

*linearqueue.c - Code::Blocks 20.03

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```
1 #include <stdio.h>
2 #define SIZE 5
3 int queue[SIZE];
4 int front = -1, rear = -1;
5 void enqueue(int value) {
6     if (rear == SIZE - 1) {
7         printf("Queue is FULL!\n");
8     } else {
9         if (front == -1) front = 0;
10        rear++;
11        queue[rear] = value;
12        printf("%d inserted into queue.\n", value);
13    }
14}
15 void dequeue() {
16    if (front == -1 || front > rear) {
17        printf("Queue is EMPTY!\n");
18    } else {
19        printf("%d removed from queue.\n", queue[front]);
20        front++;
21        if (front > rear) {
22            front = rear = -1;
23        }
24    }
25}
26 void display() {
27    if (front == -1) {
28        printf("Queue is EMPTY!\n");
29    } else {
30        printf("Queue elements: ");
31        for (int i = front; i <= rear; i++) {
32            printf("%d ", queue[i]);
33        }
34        printf("\n");
35    }
36}
37 int main() {
38    int choice, value;
39    while (1) {
40        printf("\n--- Linear Queue Menu ---\n");
41        printf("1. Enqueue\n");
42        printf("2. Dequeue\n");
43        printf("3. Display\n");
44        printf("4. Exit\n");
45        printf("Enter your choice: ");
46        scanf("%d", &choice);
47    }
}
```

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Search

Windows (CR+LF) WINDOWS-1252 Line 3, Col 17, Pos 52 Insert Modified Read/Write default

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```
25 void display() {
26     if (front == -1) {
27         printf("Queue is EMPTY!\n");
28     } else {
29         printf("Queue elements: ");
30         for (int i = front; i <= rear; i++) {
31             printf("%d ", queue[i]);
32         }
33         printf("\n");
34     }
35 }
36
37 int main() {
38     int choice, value;
39     while (1) {
40         printf("\n--- Linear Queue Menu ---\n");
41         printf("1. Enqueue\n");
42         printf("2. Dequeue\n");
43         printf("3. Display\n");
44         printf("4. Exit\n");
45         printf("Enter your choice: ");
46         scanf("%d", &choice);
47
48         switch (choice) {
49             case 1:
50                 printf("Enter value to insert: ");
51                 scanf("%d", &value);
52                 enqueue(value);
53                 break;
54
55             case 2:
56                 dequeue();
57                 break;
58
59             case 3:
60                 display();
61                 break;
62
63             case 4:
64                 return 0;
65
66             default:
67                 printf("Invalid choice!\n");
68         }
69     }
70 }
71 }
```

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```
1 #include<stdio.h>
2 #define size 5
3 int queue[size];
4 int front=-1,rear=-1;
5 int isFull()
6 {
7     if((front==0 && rear==size-1) || front==rear+1)
8         return 1;
9     return 0;
10 }
11 int isEmpty()
12 {
13     if(front==-1)
14         return 1;
15     return 0;
16 }
17 void enqueue()
18 {
19     if(isFull())
20     {
21         printf("Queue Overflow\n");
22     }
23     else
24     {
25         int ele;
26         printf("Enter ele to be inserted\n");
27         scanf("%d",&ele);
28         if(front==-1)
29             front=0;
30         rear=(rear+1)%size;
31         queue[rear]=ele;
32         printf("%d is inserted into the queue\n",ele);
33     }
34 }
35 void dequeue()
36 {
37     if(isEmpty())
38     {
39         printf("Stack underflow\n");
40     }
41     else
42     {
43         int ele;
44         ele=queue[front];
45         if(front==rear)
46         {
47             front=-1;
48             rear=-1;
49         }
50     }
51 }
```

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Search

Windows (CR+LF) WINDOWS-1252 Line 89, Col 2, Pos 1772 Insert Read/Write default

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Start here X linearqueue.c X circularqueue.c

```
37     if(isEmpty())
38     printf("Stack underflow\n");
39
40     {
41         int ele;
42         ele=queue[front];
43         if(front==rear)
44         {
45             front=-1;
46             rear=-1;
47         }
48         else
49         {
50             front=(front+1)%size;
51             printf("%d got removed\n",ele);
52         }
53     }
54     void display()
55     {
56         if (isEmpty())
57         printf(" \n Empty Queue\n");
58         else
59         {
60             int i;
61             for(i=front;i!=rear;i=(i+1)%size)
62             printf("%d ",queue[i]);
63             printf("%d\n",queue[i]);
64         }
65     }
66     int main()
67     {
68         int choice;
69
70         printf("Circular Queue Implementation using Array\n");
71
72         while (1)
73         {
74             printf("\nMenu:\n");
75             printf("1. Insert\n");
76             printf("2. Delete\n");
77             printf("3. Display\n");
78             printf("4. Exit\n");
79             printf("Enter your choice: ");
80             scanf("%d", &choice);
81
82             switch (choice)
83             {
84                 case 1: enqueue(); break;
85                 case 2: dequeue(); break;
86                 ...
87             }
88         }
89     }
```

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C/C++ Windows (CR+LF) WINDOWS-1252 Line 89, Col 2, Pos 1772 Insert Read/Write default ENG IN 11:59:18 06-10-2025

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Start here X linearqueue.c X circularqueue.c X

```
44     {
45         front=-1;
46         rear=-1;
47     }
48     else
49     {
50         front=(front+1)%size;
51         printf("%d got removed\n",ele);
52     }
53 }
54 void display()
55 {
56     if (isEmpty())
57     printf("\n Empty Queue\n");
58     else
59     {
60         int i;
61         for(i=front;i!=rear;i=(i+1)%size)
62             printf("%d ",queue[i]);
63             printf("\n");
64     }
65 }
66 int main()
67 {
68     int choice;
69
70     printf("Circular Queue Implementation using Array\n");
71
72     while (1)
73     {
74         printf("\nMenu:\n");
75         printf("1. Insert\n");
76         printf("2. Delete\n");
77         printf("3. Display\n");
78         printf("4. Exit\n");
79         printf("Enter your choice: ");
80         scanf("%d", &choice);
81
82         switch (choice)
83         {
84             case 1: enqueue(); break;
85             case 2: dequeue(); break;
86             case 3: display(); break;
87             case 4: return 0;
88             default: printf("Invalid choice! Try again.\n");
89         }
90     }
91 }
```

C:\Users\STUDENT\Downloads\CRC\circularqueue.c C/C++ Windows (CR+LF) WINDOWS-1252 Line 89, Col 2, Pos 1772 Insert Read/Write default 11:59:39 06-10-2025

```
C:\Users\STUDENT\Download X + v --- Linear Queue Menu ---  
1. Enqueue  
2. Dequeue  
3. Display  
4. Exit  
Enter your choice: 3  
Queue is EMPTY!  
--- Linear Queue Menu ---  
1. Enqueue  
2. Dequeue  
3. Display  
4. Exit  
Enter your choice: 1  
Enter value to insert: 11  
11 inserted into queue.  
--- Linear Queue Menu ---  
1. Enqueue  
2. Dequeue  
3. Display  
4. Exit  
Enter your choice: 1  
Enter value to insert: 22  
22 inserted into queue.  
--- Linear Queue Menu ---  
1. Enqueue  
2. Dequeue  
3. Display  
4. Exit  
Enter your choice: 1  
Enter value to insert: 33  
33 inserted into queue.  
--- Linear Queue Menu ---  
1. Enqueue  
2. Dequeue  
3. Display  
4. Exit  
Enter your choice: 1  
Enter value to insert: 44  
44 inserted into queue.  
--- Linear Queue Menu ---  
1. Enqueue  
2. Dequeue  
3. Display  
4. Exit  
Enter your choice: 5
```



```
C:\Users\STUDENT\Download X + v
3. Display
4. Exit
Enter your choice: 5
Invalid choice!
--- Linear Queue Menu ---
1. Enqueue
2. Dequeue
3. Display
4. Exit
Enter your choice: 1
Enter value to insert: 55
55 inserted into queue.
--- Linear Queue Menu ---
1. Enqueue
2. Dequeue
3. Display
4. Exit
Enter your choice: 1
Enter value to insert: 66
Queue is FULL!
--- Linear Queue Menu ---
1. Enqueue
2. Dequeue
3. Display
4. Exit
Enter your choice: 2
11 removed from queue.
--- Linear Queue Menu ---
1. Enqueue
2. Dequeue
3. Display
4. Exit
Enter your choice: 2
22 removed from queue.
--- Linear Queue Menu ---
1. Enqueue
2. Dequeue
3. Display
4. Exit
Enter your choice: 3
Queue elements: 33 44 55
--- Linear Queue Menu ---
1. Enqueue
2. Dequeue
3. Display
```



```
C:\Users\STUDENT\Download < + > X - D X

1. Enqueue
2. Dequeue
3. Display
4. Exit
Enter your choice: 1
Enter value to insert: 55
55 inserted into queue.

--- Linear Queue Menu ---
1. Enqueue
2. Dequeue
3. Display
4. Exit
Enter your choice: 1
Enter value to insert: 66
Queue is FULL!

--- Linear Queue Menu ---
1. Enqueue
2. Dequeue
3. Display
4. Exit
Enter your choice: 2
11 removed from queue.

--- Linear Queue Menu ---
1. Enqueue
2. Dequeue
3. Display
4. Exit
Enter your choice: 2
22 removed from queue.

--- Linear Queue Menu ---
1. Enqueue
2. Dequeue
3. Display
4. Exit
Enter your choice: 3
Queue elements: 33 44 55

--- Linear Queue Menu ---
1. Enqueue
2. Dequeue
3. Display
4. Exit
Enter your choice: 4

Process returned 0 (0x0) execution time : 44.043 s
Press any key to continue.
|
```



```
C:\Users\STUDENT\Download X + v
Circular Queue Implementation using Array

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 3

Empty Queue

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
Enter ele to be inserted
66
66 is inserted into the queue

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
Enter ele to be inserted
77
77 is inserted into the queue

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
Enter ele to be inserted
88
88 is inserted into the queue

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
Enter ele to be inserted
99
99 is inserted into the queue
```



```
C:\Users\STUDENT\Download X + v
Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
Enter ele to be inserted
100
100 is inserted into the queue

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 3
66 77 88 99 100

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
66 got removed

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
77 got removed

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
88 got removed

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 3
99 100

Menu:
```



```
C:\Users\STUDENT\Download X + v - D X

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 3
66 77 88 99 100

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
66 got removed

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
77 got removed

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
88 got removed

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 3
99 100

Menu:
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 4

Process returned 0 (0x0) execution time : 44.535 s
Press any key to continue.
```

