

Week2 Set10

Q1

Write a Python function that accepts a string and calculate the number of upper case letters and lower case letters.

Sample String: 'The quick Brow Fox'

Expected Output:

No. of Upper case characters : 3

No. of Lower case Characters : 12

```
In [1]: string = input('Enter a string: ')

uppr = 0
lowr = 0
for char in string:
    if char.islower():
        lowr += 1
    elif char.isupper():
        uppr += 1
    else:
        continue

print('No. of Upper case characters: ' + str(uppr))
print('No. of Lower case characters: ' + str(lowr))

Enter a string: The quick Brow Fox
No. of Upper case characters: 3
No. of Lower case characters: 12
```

Q2

Write a Python program to create a lambda function that takes one argument, and that argument will be multiplied with an unknown given number.

```
In [3]: def kmul(k):
        return lambda x : x*k

mul15 = kmul(15)
print(mul15(10))

150
```

Q3

Write a Python program to generate and print a list of first and last 5 elements where the values are square of numbers between 1 and 30 (both included).

```
In [8]: list = [x**2 for x in range(1,31)]
newList = list[:5] + list[-5:]
print(newList)

[1, 4, 9, 16, 25, 676, 729, 784, 841, 900]
```

Q4

Write a Python program to compute the sum of all the elements of each tuple stored inside a list of tuples.

Original list of tuples: [(1, 2), (2, 3), (3, 4)]  
Sum of all the elements of each tuple stored inside the said list of tuples: [3, 5, 7]

Original list of tuples: [(1,2,6), (2,3,-6), (3,4), (2,2,2,2)]  
Sum of all the elements of each tuple stored inside the said list of tuples: [9, -1, 7, 8]

```
In [29]: import ast

tupleList = input('Enter a list of tuples: ')
tupleList = ast.literal_eval(tupleList)

sumList = []
for tup in tupleList:
    sumList.append(sum(tup))

print('Sum of all the elements of each tuple stored inside the said list of tuples: ' + str(sumList))

Enter a list of tuples: [(1,2,6), (2,3,-6), (3,4), (2,2,2,2)]
Sum of all the elements of each tuple stored inside the said list of tuples: [9, -1, 7, 8]
```

Q5

Write a Python program to create and display all combinations of letters, selecting each letter from a different key in a dictionary.

Sample data: {'1':['a','b'], '2':['c','d']}

Expected Output:

ac  
ad  
bc  
bd

```
In [40]: # ASSUMING
# The number of key-value pairs is limited to 2

import ast

dic = input('Enter a dictionary with list values: ')
dic = ast.literal_eval(dic)

list1 = dic['1']
list2 = dic['2']

for l1 in list1:
    for l2 in list2:
        print(l1+l2)

Enter a dictionary with list values: {'1':['a','b','c','d'], '2':['w','x','y','z']}
aw
ax
ay
az
bw
bx
by
bz
cw
cx
cy
cz
dw
dx
dy
dz
```