Merge 2 sorted array and sort in 3rd array

```c
#include <stdio.h>

int main()

{

int ar1[20], ar2[20], ar3[50];

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])
```

```c
{
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 :\n");
for(i=0;i<m;i++)
{
printf("\n%d \n",ar1[i]);
}
printf("\nSecond array is : \n");
for(i=0;i<n;i++)
{
printf("%d \n",ar2[i]);
}
```

```c
printf("\nMerged array is :\n");

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

{

printf("%d \n",ar3[i]);

}

return 0;

}
```
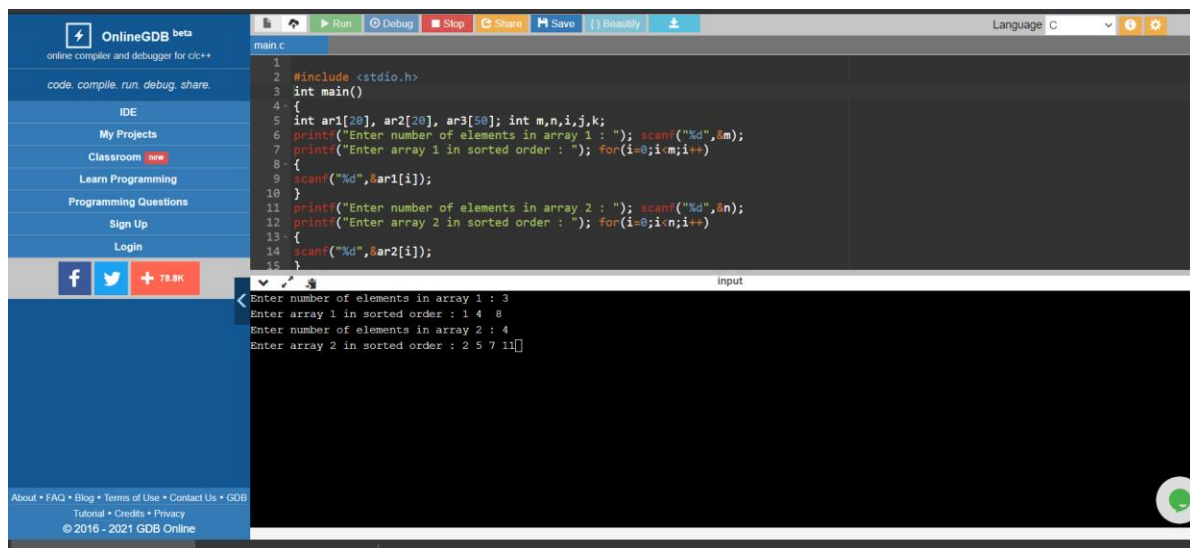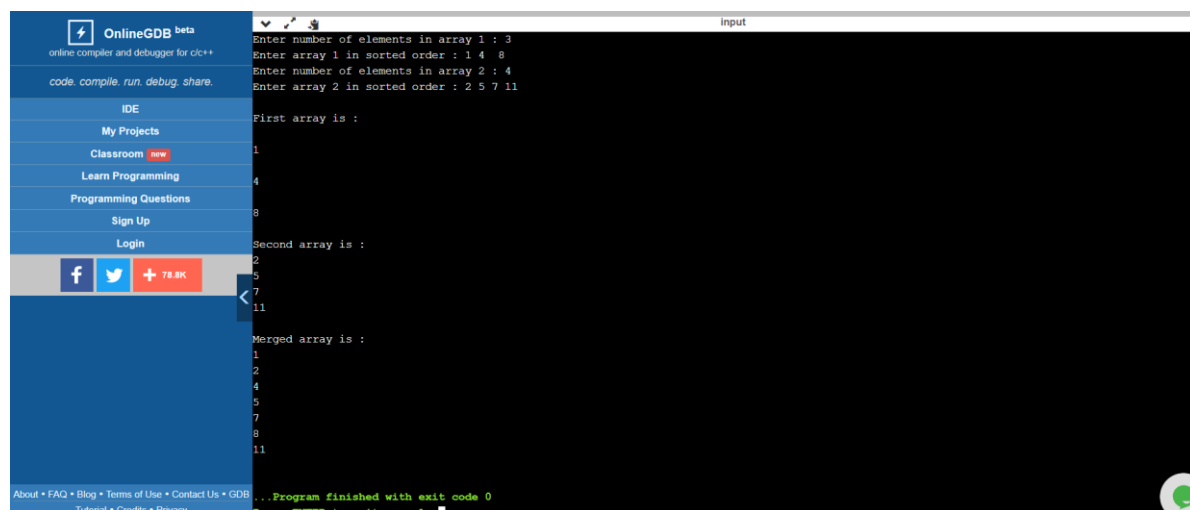
Output