

```
1 #include<stdio.h>
2 #include<stdlib.h>
3 #define Q_size 2
4 int item,front =0,rear=-1,q[10];
5 void insertrear()
6 {
7     if(rear==Q_size-1)
8     {
9         printf("QUEUE OVERFLOW\n");
10        return;
11    }
12    rear=rear+1;
13    q[rear]=item;
14 }
15 int deletefront()
16 {
17     if(front>rear)
18     {
19         front=0;
20         rear=-1;
21         return -1;
22     }
23     return q[front++];
24 }
25 void displayQ()
26 {
27     int i;
28     if(front>rear)
29     {
30         printf("QUEUE IS EMPTY\n");
31         return;
32     }
33     printf("CONTENTS OF QUEUE:\n");
34     for(i=front;i<rear;i++)
35     {
36         printf("%d\n",q[i]);
37     }
38 }
```

main.c

```
29 {
30     printf("QUEUE IS EMPTY\n");
31     return;
32 }
33 printf("CONTENTS OF QUEUE:\n");
34 for(i=front;i<rear;i++)
35 {
36     printf("%d\n",q[i]);
37 }
38 }
39 void main()
40 {
41     int choice;
42     for(;;)
43     {
44         printf("\n1:insertrear\n2:deletefront\n3:display\n4:exit\n");
45         printf("Enter the choice:\n");
46         scanf("%d",&choice);
47         switch(choice)
48         {
49             case 1:printf("Enter the item to be inserted:\n");
50                 scanf("%d",&item);
51                 insertrear();
52                 break;
53             case 2:item=deletefront();
54                 if(item==-1)
55                     printf("QUEUE IS EMPTY\n");
56                 else
57                     printf("ITEM DELETED=%d\n",item);
58                 break;
59             case 3:displayQ();
60                 break;
61             default:exit(0);
62         }
63     }
64 }
65
66
```

```
1:insertrear
2:deletefront
3:display
4:exit
Enter the choice:
1
Enter the item to be inserted:
23
```

```
1:insertrear
2:deletefront
3:display
4:exit
Enter the choice:
1
Enter the item to be inserted:
24
```

```
1:insertrear
2:deletefront
3:display
4:exit
Enter the choice:
1
Enter the item to be inserted:
26
QUEUE OVERFLOW
```

```
1:insertrear
2:deletefront
3:display
4:exit
Enter the choice:
3
CONTENTS OF QUEUE:
23
```

Enter the item to be inserted:

26

QUEUE OVERFLOW

1:insertrear

2:deletefront

3:display

4:exit

Enter the choice:

3

CONTENTS OF QUEUE:

23

1:insertrear

2:deletefront

3:display

4:exit

Enter the choice:

2

ITEM DELETED=23

1:insertrear

2:deletefront

3:display

4:exit

Enter the choice:

2

ITEM DELETED=24

1:insertrear

2:deletefront

3:display

4:exit

Enter the choice:

2

QUEUE IS EMPTY