def merge\_list(a,b):

result = []

l, r = len(a), len(b)

i = j =0

while(i<l and j<r):

if(a[i]<b[j]):

result.append(a[i])

i = i+1

else:

result.append(b[j])

j = j+1

print("result",result+ a[i:] + b[j:])

return result + a[i:] + b[j:]

def mergeSort(arr):

length = len(arr)

if(length==2):

if(arr[0]<arr[1]):

return arr

else:

return arr[::-1]

elif(length==1):

return arr

left = mergeSort(arr[:int(length/2)])

right = mergeSort(arr[int(length/2):])

if(left is not None or right is not None):

a = merge\_list(left,right)

return a

arr = [12, 11, 13, 5, 6, 7]

# print ("Given array is", end="\n")

# print(arr)

# print("Sorted array is: ", end="\n")

print(mergeSort(arr))