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1. In a given list of elements, all elements are equal except the one.Write a code to find the odd man out (Stray number)

mylist=[1,1,1,1,1,2,1]

for i in mylist:

if mylist.count(i)==1:

print(i)

1. In a given list of elements, find the elements which is close to its mean.

mylist = [1,3,2,4,5,6,7,9]

sum = 0

for i in range(len(mylist)) :

sum = sum + mylist[i]

mean = sum/len(mylist)

print("mean is : ", mean)

mylist.sort()

temp = mean - mylist[0]

arr = []

for i in range(len(mylist)):

arr.append(mean - mylist[i])

temp = arr[0]

for i in range(len(arr)) :

arr[i] = abs(arr[i])

for i in range(len(arr)-1) :

if temp < arr[i+1] :

pass

else :

temp = arr[i+1]

temp1 = arr.index(temp)

print("number near to mean in list is : ", mylist[temp1])

1. Find the average speed of vehicle, given the distance travelled for fixed time intervals, e.g. [0, 0.1,0.25, 0.45, 0.55, 0.7, 0.9, 1.0]

distance = [0, 0.1,0.25, 0.45, 0.55, 0.7, 0.9, 1.0]

time = 2

avg\_speed = []

for i in range(len(distance)) :

avg\_speed.append(distance[i]/time)

print("avg speeds are -> ",avg\_speed)

1. Find the no.of people in a bus, given the data of people onboarding & alighting at each station

n = int(input("Enter the number of stations :"))

arr = []

for i in range(n):

print("Enter data for station :",i)

arr.append(int(input("Eneter the no. of people onboarding: ")))

arr.append(int(input("Eneter the no. of people leaving: ")))

sum = 0

for i in range(len(arr)):

if i%2 == 0:

sum = sum + arr[i]

else :

sum = sum - arr[i]

print(sum)

1. Find the missing number, given the original list and modified one.

orignal\_lst=[1,2,3,4,5,6]

modified\_lst=[1,2,3,5,6]

mis\_no = set(orignal\_lst).difference(modified\_lst)

print("missing number is : ", mis\_no)

1. Find the difference between two lowest numbers in the list

mylist = [2,3,4,6,8,5]

mylist.sort()

diff = mylist[1]-mylst[0]

print(“difference between two lowest numbers in the list is : “,diff)

1. In a given list, count no.of elements smaller than their mean

mylist = [23,45,4,5,8,11,25]

mylist.sort()

sum = 0

for i in range(len(mylist)) :

sum = sum + mylist[i]

mean = sum/len(mylist)

print("list = ",mylist)

print("mean = ",mean)

count = 0

for i in range(len(mylist)) :

if mylist[i] < mean :

count = count + 1

print("no.of elements smaller than their mean is :" ,count)

1. Correct the malformed time string, for e.g "5:70:65" to "6:11:05"

time = ["5:70:65"]

for i in time:

hr, min, sec = i.split(':')

hr = int(hr)

min = int(min)

sec = int(sec)

print(hr,min,sec)

secq = sec / 60

second = sec % 60

minute = secq + min

minq = minute / 60

minute = minute % 60

hour = int(minq) + hr

#print(second , int(minute), hour)

print(hour,":",int(minute),":",second)

1. Correct the malformed date string, for e.g. "45/8/2018" to "14/9/2018"

date\_list = ["45/8/2018"]

for i in date\_list:

d, m, y = i.split('/')

d = int(d)

m = int(m)

y = int(y)

date = d % 31

date\_1 = d // 31

year = 0

month = m + date\_1

if month > 12 :

month = month % 12

year = 1

print(date,end="/")

print(month,end="/")

print(y+year)

1. Convert ip address from "a.b.c.d" format into integer and vice versa

ip\_add = ["255.255.255.1"]

print(type(ip\_add[0]), ip\_add)

for i in ip\_add:

a, b, c, d = i.split('.')

ip\_add = []

ip\_add.append(int(a))

ip\_add.append(int(b))

ip\_add.append(int(c))

ip\_add.append(int(d))

print("string to int : " ,type(ip\_add[0]),ip\_add)

ip\_addr = []

ip\_addr.append(str(ip\_add[0]))

ip\_addr.append(str(ip\_add[1]))

ip\_addr.append(str(ip\_add[2]))

ip\_addr.append(str(ip\_add[3]))

ip = ip\_addr[0] +"."+ ip\_addr[1] +"."+ip\_addr[0] +"."+ ip\_addr[1]

print("int to string : " ,type(ip),ip)

4. Check whether given string is isogram or not

my\_string = "vinayak"

my\_list=[]

my\_list[:0]=my\_string

isogram=[]

for i in my\_list:

if i not in isogram:

isogram.append(i)

if isogram==my\_list:

print("string is isogram")

else:

print("string is not isogram")

5.Given a string, find the mexican wave

my\_str = "vinayak"

arr = []

for i in range(len(my\_str)):

my\_str=my\_str.lower()

temp\_list=list(my\_str)

if temp\_list[i].isalpha():

temp\_list[i] = my\_str[i].upper()

my\_str = ''.join(temp\_list)

arr.append(my\_str)

print(arr)

6. Given a number, find the largest number by deleting single digit (order of digits will remain same)

number = 123456

number = str(number)

minimum\_num = number[0]

position\_num = 0

largest\_num = ""

for i in range(len(number)-1):

if number[i+1] < minimum\_num:

minimum\_num = number[i+1]

position\_num = i+1

for i in range(len(number)):

if position\_num == i:

continue

largest\_num += number[i]

print("The largest number possible after deleting a single digit :", largest\_num)

7.Given a number, find the largest number by shuffling the digits

number = 654321

number1 = str(number)

number2 = list(number1)

largest = ""

for i in range(len(number2) - 1):

for j in range(len(number2) - 1):

if number2[j] < number2[j + 1]:

temp = number2[j]

number2[j] = number2[j + 1]

number2[j + 1] = temp

for i in range(len(number2)):

largest += number2[i]

print("The largest number after shuffling the digits :", largest)

1. Compute the word frequency in given message

String1 = "The frequency is the number of occurrence"

word\_list = String1.split(" ")

frequency\_list = []

i = 0

for word in word\_list:

word = word.lower()

count = 0

for word1 in word\_list:

word1 = word1.lower()

if word == word1:

count += 1

frequency\_list.append(count)

i += 1

print("the word list and the associated frequency of the word")

print(word\_list)

print(frequency\_list)

1. RGB to Hex conversion and vice versa, e.g. (255,0,255) into OxFF00FF

rgb = (255, 0, 255)

rgb\_hex = '%02x%02x%02x' % rgb

print("Hex value of the given RGB pair :", rgb\_hex)

10. Generate accumulated strings,e.g. abcd=> A-Bb-Ccc-Dddd

String1 = "abcd"

String2 = ""

temp\_string = ""

for i in range(len(String1)):

c = String1[i].upper()

temp\_string = c + String1[i] \* i

String2 += (temp\_string)

if i < len(String1) - 1 :

String2 += "-"

print("Accumulated String :", String2)