

```
9 #include <stdio.h>
10 #include<stdlib.h>
11 #define MAX 50
12 void insert();
13 void delete();
14 void display();
15 int queue_array[MAX];
16 int rear = -1;
17 int front = -1;
18 int main()
19 {
20     int choice;
21     while (1)
22     {
23         printf("1.Insert element to queue \n");
24         printf("2.Delete element from queue \n");
25         printf("3.Display all elements of queue \n");
26         printf("4.Quit \n");
27         printf("Enter your choice : ");
28         scanf("%d", &choice);
29         switch(choice)
30     {
31         case 1:insert();
32         break;
33         case 2:delete();
34         break;
35         case 3:display();
```

input

```
37 case 4:wrt(1);
38 default:
39 printf("Wrong choice n");
40 }
41 }
42 }
43 void insert()
44 {
45 int item;
46 if(rear == MAX - 1)
47 printf("Queue Overflow n");
48 else
49 {
50 if(front == - 1)
51 front = 0;
52 printf("Inset the element in queue : ");
53 scanf("%d", &item);
54 rear = rear + 1;
55 queue_array[rear] = item;
56 }
57 }
58 void delete()
59 {
60 if(front == - 1 || front > rear)
61 {
62 printf("Queue Underflow n");
63 return;
64 }
```

```
65 else
66 {
67     printf("Element deleted from queue is : %d\n", queue_array[front]);
68     front = front + 1;
69 }
70 }
71 void display()
72 {
73     int i;
74     if(front == - 1)
75         printf("Queue is empty \n");
76     else
77     {
78         printf("Queue is : \n");
79         for(i = front; i <= rear; i++)
80             printf("%d ", queue_array[i]);
81         printf("\n");
82     }
83 }
```

```
2.Delete element from queue
3.Display all elements of queue
4.Quit

Enter your choice : 1
Inset the element in queue : 10
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit

Enter your choice : 1
Inset the element in queue : 20
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit

Enter your choice : 1
Inset the element in queue : 30
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit

Enter your choice : 1
Inset the element in queue : 40
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit

Enter your choice : 3
```

```
1.Queue is : n10 20 30 40 n1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice : 2
Element deleted from queue is : 10n1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice : 4
```

```
...Program finished with exit code 1
Press ENTER to exit console.[]
```