
Tanmay Desai

Roll No 17

PID: 182025

BE CMPN A

NLP Experiment 1

```
import string

print(string.ascii_letters)

abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ

print(string.ascii_lowercase)

abcdefghijklmnopqrstuvwxyz

print(string.ascii_uppercase)

ABCDEFGHIJKLMNOPQRSTUVWXYZ

print(string.digits)

0123456789

print(string.hexdigits)

0123456789abcdefABCDEF

print(string.octdigits)

01234567

print(string.punctuation)

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

print(string.printable)

0123456789abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ!"#$%&'()*+,-./:;<=>?@[\\]'
```

```
txt = "My name is Tanmay."  
x = txt.endswith(".")  
print(x)
```

True

```
txt = "My name is Tanmay."  
x = txt.startswith("M")  
print(x)
```

True

```
x = "1234"  
print(x.isdigit())
```

True

```
x = "1233"  
print(x.isdecimal())
```

True

```
x = "TanmayDesai"  
print(x.isalpha())
```

True

```
x = "Tanmay Desai"  
print(x.swapcase())
```

tANMAY dESAI

```
x = "Tanmay Desai"  
print(len(x))
```

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```
x = "Tanmay Desai"  
print(x.isalnum())
```

False

```
name = "hi hello"  
  
print(name.capitalize())
```

Hi hello

Hello Pam!

```
['welcome', 'to', 'the', 'jungle']
```

```
['apple', 'banana', 'cherry']
```

H e l l o

 y

0000000050

```
['Thank you for the music', 'Welcome to the jungle']
```

Programming Exercises

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

```
def countLength(string):  
    count = 0
```

```

for i in string:
    count += 1
return count

x = "Tanmay Desai"
print(countLength(x))

```

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

```

def countChar(string):
    newString = string.replace(" ", "")
    return countLength(newString)

x = "My name is Tanmay Desai"
print(countChar(x))

```

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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 exercise3(string):
    if len(string) > 2:
        newString = string[:2] + string[-2:]
    else:
        return string
    return newString

x = "My name is Tanmay Desai"
print(exercise3(x))

```

Myai

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 >>>> My name is Tanmay
My name is Tanmay

```

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 exercise5(string1,string2):
    new1 = string2[:2]+string1[2:]
    new2 = string1[:2]+string2[2:]
    finalString = new1 + " " + new2
    return finalString

print(exercise5("tanmay","desai"))

denmay tasai
```

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 exercise6(string):
    if len(string) < 3:
        newString = string
    else:
        if string[-3:] == "ing":
            newString = string + "ly"
        else:
            newString = string + "ing"
    return newString

print(exercise6("Danc"))
print(exercise6("stunning"))

Dancing
stunningly
```

7. Write a Python program to find the first appearance of the substring 'not' and 'poor' from a given string, if 'not' follows the '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 that 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 >>>> hi,hello,whatsup
(7, 'whatsup')
```

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 >>>> Tanmay 4
Tanmy
```

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 >>>> Tanmay Desai
ianmay DesaT
```

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 >>> Good Morning
Go onn
```

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 >>> hello how are you hope you are having a good day
{'hello': 1, 'how': 1, 'are': 2, 'you': 2, 'hope': 1, 'having': 1, 'a': 1, 'good': 1, 'c
```

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 >>> Tanmay Desai
TANMAY DESAI tanmay desai
```

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 >>> hello,hi,tanmay,good
good,hello,hi,tanmay
```

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 >>> Hello title  
<title> Hello </title>
```

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