Merge two sorted arrays & store in a third array

```c
#include<stdio.h>
void main()
{
        inr arr1[50],arr2[50],res[100],m,n,i,j,k=0;
        printf("\n Enter size of array Array1:");
        scanf("%d", &m);
        printf("\n Enter the sorted array for Array1: \n");
        for(i=0;i<m;i++)
        {
                scanf("%d",&arr1[i]);
        }
        printf("\n Enter the size of Array2: ");
        scanf("%d",&n);
        printf("\n Enter the sorted element for Array2: \n");
        for(i=0;i<n;i++)
        {
                csanf("%d",&arr2[i]);
        }
        i=0;
        j=0;
        while(i<m && j<n)
        {
                if(arr1[i]<arr2[j])
                {
                        res[k]=arr1[i];
                        i++;
                }
                else
                {
                        res[k]=arr2[j];
```

```c
                j++;
                k++
        }
    }
    if(i>=m)
    {
        while(j<n)
        {
            res[k]=arr3[j];
            j++;
            k++;
        }
    }
    if(j>=n)
    {
        while(i<m)
        {
            res[k]=arr1[i];
            i++;
            j++;
        }
    }
    printf("\n Aftre merging: \n");
    for(i=0;i<m+n;i++)
    {
        printf("\n%d",res[i]);
    }
}
```

Output

Enter size of array Array1:4

Enter the sorted array for Array1:1

3

5

7

Enter the size of Array2:5

Enter the sorted element for Array2:2

4

6

8

10

Aftre merging:

1

2

3

4

5

6

7

8

10