1. merge-two-sorted-array.cpp

```
//merge two sorted array in a new sorted array.

#include <bits/stdc++.h>
using namespace std;

void sort_merge(int arr[], int arr1[], int arr2[],int l1, int l2){
   int l = l1+l2;
   int i = 0;
   int j = 0;
   int k = 0;
   while(i < l){
      if(j >= l1 || k >= l2){
         if(j >= l1){
            while(k > l2){
               arr[i] = arr2[k];
               k++;
               i++;
            }
         }else{
            while(j < l1){
               arr[i] = arr1[j];
               j++;
               i++;
            }
         }
         return;
      }
      if(arr1[j] < arr2[k]){
         arr[i] = arr1[j];
         j++;
      }else{
         arr[i] = arr2[k];
         k++;
      }
      i++;
   }
}

int main(){
   int arr[10];
   int arr1[] = {1,3,5,9,10};
   int arr2[] = {2,3,4,6,8};
   int l1 = sizeof(arr1)/sizeof(arr1[0]);
   int l2 = sizeof(arr2)/sizeof(arr2[0]);
   sort_merge(arr,arr1,arr2,l1,l2);
   int i = 0;
   while(i < 10){
      cout << arr[i] << " ";
      i++;
   }
   return 0;
}
```

OUTPUT

```
PS S:\WorkSpace\CollegeWork\Practicals> g++ .\1.merge-two-sorted-array.cpp
PS S:\WorkSpace\CollegeWork\Practicals> ./a
1 2 3 3 4 5 6 8 9 10
PS S:\WorkSpace\CollegeWork\Practicals>
```