## Program 1:

j++;

k++;

j++; k++; }

**if(i>=m)** while(j<n)

arr3[k]=arr2[j];

Merge two arrays

## PROGRAM CODE:

```
Window Help
                                                                               <del>-</del>7=[‡]=
 include<stdio.h>
#include<comio.h>
void main()
int arr1[50],arr2[50],arr3[100],m,n,i,j,k=0;
           nter the no of elements1:\n");
',&m);
printf("enscanf("zd
printf ("
                 the elements\n");
for(i=0;i<m;i++)
scanf("xd",&arr1[i]);
printf("Enter the no of elements 2:\n");
scanf("%d",&n);
printf("Enter the elements\n");
for(i=0;i<n;i++)
scanf("xd",&arr2[i]);
i=0;
j=0;
1:1 —— 1:1 F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu
 ≡ File Edit Search Run Compile Debug Project Options
-[■] MERGING.C
                                                                       Window Help
while(i<m && j<n)
                                                                               <del>-</del>7=[$]=
if(arr1[i] < arr2[j])
arr3[k]=arr1[i];
i++;
else
{arr3[k]=arr2[j];
```

П

F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu

```
File Edit Search Run Compile Debug Project Options Window Help

while(j(n))
{
arr3[k]=arr2[j];
j++;
k++;
}}
if(j>=n)
{
while(i<m)
{
arr3[k]=arr1[i];
i++;
}}
}printf("Horged array(\n");
for(i=0;i<m+n;i++)
{
printf("\d\n",arr3[i]);
}
getch();

F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu
```

## OUTPUT:

```
C:\TC\BIN>tc.exe
enter the no of elements1:
3
Enter the elements
1 2 3
Enter the no of elements 2:
4
Enter the elements
5 6 7 9
Merged array:
1
2
3
5
6
7
9
```

## Program 2:

Implement circular queue

PROGRAM CODE:

```
    ■ File Edit Search Run Compile Debug Project Options
    ■ CQUEUE.C

                                                                       Window Help
 [1]=
 include<stdio.h>
#include<comio.h>
#define MAX 5
int cqueue_arr[MAX];
int front = -1;
int rear = -1:
void insert(int item)
if((front == 0 && rear == MAX-1) || (front == rear+1))
printf("queue overflown");
return;
if(front == -1)
front = 0;
rear = 0;
else
if (rear == MAX-1)
       = 1:1 =
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu
```

```
Window Help
                                                             -9=[$]=
rear = 0;
else
rear = rear+1;
cqueue_arr[rear] = item;
void deletion()
if(front == -1)
printf("queue underflow\n");
return;
printf("element deleted from queue is:xd\n",cqueue_arr[front]);
if(front == rear)
front = -1;
rear = -1;
else
42:1 42:1 F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu
```

```
■ File Edit Search Run Compile Debug Project Options

[[1] — CQUEUE.C
                                                                           Window Help
else
{
if(front == MAX-1)
front = 0;
else
front = front+1;
}}
void display()
int front_pos = front,rear_pos=rear;
if(front == -1)
printf("queue is empty\n");
return;
printf("queue elements\n:");
if(front_pos <= rear_pos)
while(front_pos <= rear_pos)
{</pre>
 printf("xd",cqueue_arr[front_pos]);
 front_pos++;
    <del>----</del> 62:1 =
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu
File Edit Search Run Compile Debug Project Options

CQUEUE.C
                                                                           Window Help
else
while(front_pos <= MAX-1)
printf("xd",cqueue_arr[front_pos]);
 front_pos++;
 front_pos = 0;
while(front_pos <= rear_pos)
 printf("xd",cqueue_arr[front_pos]);
 front_pos++;
 printf("\n");
 void main()
int choice, item;
do
       = 83:1 ----
```

F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu

```
≡ File Edit Search Run Compile Debug Project Options
                                                                      Window Help
[ ] =
0
{
                                     = CQUEUE.C
printf("1.Insert\n 2.Delete\n 3.Display\n 4.quit\n");
printf("\nEnter your choice\n");
scanf ("xd", &choice);
switch(choice)
case 1:printf("Input element for insertion:");
scanf("xd", &item);
insert(item);
break;
case 2:
deletion();
break;
case 3:
display();
break;
case 4:
break;
default:
printf("wrong choice");
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu
                                                                      Window Help
9=[‡]=
 scanf ("xd",&choice);
switch(choice)
case 1:printf("Input element for insertion:");
scanf("xd", &item);
insert(item);
break;
case 2:
deletion();
break;
case 3:
display();
break;
case 4:
break;
default:
printf("wrong choice");
}}
while(choice!=4);
getch();
     = 106:1 -----
F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu
```

OUTPUT:

```
1.Insert
2.Delete
3.Display
4.quit
Enter your choice
1
Input element for insertion:23
1.Insert
2.Delete
3.Display
4.quit
Enter your choice
1
Input element for insertion:25
1.Insert
2.Delete
3.Display
4.quit
Enter your choice
1
Input element for insertion:25
1.Insert
2.Delete
3.Display
4.quit
Enter your choice
1
Enter your choice
1
Input element for insertion:28
```

```
2.32528
1.Insert
2.Delete
3.Display
4.quit
Enter your choice
2
2 element deleted from queue is:23
1.Insert
2.Delete
3.Display
4.quit
Enter your choice
3
queue elements
:2528
1.Insert
2.Delete
3.Display
4.quit
Enter your choice
3
queue relements
:2528
1.Insert
2.Delete
3.Display
4.quit
Enter your choice
5.Company
6.quit
Enter your choice
```