**Logical questions on 25/04/2023**

# how an string converted into dict example

a="mahesh"

d2={}

for i in a:

if i in d2:

d2[i]=d2[i]+1

else:

d2[i]=1

print(d2)

output: {'m': 1, 'a': 1, 'h': 2, 'e': 1, 's': 1}

----------------- -- ------------------------ -- ------------------------- -- --------------------

**1. compare two strings whether anagrams or not?**

a="beesquare"

b="squarebee"

d1={}

d2={}

for ele in a:

# checking element is present d1 or not using if condition.

if ele in d1:

# if ele is present increase value of element(key)

d1[ele]+=1

else:

# if ele is not present then ele value is 1 stored in d1

d1[ele]=1

for ele in b:

if ele in d2:

d2[ele]+=1

else:

# if ele is not present then ele value is 1 stored in d1

d2[ele]=1

# comparing two dict

print(d1==d2)

output: True

# how will be sorted string

a="mahersh"

b=sorted(a)

b

output: ['a', 'e', 'h', 'h', 'm', 'r', 's']

------------ ------------ ----------------------- ---------------- ------------------ ---------------------

#compare two strings whether anagrams or not?

a="goodboymahesh"

b="maheshgoodboy"

# c,d are sorted a,b it will display according to alphabetical order

c=sorted(a)

d=sorted(b)

if len(a)==len(b):

# comparing c abd d

if c==d:

print("yes")

else:

print("no")

else:

print("not an")

output: yes

-------------------- ---- ----------------------------------------------------------------------------------------------------------------

# compare two strings whether anagrams or not?

s="ghhheeks"

s2="skeeghhh"

for char in s:

# comparing count of each character in string using count function

if s2.count(char)!=s.count(char):

print("no")

break

else:

print("yes")

output: yes

# check whether given string is palindrome or not?

x="12325"

a=""

for i in x:

a=i+a

print(a)

if x==a:

print('yes')

else:

print("no")

output: yes

------------------- -------------------- ---------------- --------------- ---------------------

**2. check whether given string is palindrome or not? Rewrite the string if you want?**

a="geeksgeeks"

# converting string into list

a=list(a)

d1={}

for ele in a:

# checking element is present d1 or not using if condition.

if ele in d1:

# if ele is present increase value of element(key)

d1[ele]=d1[ele]+1

else:

# if ele is not present then ele value is 1 stored in d1

d1[ele]=1

c=0

# checking values in d1 not keys

for value in d1.values():

# modules of 2 by value if it equal to 1

if value%2==1:

c+=1

if c<=1:

print("yes")

else:

print("no")

output: yes

**3. sorting of 0,1,2 in the list using while condition in time complexity?**

l=[0,0,1,2,1,1,2,0]

low=0

mid=0

high=len(l)-1

while mid<=high:

# (l[0]==1,0==1) false, if it true then mid value will increase

if l[mid]==1:

mid+=1

# (l[0]==1,0==0) true, if it true, swap low=mid,mid=low then mid and low value will increase

elif l[mid]==0:

l[low],l[mid]=l[mid],l[low]

low+=1

mid+=1

# (l[6]==1,2==0) two conditions fail,then swap high=mid,mid=high then high value will decrease

else:

l[high],l[mid]=l[mid],l[high]

high-=1

print(l)

output: [0, 0, 0, 1, 1, 1, 2, 2]

---------------------- ---------------------- --------------------------- -----------------------------

l=[0,0,1,2,1,1,2,0]

# in sorted we need to asign new variable

y=sorted(l)

print(y)

output: [0, 0, 0, 1, 1, 1, 2, 2]

---------------- ------------------ ----------------- --------------------

l=[0,0,1,2,1,1,2,0]

# in sort it will update same list

l.sort()

print(l)

output: [0, 0, 0, 1, 1, 1, 2, 2]

**#using bubble sort**

l = [1, 2, 0, 1, 2, 0, 1,0,2]

# Bubble sort algorithm

for i in range(len(l)):

for j in range(len(l)-1-i):

if l[j] > l[j+1]:

l[j], l[j+1] = l[j+1], l[j]

# Print the sorted list

print(l)

output: [0, 0, 0, 1, 1, 1, 2, 2]