**Assignment 1**

Q) In a given list of elements ,all elements are equal except the one. write a code to find the odd man out(stray number)

**1. def stray(arr):**

key = arr[0]

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

if key == arr[i]:

pass

elif i == len(arr)-1:

return arr[i]

elif arr[i] != arr[i+1]:

return arr[i]

else:

return key

Q) In a given list of elements find the element which is close to its mean in python

**2. mylist=[1,2,3,4,5]**

sum = 0

for i in mylist:

sum = sum+i

k= len(mylist)

val=sum/k

for c in mylist:

if mylist[c]-val < 0.5:

print(mylist[c])

Q) find the average speed of vehicle given the distance travelled for fixed time intervals

**3. mylist=[0,0.1,0.25,0.45,0.55,0.7,0.9,1.0]**

sum = 0

for i in mylist:

sum = sum+i

val=sum/len(mylist)

print(val)

**4. onboard=[3,2,0,4,5]**

alight=[0,2,1,2,4]

sum1 = 0

sum2=0

for i in onboard:

sum1 = sum1+i

for i in alight:

sum2 = sum2 + i

val=sum1-sum2;

print(val)

**5. oldlist=[3,2,0,4,5]**

mylist=[5,2,3,4]

for i in oldlist:

if oldlist[i]!=mylist[i]:

print(oldlist[i])

**6. mylist=[3,2,0,4,5,8,7,1,6]**

mylist.sort()

i=len(mylist)

val=mylist[i-1]-mylist[i-2]

print(val)

**7. mylist=[3,2,0,4,5,8,7,1,6]**

sum = 0

for i in mylist:

sum = sum+i

k = len(mylist)

val=sum/k

for c in mylist:

if mylist[c] < val:

print(mylist[c])