#include <stdio.h>

#include <stdlib.h>

void mergesort(int arr1[], int arr2[], int n1, int n2, int merge[])

{

int a = 0, b = 0, c = 0;

while (a < n1 && b < n2)

{

if (arr1[a] <= arr2[b])

{

merge[c] = arr1[a];

a++;

}

else

{

merge[c] = arr2[b];

b++;

}

c++;

}

while (a < n1)

{

merge[c] = arr1[a];

a++;

c++;

}

while (b < n2)

{

merge[c] = arr2[b];

b++;

c++;

}

}

int main()

{

int n1, n2;

printf("enter the number of elements in the first array: ");

scanf("%d", &n1);

int arr1[n1];

printf("enter the elements of the first array:\n");

for (int i = 0; i < n1; i++) {

scanf("%d", &arr1[i]);

}

printf("enter the number of elements in the second array: ");

scanf("%d", &n2);

int arr2[n2];

printf("enter the elements of the second array:\n");

for (int i = 0; i < n2; i++) {

scanf("%d", &arr2[i]);

}

int merge[n1 + n2];

mergesort(arr1, arr2, n1, n2, merge);

printf("Merged array is: ");

for (int i = 0; i < n1 + n2; i++) {

printf("%d ", merge[i]);

}

printf("\n");

return 0;

}

