"
a,b=string2.isalpha() , string2.isdecimal()
c= "My name is {}".format("Nithin")
print(a,b,c)
```

```
False False My name is Nithin
```

```
import string
s="Nithin Menezes"
s1=s.swapcase()
print(s)
```

```
print(string.whitespace)
print(s1)
```

```
     Nithin Menezes


     nITHIN mENEZES
```

```
string3="I'm fine, how are you"
d=string3.upper()
e=string3.lower()
f=string3.replace("are","about")
print(d,e,f)
```

```
     I'M FINE, HOW ARE YOU i'm fine, how are you I'm fine, how about you
```

```
s="Nithin"
s1="Nithin Menezes"
print(s.isalnum(),s.isidentifier(),s1.istitle(),s1.partition('Marc'),len(s1))
```

```
     True True True ('Nithin Menezes', '', '') 14
```

```
x="Today is a beautiful day"
y = x.rindex("day")
print(y,max(x),min(s))
```

```
     21 y N
```

```
txt = "Hi I am Nithin \n Menezes"
x = txt.splitlines(True)
print(x)
```

```
     ['Hi I am Nithin \n', ' Menezes']
```

```
s="nithin"
print(s.capitalize())
```

```
     Nithin
```

```
s= "H\te\tl\tl\to"
x = s.expandtabs(5)
print(x)
```

```
     H    e    l    l    o
```

```
s="We should go for a long vacation some time soon"
print(s.find("long"),s.rfind("long"),s.count("long"),s.split())
```

```
19 19 1 ['We', 'should', 'go', 'for', 'a', 'long', 'vacation', 'some', 'time', 'soon']
```

```
txt = "I could eat bananas all day, bananas are my favorite fruit"
x = txt.rpartition("bananas")
print(x)
```

```
('I could eat bananas all day, ', 'bananas', ' are my favorite fruit')
```

```
s = ("Live", "Love", "Laugh")
x = "-".join(s)
print(x)
```

```
Live-Love-Laugh
```

```
txt = "     banana     "
x = txt.strip()
print("of all fruits", x, "is the best")

txt = "     banana     "
x = txt.lstrip()
print("of all fruits", x, "is the best")

txt = "     banana     "
x = txt.rstrip()
print("of all fruits", x, "is the best")
```

```
of all fruits banana is the best
of all fruits banana      is the best
of all fruits      banana is the best
```

```
mydict = {83:  80}
txt = "Hello San!"
print(txt.translate(mydict))
```

```
Hello Pan!
```

```
txt = "apple"
x = txt.ljust(20)
print(x, "is my favorite fruit.")

txt = "apple"
x = txt.rjust(20)
print(x, "is my favorite fruit.")

txt = "apple"
x = txt.center(20)
print(x, "is my favorite fruit.")
```

```
apple                is my favorite fruit.
```

```
                    apple is my favorite fruit.
             apple         is my favorite fruit.
```

```
s = "100"
x = s.zfill(10)
print(x)
```

```
     0000000100
```

Part 02 - Programming excercise

1. Write a Python program to calculate the length of a string.

```
def calc_len(string):
  return len(string)

string = input("Enter the string to calculate its length >>>> ")
print(calc_len(string))
```

```
     Enter the string to calculate its length >>>> you guys are getting paid
     25
```

2. Write a Python program to count the number of characters in a string.

```
def count_char(string):
  return len(string.replace(" ",""))

string = input("Enter the string to count characters >>>> ")
print(count_char(string))
```

```
     Enter the string to count characters >>>> peterson
     8
```

3. Write a Python program to get a string made of the first 2 and the last 2 chars from a given a string. If the string length is less than 2, return instead of the empty string.

```
def join_f_l_2(string):
  if len(string) < 2:
    return
  else:
    return (string[:2]+string[-2:])
```

```
string = input("Enter the string to merge first and last 2 >>>> ")
print(join_f_l_2(string))
```

```
Enter the string to merge first and last 2 >>>> Nithin Menezes
Nies
```

4. Write a Python program to get a string from a given string where all occurrences of its first char have been changed to '$', except the first char itself.

```
def replace_fchar_with_dollar(string):
  string1 = string.replace(string[0], '$')
  return (string[0] + string1[1:])

string = input("Enter the string to count characters >>>> ")
print(replace_fchar_with_dollar(string))
```

```
Enter the string to count characters >>>> Nithin Yash Menezes
Nithin Yash Menezes
```

5. Write a Python program to get a single string from two given strings, separated by a space and swap the first two characters of each string.

```
def swap_first_two(string1,string2):
  str1 = string2[:2] + string1[2:]
  str2 = string1[:2] + string2[2:]
  return (str1+" "+str2)

string1, string2 = input("Enter the two string separated by space for swap >>>> ").split(" ")
print(swap_first_two(string1, string2))
```

```
Enter the two string separated by space for swap >>>> Nithin Menezes
Methin Ninezes
```

6. Write a Python program to add 'ing' at the end of a given string (length should be at least 3). If the given string already ends with 'ing' then add 'ly' instead. If the string length of the given string is less than 3, leave it unchanged.

```
def add_ing(string):
  if len(string) > 2:
    if string[-3:] == 'ing':
      string += 'ly'
    else:
      string += 'ing'
```

```
  return string

string = input("Enter the string >>>> ")
print(add_ing(string))
```

```
Enter the string >>>> surfing and fishing
surfing and fishingly
```

7. Write a Python program to find the first appearance of the substring 'not' and 'poor' from a given string, if 'not' followed by 'poor', replace the whole 'not'...'poor' substring with 'good'. Return the resulting string.

```
def not_poor_edit(string):
  nott = string.find('not')
  poor = string.find('poor')
  if (poor > nott and nott > 0 and poor > 0):
    string = string.replace(string[nott:(poor+4)], 'good')
    return string
  else:
    return string
string = input("Enter the string >>>> ")
print(not_poor_edit(string))
```

```
Enter the string >>>> he is not poor
he is good
```

8. Write a Python function that takes a list of words and returns the length of the longest one.

```
def find_longest(str_list):
  str_list_l = []
  for i in str_list:
    str_list_l.append((len(i), i))
  str_list_l.sort()
  return (str_list_l[-1][0], str_list_l[-1][1])
str_list = list(map(str,input("Enter the words comma separated >>>> ").split(",")))
print(find_longest(str_list))
```

```
Enter the words comma separated >>>> Nithin, Aaron, Tanmay Kamble, Coutinhno Aaron
(16, ' Coutinhno Aaron')
```

9. Write a Python program to remove the nth index character from a nonempty string.

```
def remove_n(string, n):
  f = string[:n]
```

```
  l = string[n+1:]
  return f + l
string, n = input("Enter the string and the nth index separated by a space >>>> ").split(" ")
print(remove_n(string, int(n)))
```

```
Enter the string and the nth index separated by a space >>>> Nithin 3
Nitin
```

10. Write a Python program to change a given string to a new string where the first and last chars have been exchanged.

```
def replace_f_l(string):
  return string[-1:] + string[1:-1] + string[:1]
string = input("Enter the string >>>> ")
print(replace_f_l(string))
```

```
Enter the string >>>> sebastian
nebastias
```

11. Write a Python program to remove the characters which have odd index values of a given string.

```
def remove_odd_index(string):
  return (string[::2])
string = input("Enter the string >>>> ")
print(remove_odd_index(string))
```

```
Enter the string >>>> Nithin Menezes
Nti eee
```

12. Write a Python program to count the occurrences of each word in a given sentence.

```
def count_occr(string):
  word_c = {}
  words = string.split()
  for i in words:
    if i in word_c:
      word_c[i] += 1
    else:
      word_c[i] = 1
  return word_c
string = input("Enter the string >>>> ")
print(count_occr(string))
```

```
Enter the string >>>> you know where do you stay
```

```
{'you': 2, 'know': 1, 'where': 1, 'do': 1, 'stay': 1}
```

13. Write a Python script that takes input from the user and displays that input back in upper and lower cases.

```
def get_up_low(string):
  return(string.upper()+" "+string.lower())
string = input("Enter the string >>>> ")
print(get_up_low(string))
```

```
Enter the string >>>> nithin
NITHIN nithin
```

14. Write a Python program that accepts a comma separated sequence of words as input and prints the unique words in sorted form (alphanumerically).

```
def get_unique(string):
  words = [word for word in string.split(",")]
  return (",".join(sorted(list(set(words)))))
string = input("Enter the string >>>> ")
print(get_unique(string))
```

```
Enter the string >>>> rohan, ashley, seema, nikitha
 ashley, nikitha, seema,rohan
```

15. Write a Python function to create the HTML string with tags around the word(s).

```
def html_tag(tag, word):
    return (f"<{tag}> {word} </{tag}>")
word, tag = input("Enter the word and tag space separated >>>> ").split(" ")
print(html_tag(tag, word))
```

```
Enter the word and tag space separated >>>> nithin title
<title> nithin </title>
```