**Program:**

#include<stdio.h>

void main()

{

int arr[10],ar[10],n,j,i,m,p,q,a,b,k,merge[20];

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

scanf("%d",&n);

printf("enter the elements of the array 1:\n");

 for(i=0;i<n;i++)

 {

  scanf("%d",&arr[i]);

 }

    for (i = 0; i < n; ++i)

     {

     for (j = i + 1; j < n; ++j)

      {

      if (arr[i] > arr[j])

       {

       a =  arr[i];

       arr[i] = arr[j];

       arr[j] = a;

       }

      }

     }

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

scanf("%d",&m);

printf("enter the elements of the array 2:\n");

for(p=0;p<m;p++)

 {

  scanf("%d",&ar[p]);

 }

for (p = 0; p < m; p++)

     {

     for (q= p + 1; q < m; q++)

      {

      if (ar[p] > ar[q])

       {

       b =  ar[p];

       ar[p] = ar[q];

       ar[q] = b;

       }

      }printf("The sorted array1 is:\n");

for(i=0;i<n;i++)

 {

  printf("%d\t",arr[i]);

  merge[i]=arr[i];

 }

 k=i;

printf("\n The sorted array2 is:\n");

for(p=0;p<m;p++)

 {

  printf("%d \t",ar[p]);

  merge[k]=ar[p];

  k++;

 }

 printf("\nThe new array after merging is:\n");

 for (i = 0; i < k; ++i)

     {

     for (j = i + 1; j < k; ++j)

      {

      if (merge[i] > merge[j])

       {

       a =  merge[i];

       merge[i] = merge[j];

       merge[j] = a;

       }

      }

     }

    for(i=0; i<k; i++)

        printf("%d ", merge[i]);

} }