

```
1 def mergesort(A):
2
3     if len(A) > 1:
4         mid = len(A) // 2
5         left = A[:mid]
6         right = A[mid:]
7
8         mergesort(left)
9         mergesort(right)
10
11     i=0
12     j=0
13     k=0
14     while i < len(left) and j < len(right):
15         if left[i] < right[j]:
16             A[k] = left[i]
17             i = i + 1
18         else:
19             A[k] = right[j]
20             j = j + 1
21         k = k + 1
22
23     while i < len(left):
24         A[k] = left[i]
25         i = i + 1
26         k = k + 1
27
28     while j < len(right):
29         A[k] = right[j]
30         j = j + 1
31         k = k + 1
32
33 A = [84, 21, 96, 15, 47]
34 print('Original Array: ', A)
35 mergesort(A)
36 print('Sorted Array: ', A)
37
38
39
40
```