Program - 7

**Aim: Merge Sort in Python.**

**Code:**

def mergeSort(array):  
 if len(array) > 1:  
 r = len(array)//2  
 L = array[:r]  
 M = array[r:]  
 mergeSort(L)  
 mergeSort(M)  
 i = j = k = 0  
 while i < len(L) and j < len(M):  
 if L[i] < M[j]:  
 array[k] = L[i]  
 i += 1  
 else:  
 array[k] = M[j]  
 j += 1  
 k += 1  
 while i < len(L):  
 array[k] = L[i]  
 i += 1  
 k += 1  
 while j < len(M):  
 array[k] = M[j]  
 j += 1  
 k += 1  
def printList(array):  
 for i in range(len(array)):  
 print(array[i], end=" ")  
 print()  
if \_\_name\_\_ == '\_\_main\_\_':  
 array = [6, 5, 12, 10, 9, 1]  
 mergeSort(array)  
 print("Sorted array is: ")  
 printList(array)

**Output:**

