

MERGE SORT

```
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

Sorted array is:

1 5 6 9 10 12