**Python Assignment**

#1.stray number

l=[]

n=int(input("Enter the number of elements in the list"))

for i in range(n):

l.append(int(input()))

num=l[0]

count=0

for num in l:

if l.count(num)==1:

print(num)

count+=1

break

if count==0:

print(num)

#2.In a given list of elements find the element which is close to its mean

n=int(input("Enter number of elements in the list"))

list1=[]

for i in range(0,n):

list1.append(int(input()))

mean=0.0

for i in range(n):

mean+=list1[i]/len(list1)

list2=[]

for i in range(len(list1)):

list2.append(abs((list1[i]-mean)))

print(list1[list2.index(min(list2))])

#3.average speed

time\_interval=int(input())

n=int(input())

l=[]

for i in range(n):

l.append(int(input()))

time=len(l)\*time\_interval

dist=sum(l)

average\_speed=dist/time

print(average\_speed)

#average speed

time\_interval=int(input())

n=int(input())

l=[]

for i in range(n):

l.append(int(input()))

time=len(l)\*time\_interval

dist=sum(l)

average\_speed=dist/time

# 4.Find the no of people in the bus given the data of people onboarding and alighting at the station

# Assuming that n number of people are there in the bus before on coming to this particular station

n= int(input("The number of people before coming to the station:"))

n1=int(input("Enter number of people onboarding the bus"))

n2=int(input("Enter number of people alighting the bus"))

print('The number of people in the bus are',(n+n1-n2))

print(average\_speed)

# 5.find a missing number given original list and modified list

n=int(input("Enter number of elements in the original list"))

list1=[]

for i in range(0,n):

list1.append(int(input()))

m = int(input("Enter number of elements in the modified list"))

list2 = []

for i in range(0, m):

list2.append(int(input()))

i=0

for i in range (n):

a=list1[i]

if a not in list2:

print (a)

# 6.in a given list count the number of elements smaller than their mean

n=int(input("Enter number of elements in the list"))

list1=[]

for i in range(0,n):

list1.append(int(input()))

list1.sort()

print(list1[1]-list1[0])

# 7.in a given list count the number of elements smaller than their mean

n=int(input("Enter number of elements in the list"))

list1=[]

for i in range(0,n):

list1.append(int(input()))

mean=0.0

for i in range(n):

mean+=list1[i]/len(list1)

count=0

for i in list1:

if i < mean:

count+=1

print(count)

# 8.correct the malfunormed time

time= input()

t=(time.split(":"))

for i in range(len(t)):

t[i]= int(t[i])

if t[0]>24:

w=t[0]%24

t[0]=w

if t[0]>12 and t[0]<24:

t[0]-=12

if t[2]>60:

b=t[2]//60

t[1]+=b

t[2]%=60;

if t[1]>60:

a= t[1]//60

t[0]+=a

t[1]%=60

for i in range(len(t)):

t[i]=str(t[i])

seperator=':'

print(seperator.join(t))

#9. malformed date

x=input('enter malformed date in dd/mm/yyyy')

day=str(int(x[:-8])%30)

mnth1=int(x[:-8])//30

month=str((mnth1+int(x[-7]\*10)+int(x[-6]))%12)

year1=(mnth1+int(x[-7:-5]))//12

year=str(year1+int(x[-4:]))

print(day+'/'+month+'/'+year)

# 10.int to ip and ip to int

def int2ip(n):

str1 = []

for i in range(4):

str1.append(str(n %256))

n //= 256

return '.'.join(str1[::-1])

def ip2int(ip):

ans = 0

for j, i in enumerate(ip.split('.')[::-1]):

ans += 256 \*\* j \* int(i)

return ans

print(int2ip(int(input('Enter integer'))))

print(ip2int(input('Enter ip')))

#11.Isogram

a=input()

l=[]

for i in range(len(a)):

l.append(a[i])

count=0

for i in range(len(l)):

if(l.count(l[i])!=1):

print('Not an isogram')

count+=1

break

if count==0:

print("An isogram")

#12. find the mexican wave

stringb=input()

string1=stringb.lower()

l=[]

for i in range(len(string1)):

for j in string1:

a=string1[i].upper()

b=string1[:i]+a+string1[i+1:]

l.append(b)

for i in l:

print(i)

# 13.Given a number find the largest number by deleting a single digit

num=(int(input()))

i= 1

ans= 0

while num//i>0:

temp= num//(10\*i)\*i+num%i

i\*=10

if temp>ans:

ans=temp

print(ans)

# 14.Given a number , find the largest number by shufling the digits

a=input()

l=[]

for i in a:

l.append(int(i))

l.sort(reverse=True)

for i in range(len(l)):

l[i]=str(l[i])

w=''

print(w.join(l))

# 15.Compute the word frequency of the message

msg=input()

print(msg)

word=input()

print(word)

count=0

for i in msg.split():

if(i==word):

count+=1

print("Word frequency is",count)

#16. RGB to hex

n=3

l=[]

for i in range(n):

l.append(int(input()))

str1=''

for i in range(n):

str1+=hex(l[i])

str2=str1.split('0x')

str3=''

for i in range(1,len(str2)):

if(len(str2[i])==1):

str2[i]='0'+str2[i]

str3+=str(str2[i])

str3='0x'+str3

print(str3)

#17. Accumulated String

str1=input()

str2=''

for i in range(len(str1)):

str2+=str1[i]\*(i+1)

if i!=len(str1)-1:

str2+='-'

print(str2)