```c
#include <stdio.h>

void merge(int arr[], int l, int m, int r) {
    // Merge two subarrays of arr[]
    // Implement the merging logic here
}

void mergeSort(int arr[], int l, int r) {
    if (l < r) {
        int m = l + (r - l) / 2;
        mergeSort(arr, l, m);
        mergeSort(arr, m + 1, r);
        merge(arr, l, m, r);
    }
}

int main() {
    int arr[] = {12, 11, 13, 5, 6, 7};
    int arr_size = sizeof(arr) / sizeof(arr[0]);

    mergeSort(arr, 0, arr_size - 1);

    printf("Sorted array: \n");
    for (int i = 0; i < arr_size; i++) {
        printf("%d ", arr[i]);
    }
    return 0;
}
```