

F:\DSA\ASSN 7\Circular Queue.c - Dev-C++ 5.11

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TDM-GCC 4.9.2 64-bit Release

(globals)

Project Classes Debug

Circular Queue.c circular queue 2.c

```
1  #include <stdio.h>
2  #define MAX 5
3  int cqueue_arr[MAX];
4  int front = -1;
5  int rear = -1;
6  void insert(int item)
7  {
8      if ((front == 0 && rear == MAX - 1) || (front == rear + 1))
9      {
10         printf("Queue Overflow \n");
11         return;
12     }
13     if (front == -1)
14     {
15         front = 0;
16         rear = 0;
17     }
18     else
19     {
20         if (rear == MAX - 1)
21             rear = 0;
22         else
23             rear = rear + 1;
24     }
25     cqueue_arr[rear] = item;
26 }
27 void deletion()
28 {
29     if (front == -1)
30     {
31         printf("Queue Underflown\n");
32         return;
33     }
34     printf("Element deleted from queue is : %d\n", cqueue_arr[front]);
35     if (front == rear)
```

Compiler Resources Compile Log Debug Find Results Close

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63°F 10:47 15-12-2021

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Project Classes Debug

Circular Queue.c circular queue 2.c

```
34 printf("Element deleted from queue is : %d\n", cqueue_arr[front]);
35 if (front == rear)
36 {
37     front = -1;
38     rear = -1;
39 }
40 else
41 {
42     if (front == MAX - 1)
43         front = 0;
44     else
45         front = front + 1;
46 }
47 }
48 void display()
49 {
50     int front_pos = front, rear_pos = rear;
51     if (front == -1)
52     {
53         printf("Queue is empty\n");
54         return;
55     }
56     printf("Queue elements :\n");
57     if (front_pos <= rear_pos)
58         while (front_pos <= rear_pos)
59         {
60             printf("%d ", cqueue_arr[front_pos]);
61             front_pos++;
62         }
63     else
64     {
65         while (front_pos <= MAX - 1)
66         {
67             printf("%d ", cqueue_arr[front_pos]);
68             front_pos++;
69         }
70     }
71 }
```

Compiler Resources Compile Log Debug Find Results Close

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63°F 10:48 15-12-2021

```
67     printf("%d ", cqueue_arr[front_pos]);
68     front_pos++;
69 }
70 front_pos = 0;
71 while (front_pos <= rear_pos)
72 {
73     printf("%d ", cqueue_arr[front_pos]);
74     front_pos++;
75 }
76 }
77 printf("\n");
78 }
79 int main()
80 {
81     int choice, item;
82     do
83     {
84         printf("1.Insert\n");
85         printf("2.Delete\n");
86         printf("3.Display\n");
87         printf("4.Quit\n");
88         printf("Enter your choice :\n ");
89         scanf("%d", &choice);
90         switch (choice)
91         {
92             case 1:
93                 printf("Input the element for insertion in queue :\n ");
94                 scanf("%d", &item);
95                 insert(item);
96                 break;
97             case 2:
98                 deletion();
99                 break;
100            case 3:
101                display();
```

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(globals)

Project Classes Debug

```
76     }
77     printf("\n");
78 }
79 int main()
80 {
81     int choice, item;
82     do
83     {
84         printf("1.Insert\n");
85         printf("2.Delete\n");
86         printf("3.Display\n");
87         printf("4.Quit\n");
88         printf("Enter your choice :\n ");
89         scanf("%d", &choice);
90         switch (choice)
91         {
92             case 1:
93                 printf("Input the element for insertion in queue :\n ");
94                 scanf("%d", &item);
95                 insert(item);
96                 break;
97             case 2:
98                 deletion();
99                 break;
100            case 3:
101                display();
102                break;
103            case 4:
104                break;
105            default:
106                printf("\nWrong choicen");
107            }
108        } while (choice != 4);
109        return 0;
110 }
```

Compiler Resources Compile Log Debug Find Results Close

Line: 110 Col: 2 Sel: 0 Lines: 110 Length: 2306 Insert Done parsing in 0.031 seconds

63°F 10:49 15-12-2021

```
F:\DSA\ASSN 7\Circular Queue.exe
1.Insert
2.Delete
3.Display
4.Quit
Enter your choice :
1
Input the element for insertion in queue :
56
1.Insert
2.Delete
3.Display
4.Quit
Enter your choice :
1
Input the element for insertion in queue :
67
1.Insert
2.Delete
3.Display
4.Quit
Enter your choice :
1
Input the element for insertion in queue :
90
1.Insert
2.Delete
3.Display
4.Quit
Enter your choice :
1
Input the element for insertion in queue :
3
1.Insert
2.Delete
3.Display
4.Quit
```


F:\DSA\ASSN 7\Circular Queue.exe

Input the element for insertion in queue :

3

- 1.Insert
- 2.Delete
- 3.Display
- 4.Quit

Enter your choice :

2

Element deleted from queue is : 56

- 1.Insert
- 2.Delete
- 3.Display
- 4.Quit

Enter your choice :

3

Queue elements :

67 90 3

- 1.Insert
- 2.Delete
- 3.Display
- 4.Quit

Enter your choice :

4