

Program to merge two sorted arrays.

```
#include <stdio.h>

int main()
{
    int ar1[10], ar2[10], ar3[20];
    int m,n,i,j,k;

    printf("Enter number of elements in array 1 : ");
    scanf("%d",&m);
    printf("Enter array 1 in sorted order : ");
    for(i=0;i<m;i++)
    {
        scanf("%d",&ar1[i]);
    }

    printf("Enter number of elements in array 2 : ");
    scanf("%d",&n);
    printf("Enter array 2 in sorted order : ");
    for(i=0;i<n;i++)
    {
        scanf("%d",&ar2[i]);
    }

    i=j=k=0;

    while(i<m&& j<n)
    {
        if(ar1[i]>ar2[j])
        {
            ar3[k++] = ar2[j++];
        }
        else
        {
            ar3[k++] = ar1[i++];
        }
    }
}
```

```
    while(i<m)
    {
        ar3[k++]=ar1[i++];
    }

    while(j<n)
    {
        ar3[k++]= ar2[j++];
    }

    printf("\nFirst array is :");
    for(i=0;i<m;i++)
    {
        printf("%d",ar1[i]);
    }

    printf("\nSecond array is :");
    for(i=0;i<n;i++)
    {
        printf("%d",ar2[i]);
    }

    printf("\nMerged array is :");
    for(i=0;i<m+n;i++)
    {
        printf("%d",ar3[i]);
    }

    return 0;
}
```