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SET-1

Q1: In a given list of elements all elements are equal except one. Find unique number?

Ans:

print(**"Enter The list of the number"**)  
lst = [int(item) for item in input().split()]  
my\_dic= {}  
for item in lst:  
 if (my\_dic.get(item)):  
 my\_dic[item] = my\_dic.get(item) + 1  
 else:  
 my\_dic[item] = 1;  
for item in my\_dic:  
 if (my\_dic.get(item) == 1):  
 print(**"The different number is :"**,item)

Q2:In a given list of elements find the element which is close to its mean?

Ans:

t=0  
i=0  
s=0  
print(**"Enter The list of the number"**)  
lst = [int(i) for i in input().split()]  
print (lst)  
while(i<len(lst)):  
 s=s+lst[i]  
 i+=1  
count=[]  
mean=s/len(lst)  
for i in range(0,len(lst)):  
 t=abs(mean-lst[i])  
 count.append(t)  
min=count[0]  
for i in range(0,len(count)):  
 if(count[i]<min):  
 min=count[i]  
 pos=i  
print(lst[pos])

Q3: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]

Ans:

print(**"Enter The list of the distances:"**)  
lst = [float(i) for i in input().split()]  
distance=0  
i=0  
while(i<len(lst)):  
 distance=distance+lst[i]  
 i+=1  
avg\_speed=distance/len(lst)  
print(**"Average speed is:"**,avg\_speed)

Q4:Find the number of people in a bus ,given the data of people onboarding and alighting at each station

Ans:

print(**"Enter the initial no.of the people in the bus:"**)  
Initial = int(input())  
print(**"Enter the list of no.of onboarding at each station: "**)  
On\_boarding = [int(i) for i in input().split()]  
print(**"Enter the list of no.of alighting at each station: "**)  
alighting = [int(i) for i in input().split()]  
final=[]  
for i in range(0,len(On\_boarding)):  
 People\_left = Initial+On\_boarding[i]-alighting[i]  
 final.append(People\_left)  
print(**"Number of people after every station is :"**)  
print(final)

Q5:Find the missing number given the original and modified one?

Ans:

print(**"Enter the list of the number:"**)  
lst = [int(i) for i in input().split()]  
print(**"Enter the Modified list of the number:"**)  
mod\_lst = [int(i) for i in input().split()]  
for i in range(0,len(lst)):  
 if lst[i] in mod\_lst:  
 continue  
 else:  
 print(**"Missing element is:"**,lst[i])

Q6:Find the difference between two lowest numbers in the list?

Ans:

print(**"Enter The list of the number"**)  
lst = [int(i) for i in input().split()]  
lst1=[]  
  
while lst:  
 min = lst[0]  
 for i in lst:  
 if i< min:  
 min = i  
 lst1.append(min)  
 lst.remove(min)diff=lst1[1]-lst1[0]  
print(**"difference between two lowest numbers is:"**,diff)  
Q7:In a given list count no.of elements smaller than their mean?

Ans:

t=0  
i=0  
s=0  
print(**"Enter The list of the number:"**)  
lst = [int(i) for i in input().split()]  
print(lst)  
while(i<len(lst)):  
 s=s+lst[i]  
 i+=1  
mean=s/len(lst)  
for i in range(0,len(lst)):  
 if(lst[i]<mean):  
 t+=1  
print(**"No.of elements less than mean:"**,t)

SET-2

Q1:Correct the malformed time string?

Ans:

print(“Enter the malformed time string:”)  
time = input()  
time\_lst = time.split(**":"**)  
hour = int(time\_lst[0])  
mins = int(time\_lst[1])  
seconds = int(time\_lst[2])  
carry = seconds // 60  
remainder = seconds % 60  
mins = mins + carry  
seconds = remainder  
carry = mins // 60  
remainder = mins % 60  
hour = hour + carry  
mins = remainder  
hour = hour % 24  
print(**"correct time is:"**,hour,**":"**,mins,**":"**,seconds)

Q2: Correct the malformed Date String?

Ans:

months = {1: 31,2: 28,3: 31,4: 30,5: 31,6: 30,7: 31,8: 31,9: 30,10: 31,11: 30,12: 31}

print(“Enter the malformed date string:”)  
To\_date = **input()**current\_Date = To\_date.split(**'/'**)  
date = int(current\_Date[0])  
month = int(current\_Date[1])  
year = int(current\_Date[2])  
carry = date // months[int(month)]  
rem = date % months[int(month)]  
month = month + carry  
date = rem  
carry = month // 12  
rem = month % 12  
year = year + carry  
month = rem  
print(date, **'/'**, month, **'/'**, year)

Q3:Convert the ipaddress into integer and viceversa?

Ans:

#integer to ipaddress

print(**"enter the number to be converted to ipadress:"**)  
n=int(input())  
s = []  
for i in range(4):  
 s.append(str(n %256))  
 n //= 256  
  
print(**'.'**.join(s[::-1]))

#Ip address to integer:

print(**"enter the ip\_address to be converted to integer:"**)  
lst=[int(i) for i in input().split(**'.'**)]  
num=0  
j=3  
for i in range(0,len(lst)):  
 num=num+256\*\*j\*lst[i]  
 j-=1  
  
print(**"integer is:"**,num)

Q4:Check whether given string is isogram or not?

Ans:

print(**"enter the string:"**)

str=**input()**s=str.lower()  
t=0  
lst=[]  
for char in str:  
 if char in lst:  
 t+=1  
 lst.append(char)  
  
if(t==1):  
 print(**"not isogram"**)  
else:  
 print(**"isogram"**)

Q5:Given a string .Find the Mexican wave?

Ans:

print(**"enter the string:"**)  
str=input()  
lst=[]  
for i in range (0,len(str)):  
 upper=str[i].upper()  
 t=str.replace(str[i], upper)  
 lst.append(t)  
print(lst)

Q6:Given a number find the largest number by deleting single digit?

Ans:

print(**"enter the number:"**)  
n=int(input())

t=1  
for i in range(0, t):  
 a = 0  
 i = 1  
 while n//i > 0:  
 temp\_var = (n // (i \* 10)) \* i + (n % i)  
 i \*= 10  
 if temp\_var > a:  
 a = temp\_var

n = a  
print(**"largest number is:"**,n)

Q7:Given a number find the largest number by shuffling digits?

Ans:

print(**"enter the number:"**)  
n=(input())

n\_list = []  
for i in n:  
 n\_list.append(int(i))  
n\_list.sort()  
n\_list.reverse()  
l = **''**for i in n\_list:  
 l = l + str(i)  
print(**"large number after shuffling digits is:"**,l)

Q8:

Compute the word frequency in given message?

Ans:

print(**"enter the message:"**)  
str=input()

str1 = str.split()  
str2 = []  
for i in str1:  
 if i not in str2:  
 str2.append(i)  
for i in range(0, len(str2)):  
 print(**'frequency of'**, str2[i], **':'**, str.count(str2[i]))

Q9:RGB to Hex conversion and viceversa?

Ans:

*#hex to rgb value*print(**"enter the hex value:"**)  
val=input()  
val = val.lstrip(**'#'**)  
lv = len(val)  
print(tuple(int(val[i:i+lv//3], 16) for i in range(0, lv, lv//3)))

*#rgb to Hex value*print(**"Enter Rgb value:"**)  
rgb = [int(i) for i in input().split(**','**)]  
r,g,b=rgb  
print( **"Hex value is:"**,**'%02x%02x%02x'** % (r,g,b))

Q10:Generate Accumulated Strings?

Ans:

print(**"Enter the string:"**)  
string = input()  
Char\_list = []  
for i in range(len(string)):  
 Char\_list.append(string[i])  
output = []  
for item in range(len(Char\_list)):  
 output.append(Char\_list[item].upper())  
 loop = item  
 while loop > 0:  
 output.append(Char\_list[item])  
 loop -= 1  
 if item < len(Char\_list) - 1:  
 output.append(**"-"**)  
output1 = **""**for i in range(len(output)):  
 output1 = output1 + output[i]  
str=**" "**for ele in output:  
 str+=ele  
  
print(str)