

Program:

// Write a C program to merge two array in Ascending order.

```
#include<stdio.h>
```

```
void setData(int arrSize, int arr[])
{
    for(int i = 0; i < arrSize; i++)
    {
        printf("Enter number for Arr[%d] : ", i);
        scanf("%d", &arr[i]);
    }
}
```

```
int main()
{
    system("cls");
    int size1, size2, temp;

    printf("Enter size for ARRAR-1 : ");
    scanf("%d",&size1);
    int arr1[size1];
    setData(size1, arr1);

    printf("Enter size for ARRAR-2 : ");
    scanf("%d",&size2);
    int arr2[size2];
    setData(size2, arr2);
    system("cls");

    printf("ARRAY-1 : ");
    for(int i = 0; i < size1; i++)
    {
        printf("%d ", arr1[i]);
    }

    printf("\nARRAY-2 : ");
    for(int i = 0; i < size2; i++)
    {
        printf("%d ", arr2[i]);
    }

    int arrSize = size1 + size2;
    int arr[arrSize];

    for(int i = 0; i < size1; i++)
    {
        arr[i] = arr1[i];
    }
}
```

```

for(int i = 0, j = size1; i < size2, j < arrSize; i++, j++)
{
    arr[j] = arr2[i];
}

for(int i = 0; i < (arrSize - 2); i++)
{
    for(int j = 0; j < (arrSize - i); j++)
    {
        if(arr[j] > arr[j + 1])
        {
            temp = arr[j];
            arr[j] = arr[j + 1];
            arr[j + 1] = temp;
        }
    }
}

printf("\n\nMerged & Sorted Array : ");
for(int i = 0; i < arrSize; i++)
{
    printf("%d ", arr[i]);
}
}

```

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Output :

```

Enter size for ARRAR-1 : 5
Enter number for Arr[0] : 2
Enter number for Arr[1] : 1
Enter number for Arr[2] : 5
Enter number for Arr[3] : 22
Enter number for Arr[4] : 10

```

```

Enter size for ARRAR-2 : 3
Enter number for Arr[0] : 11
Enter number for Arr[1] : 22
Enter number for Arr[2] : 8

```

```

ARRAY-1 : 2 1 5 22 10
ARRAY-2 : 11 22 8

```

```

Merged & Sorted Array : 1 2 5 8 10 11 11 22
PS E:\SGGS\2ND YEAR\C>

```