PYTHON ASSIGNMENT: 6

Q1. Write a Python function that accepts a string and calculate the number of upper case letters and lower case letters.

def ul(s):

count=0

count1=0

for i in s:

if i.isupper():

count+=1

else:

count1+=1

print(f"Count of upper case letter is: {count}")

print(f"Count of lower case letter is: {count1}")

s=input()

ul(s)

Q2. Write a program to compute the frequency of the words from the input. The output should output after sorting the key alphanumerically.

def countfrequency(mylist):

dic = {}

for ch in mylist:

if ch in dic:

dic[ch] += 1

else:

dic[ch] = 1

for key in sorted(dic.keys()):

print (f"{key}:{dic[key]}")

strings=[x for x in input().split(" ")]

mylist=list(strings)

countfrequency(mylist)

Q3. Write a Python function that takes a list and returns a new list with unique elements of the first list.

def unique(mylist):

mylist2=[]

for ch in mylist:

if ch not in mylist2:

mylist2.append(ch)

return mylist2

num=[int(x) for x in input().split(" ")]

mylist=list(num)

listmine=unique(mylist)

print(listmine)

Q4. Write a python function to check whether a number is perfect or not in the range between 1 to 5000.

dic={k:sum([i for i in range(1,int(k/2)+1) if k%i==0]) for k in range(1,5001)}

print([k for k,v in dic.items() if k==dic[k]])

Q5. Write a python program to access a function inside a function.

def mul(a,b):

return a\*b

def sum(c,d):

x=c+d

return x+mul(c,d)

a=int(input())

b=int(input())

print(mul(a,b))

print(sum(a,b))

Q6. Write a python program that takes any number of arguments and any type and returns the sum.

def sum(\*args):

sum=0

for ch in args:

sum+=ch

return sum

print(sum(10,20,30))

Q7. Write a program which can map() to make a list whose elements are square of elements in any list.

num=[int(x) for x in input().split(" ")]

print(list(map(lambda x: x\*x, num)))

Q8. Write a program which can filter even numbers in a list by using filter function in list.

num=[int(x) for x in input().split(" ")]

print(list(filter(lambda x: x%2==0, num)))

Q9. Write a program which can map() and filter() to make a list whose elements are square of even number is list.

num=[int(x) for x in input().split(" ")]

print(list(map(lambda x: x\*\*2, filter(lambda x: x%2==0,num))))

Q10. Write a program to compute the value of f(n) with a given n input by console.

def fibo(n):

if n==0 or n==1:

return n

return fibo(n-1)+fibo(n-2)

n=int(input())

print(fibo(n-1))

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