Merge Sort

Merge sort algorithm uses a specific algorithmic technique to perform the sort operations. This technique is known as the divide-and-conquer approach. In this technique, we essentially break the given problem into subproblems that are similar to the original problem. This is the first part where you have divided the problem to the smallest possible subproblem. After that, the next step, known as conquer will take place. In this step, the solution of subproblems will be combined to solve the broken problem. After performing the conquer operation iteratively/recursively we will have the final solution.

This method takes a python list as input and returns the same list in sorted order.

Test Case - 1
1 2 3 4 5 6
1 2 3 4 5 6

Test Case - 2
43 23 11 78 51 67
11 23 43 51 67 78

Test Case - 3
60 41 37 52 20 1
1 20 37 41 52 60

Test Case - 4
20 37 1 60 41 52
1 20 37 41 52 60

Explanation:
First line in the test case is the list of integers separated by space. Last line of each test case is the output line that prints the list in sorted order.

Note:
1. Do not accept more than 50 values as elements of the list.
2. Enter the elements in random order, no need to insert elements in sorted order.