1. Given two unsorted arrays of distinct elements, the task is to find all pairs from both arrays whose sum is equal to x.

Examples:

Input : arr1 = [-1, -2, 4, -6, 5, 7]

arr2 = [6, 3, 4, 0]

x = 8

Output : [(5, 3), (4, 4)]

Input : arr1 = [1, 2, 4, 5, 7]

arr2 = [5, 6, 3, 4, 8]

x = 9

Output : [(1, 8), (4, 5), (5, 4)]

OUTPUT:

a=[-1, -2, 4, -6, 5, 7]  
b=[6, 3, 4, 0]  
for i in range(0,len(a)):  
 for j in range(0,len(b)):  
 if a[i]+b[j]==9:  
 print(a[i],b[j])

a=[1, 2, 4, 5, 7]  
b=[5, 6, 3, 4, 8]  
c=[]  
for i in range(0,len(a)):  
 for j in range(0,len(b)):  
 if a[i]+b[j]==9:  
 print(a[i],b[j])

1. Given an array and a range **[lowVal, highVal]**, partition the array around the range such that array is divided in three parts.  
   1) All elements smaller than **lowVal** come first.  
   2) All elements in range **lowVal to highVal** come next.  
   3) All elements greater than **highVal** appear in the end.  
   The individual elements of three sets can appear in any order.

Examples:

Input: arr = [1, 14, 5, 20, 4, 2, 54, 20, 87, 98, 3, 1, 32]

lowVal = 14, highVal = 20

Output: arr = [1, 5, 4, 2, 3, 1, 14, 20, 20, 54, 87, 98, 32]

Input: arr = [1, 14, 5, 20, 4, 2, 54, 20, 87, 98, 3, 1, 32]

lowVal = 20, highVal = 20

Output: arr = [1, 14, 5, 4, 2, 3, 1, 20, 20, 54, 87, 98, 32]

OUTPUT:

a=[1, 14, 5, 20, 4, 2, 54, 20, 87, 98, 3, 1, 32]  
b=[]  
lv=14  
hv=20  
for i in range(0,len(a)):  
 if a[i]<lv:  
 b.append(a[i])  
if lv!=hv:  
 b.append(lv)  
for j in range(0,len(a)):  
 if a[j]>hv:  
 b.append(a[j])  
print(b)

1. Given a list in Python and a number x, count number of occurrences of x in the given list.

Examples:

Input : lst = [15, 6, 7, 10, 12, 20, 10, 28, 10]

x = 10

Output : 3

10 appears three times in given list.

Input : lst = [8, 6, 8, 10, 8, 20, 10, 8, 8]

x = 16

Output : 0

OUTPUT :

a=[15, 6, 7, 10, 12, 20, 10, 28, 10]  
c=0  
for i in a:  
 if i==10:  
 c=c+1  
 print(i)  
print("counts:",c)

1. Given a list of numbers, the task is to find average of that list. Average is the sum of elements divided by the number of elements.

Examples:

Input : [4, 5, 1, 2, 9, 7, 10, 8]

Output : Average of the list = 5.75

**Explanation**:

Sum of the elements is 4+5+1+2+9+7+10+8 = 46

and total number of elements is 8.

So average is 46 / 8 = 5.75

Input : [15, 9, 55, 41, 35, 20, 62, 49]

Output : Average of the list = 35.75

**Explanation**:

Sum of the elements is 15+9+55+41+35+20+62+49 = 286

and total number of elements is 8.

So average is 46 / 8 = 35.75

OUTPUT :

a=[4, 5, 1, 2, 9, 7, 10, 8]  
total=0  
m=0  
n=len(a)+1  
for i in a:  
 total +=i  
print(total)  
m=total+i  
print(m/n)

1. We need to take two lists in Python and merge them into one. Finally, we display the sorted list.

Examples:

Input :

list1 = [25, 18, 9, 41, 26, 31]

list2 = [25, 45, 3, 32, 15, 20]

Output :

[3, 9, 15, 18, 20, 25, 25, 26, 31, 32, 41, 45]

Input :

list1 = ["suraj", "anand", "gaurav", "aman", "kishore"]

list2 = ["rohan", "ram", "mohan", "priya", "komal"]

Output :

['aman', 'anand', 'gaurav', 'kishore', 'komal',

'mohan', 'priya', 'ram', 'rohan', 'suraj']

OUTPUT :

With Function

a=[25, 18, 9, 41, 26, 31]  
b=[25, 45, 3, 32, 15, 20]  
a.extend(b)  
print(a)  
a.sort()  
print(a)

without function

a=["suraj", "anand", "gaurav", "aman", "kishore"]  
b=["rohan", "ram", "mohan", "priya", "komal"]  
for i in range(0,len(b)):  
 a.append(b[i])  
print(a)  
for k in range(0,len(a)):  
 for j in range(k+1,len(a)):  
 if a[j]<a[k]:  
 a[j], a[k]=a[k], a[j]  
print(a)