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

ip=[1,1,1,1,1,2]  
**for** i **in** ip:  
 **if**(ip.count(i)==1):  
 print(i)  
 **break**

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

l = [2, 5, 3, 9,10,15]  
m = sum(l) // len(l)  
l1=[]  
**for** i **in** l:  
 l1.append(abs(m-i))  
m=min(l1)  
print(**"closest elements to mean are:"**,end=**""**)  
**for** i **in** range(len(l1)):  
 **if**(l1[i]==m):  
 print(l[i],end=**" "**)

**3.find the average speed of vehicle, given distance travelled for fixed time intervals.**

t=5  
 l=[0,0.1,0.25,0.45,0.55,0.7,0.9,1.0]  
 t1=t/60  
 **for** i **in** range(len(l)):  
 l[i]=l[i]/t1  
 avg=sum(l)/len(l)  
 print(**"The average speed is {:.2f}"**.format(avg))

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

n=4  
 onboarding=[40,30,20,10]  
 alighting= [8,7,6,5]  
 s=0  
 **for** i **in** range(n):  
 s=s+onboarding[i]-alighting[i]  
 print(s)

5. Find the missing number, given the original list and modified list.

l\_original=[1,2,3,4,5]  
 l\_modified=[1,2,4,5]  
 **for** i **in** l\_original:  
 **if** i **not in** l\_modified:  
 print(i)  
 **break**

**6. Find the difference between two lowest numbers in the list.**

l=[2,5,4,9,6]  
 l.sort()  
 d=abs(l[0]-l[1])  
 print(d)

7. In a given list, count the no of elements smaller than

their mean

l=[2,5,4,9,6]  
 m=sum(l)//len(l)  
 **for** i **in** l:  
 **if**(i<m):  
 print(i,end=” “)

1.Correct the malformed time string

time=**"5:70:65"** hours,minutes,seconds=map(int,time.split(**":"**))  
  
 **if** seconds>60:  
 minutes1=seconds//60  
 seconds=seconds%60  
 minutes+=minutes1  
 seconds=str(seconds)  
 **if** minutes>60:  
 hours1=minutes//60  
 minutes=minutes%60  
 hours+=hours1  
 minutes=str(minutes)  
 **if** hours>23:  
 hours=hours-23  
 hours=str(hours)

1. Correct the malformed date

date\_input=**"45/8/2018"**date,month,year=map(int,date\_input.split(**"/"**))  
**if**(month>12):  
 year=year+1  
 month=month-12  
**if** month **in** [1,3,5,7,8,10,12]:  
 **if**(date>31):  
 date=date-31  
 **if**(month>12):  
 month=month-12  
 year=year+1  
 **else**:  
 month=month+1  
**elif** month **in** [4,6,9,11]:  
 **if**(date>30):  
 month=month+1  
 date=date-30  
**else**:  
 **if**(date>28):  
 date=date-28  
 month=month+1  
date,month,year=str(date),str(month),str(year)  
print(**"{}/{}/{}"**.format(date.zfill(2),month.zfill(2),year.zfill(4)))

print(**"{}:{}:{}"**.format(hours.zfill(2),minutes.zfill(2),seconds.zfill(2)))

1. Convert ip address from “a.b.c.d” format to integer and vice versa

ip=input()  
**if**(ip[0].isalpha()):  
 l=list(ip.split(**"."**))  
 x=**""  
 for** i **in** l:  
 x=x+str(ord(i))+**"."** print(x[:-1])  
**else**:  
 l=list(map(int,ip.split(**"."**)))  
 **for** i **in** range(len(l)):  
 l[i]=chr(l[i])  
 **for** i **in** range(len(l)):  
 **if**(i==len(l)-1):  
 print(l[i])  
 **else**:  
 print(l[i]+**"."**,end=**""**)

4.Check whether given string is isograms or not

s=input()  
 s=s.lower()  
 l=list(s)  
 f=0  
 l1=[]  
 **for** i **in** l:  
 **if** i **not in** l1:  
 l1.append(i)  
 **else**:  
 print(**"String is not an isogram"**)  
 f=1  
 **break  
 if** f==0:  
 print(**"String is isogram"**)

5.Given a string, find the Mexican wave

ip=input(**"Enter input in lower case:"**)  
 l=[]  
 **for** i **in** range(len(ip)):  
 k=ip[i].upper()  
 x=**""** x=ip[0:i]+k+ip[i+1:len(ip)]  
 l.append(x)  
 print(l)

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

n=input()  
l=[]  
**for** i **in** range(len(n)):  
 s=**""** s=s+n[0:i]+n[i+1:]  
 l.append(int(s))  
print(max(l))

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

n=int(input())  
 n1=n  
 l=[]  
 **while**(n>0):  
 r=n%10  
 l.append(r)  
 n=n//10  
 l.sort(reverse=**True**)  
 **for** i **in** l:  
 print(i,end=**""**)

1. Compute the word frequency in message

l=list(input().split())  
 l1=[]  
 **for** i **in** l:  
 **if** i **not in** l1:  
 l1.append(i)  
 **for** i **in** l1:  
 cnt=0  
 **for** j **in** range(len(l)):  
 **if**(i==l[j]):  
 cnt+=1  
 print(i+**"="**,cnt)

9.RGB to Hex conversion and vice versa

ip=input()  
 **if**(ip[0]==**"("**):  
 s=**""  
 for** i **in** ip:  
 **if** i **not in** [**"("**,**")"**]:  
 s=s+i  
 l=list(map(int,s.split(**","**)))  
 l=tuple(l)  
 print(**"HEX is:"**,end=**""**)  
 print(**'0x%02x%02x%02x'** % l)  
 **else**:  
 val=ip[2:]  
 val=val.lstrip(**'#'**)  
 lv = len(val)  
 print(tuple(int(val[i:i+lv//3], 16) **for** i **in** range(0,lv, lv//3)))

10.Generate accumulated string

s=**"abcde"** l=list(s)  
 s1=**""  
 for** i **in** range(len(l)):  
 **if**(i==len(l)-1):  
 s1=s1+l[i].upper()+l[i]\*i  
 **else**:  
 s1=s1+l[i].upper()+l[i]\*i+**"-"** print(s1)