LIST 1:

Program 1:In a given list of elements, all are same except one. Find the odd man out

l=list(map(int,input().split()))  
**for** i **in** l:  
 **if** l.count(i) ==1:  
 print(i)  
 **break**

Program 2:In the given list of elements, find the element which is nearer to its mean

l= list(map(int,input().split()))  
s=sum(l)/len(l)  
d={}  
**for** i **in** l:  
 d[i]=abs(s-i)  
v=list(d.values())  
ind=v.index(min(v))  
k=list(d.keys())  
print(**f"mean is {**s**} and nearest number is {**k[ind]**}"**)

Program 3:Find the average speed of the vehicle for fixed time interval.

t=20 *#time taken in minutes*t=20/60 *#min to Hours conversion*l=[0,0.1,0.25,0.45,0.55,0.7,0.9,1.0] *#distance taken in km*l=[i/t **for** i **in** l] *#finding individual speeds*average=sum(l)/len(l)  
print(**"The average speed is {:.2f}"**.format(average))

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

stations =5  
onboarding=[19,20,45,21,10]  
alighting= [4,8,10,5,7]  
total=0  
**for** i **in** range(stations):  
 total+=onboarding[i]-alighting[i]  
print(total)

Program 5:Find the missing number, given the original and modified one

original=[21,89,100,32,29,54]  
modified=[100,29,54,32,21,40]  
**for** i **in** original:  
 **if** i **not in** modified:  
 print(i)  
 **break**Program 6: find difference between two lowest numbers in list

l=[39,64,17,84,29,45]  
l.sort()  
print(l[1]-l[0])

Program 7: In given list, count no.of elements smaller than their mean.

l=[34,21,56,92,20,15,25]  
mean=sum(l)/2  
k=[ i **for** i **in** l **if** i<mean]  
print(**"Mean is "**,mean)  
**for** i **in** k:  
 print(i,end=**" "**)

LIST \_2:

Program 1:correct the malformed time string

t=**input()**h,min,sec=map(int,t.split(**":"**))  
  
**if** sec>60:  
 min\_quo=sec//60  
 sec=sec%60  
 min+=min\_quo  
sec=str(sec)  
**if** min>60:  
 hour\_quo=min//60  
 min=min%60  
 h+=hour\_quo  
min=str(min)  
**if** h>23:  
 h=h-23  
h=str(h)  
  
print(**"{}:{}:{}"**.format(h.zfill(2),min.zfill(2),sec.zfill(2)))

Program 2: correct the malformed date string

d=**input()**da,mo,ye=map(int,d.split(**"/"**))  
**if** mo>12:  
 ye+=1  
 mo=mo-12  
**if** mo==2:  
 **if** da>28:  
 da-=28  
 mo=3  
  
**elif** mo **in** [4,6,9,11]:  
 **if** da>30:  
 mo+=1  
 da=da-30  
**elif** mo **in** [1,3,5,7,8,10,12]:  
 **if** da>31:  
 da-=31  
 **if** mo>12:  
 mo-=12  
 ye+=1  
 **else**:  
 mo+=1  
da=str(da)  
mo=str(mo)  
ye=str(ye)  
print(**"The corrected date is {}/{}/{}"**.format(da.zfill(2),mo.zfill(2),ye.zfill(4)))

Program 3:convert the ip address format “a.b.c.d” into integers and vice versa

address=input()  
f=address[0]  
**if** f.isdigit()==**True**: *#given input has integers* l=list(map(int,address.split(**"."**)))  
 l=[chr(i) **for** i **in** l]  
 s=**"."**.join(l)  
 print(s)  
**else**:  
 *#given input contain characters* l=list(address.split(**"."**))  
 s=**""  
 for** i **in** l:  
 s+=str(ord(i))+**"."** s=s[:-1]  
 print(s)

program 4: Given a string, check it is isogram or not

s=input()  
f=1  
l=[]  
**for** i **in** range(len(s)):  
 c=0  
 **for** j **in** range(len(s)):  
 **if** i!=j **and** s[i]==s[j]:  
 c+=1  
 l.append(c+1)  
**for** i **in** l:  
 **if** i!=1:  
 f=0  
 **break**print(l)  
**if** f==1:  
 print(**"ISOGRAM"**)  
**else**:  
 print(**"NOT ISOGRAM"**)

Program 5:Given a string, Find Mexican wave

s=input()  
t=s  
l=[]  
**for** i **in** range(len(s)):  
 s=t;k=**""  
 for** j **in** range(len(s)):  
 k+=s[j]  
 **if** i==j:  
 k=k[:-1]  
 k+=s[j].upper()  
  
 l.append(k)  
**for** i **in** l:  
 print(i,end=**" "**)

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

num=int(input())  
d=1;maxim=0  
**while** num//d!=0:  
 s=((num//(d\*10))\*d)+(num%d)  
 d=d\*10  
 **if** s>maxim:  
 maxim=s  
print(maxim)

Program 7: Given a number, find the largest number by shuffling the digits

n=int(input())  
l=[]  
**while** n!=0:  
 num=n%10  
 n=n//10  
 l.append(num)  
**for** i **in** range(len(l)):  
 **for** j **in** range(i+1,len(l)):  
 **if** l[i]<l[j]:  
 l[i],l[j]=l[j],l[i]  
d=10;s=0  
**for** i **in** l:  
 s=(s\*d)+i  
print(s)

Program 8: Compute word frequency in given message

l=[];k=[]  
s=list(input().strip().split(**" "**))  
**for** i **in** s:  
 c=0  
 **for** j **in** s:  
 **if** i==j:  
 c+=1  
 **if** i **not in** k:  
 k.append(i)  
 l.append(c)  
j=0  
**for** i **in** k:  
 print(**"the frequency of {} is {}"**.format(i,l[j]))  
 j+=1

Program 9: Conversion of rgb to hexa and vice versa

print(**'1. RGB to hex\t 2. Hex to RGB'**)  
n=int(input())  
**if** n==1:  
 rgb=list(map(int,input().split(**","**))) *#input given in 234,255,158 this format* **if** (rgb[0] >= 0 **and** rgb[0] < 256) **and** (rgb[1] >= 0 **and** rgb[1] < 256) **and** (rgb[2] >= 0 **and** rgb[2] < 256):  
  
 hex=**"#"  
 for** i **in** range(3):  
 q=rgb[i]  
 j=0;h=[0]\*10  
 **while**(q!=0):  
 rem=q%16  
 q=q//16  
 **if** rem<10:  
 p=chr(48+rem)  
 j+=1  
 **else**:  
 p=chr(55+rem)  
 j+=1  
 h[0]=p  
 **if** j==2:  
 **for** i **in** range(j):  
 hex+=str(h[i])  
 **elif** j==1:  
 hex+=**"0"** hex+=str(h[0])  
 **elif** j==0:  
 hex+=**"00"** print(hex)  
 **else**:  
 print(**"-1"**)  
**else**:  
 s=input().lstrip(**"#"**)  
 h=[0]\*3;c=0  
 rgb=[]  
 **for** i **in** range(0,6,2):  
 h[c]=s[i:i+2]  
 c+=1  
 **for** i **in** h:  
 decimal=0;base=1  
 **for** j **in** range(1,-1,-1):  
 **if** (i[j] >= **'0' and** i[j] <= **'9'**):  
 decimal += int(i[j])\* base  
 base \*= 16  
 **elif** (i[j] >= **'A' and** i[j] <= **'F'**):  
 decimal += (ord(i[j])- 55) \* base  
 base \*= 16  
 rgb.append(decimal)  
 print(rgb)

Program 10: Generate accumulated strings

s=input();c=0  
**for** i **in** range(len(s)):  
 print(s[i].upper(),end=**""**)  
 c=0  
 **while**(c<i):  
 print(s[i],end=**""**)  
 c+=1  
 **if** i!=len(s)-1:  
 print(**"-"**,end=**""**)