

```

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

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33     return;
34 }
35 printf("Contents of the Queue\n");
36 for(i=front;i<=rear;i++)
37 {
38     printf("%d\n",q[i]);
39 }
40 }
41 int main()
42 {
43     int choice;
44     for(;;)
45     {
46         printf("\n1:Insert rear\n2:Delete front\n3:Display\n4:exit\n");
47         printf("Enter the choice\n");
48         scanf("%d",&choice);
49         switch(choice)
50         {
51             case 1: printf("Enter the Item to be Inserted :\n");
52                     scanf("%d",&item);
53                     insertrear();
54                     break;
55             case 2: item=deletefront();
56                     if(item==1)
57                         printf("Queue is Empty\n");
58                     else
59                         printf("Item Deleted =%d\n",item);
60                     break;
61             case 3: displayQ();
62                     break;
63             default : exit(0);
64         }
65     }
66     return 0;
67 }
68
69

```

```
1:Insert rear
2:Delete front
3:Display
4:exit
Enter the choice
3
Queue is Empty

1:Insert rear
2:Delete front
3:Display
4:exit
Enter the choice
1
Enter the Item to be Inserted :
10

1:Insert rear
2:Delete front
3:Display
4:exit
Enter the choice
1
Enter the Item to be Inserted :
20

1:Insert rear
2:Delete front
3:Display
4:exit
Enter the choice
1
Enter the Item to be Inserted :
30

1:Insert rear
2:Delete front
3:Display
4:exit
Enter the choice
3
```

```
4:exit
Enter the choice
3
Contents of the Queue
10
20
30
```

```
1:Insert rear
2:Delete front
3:Display
4:exit
Enter the choice
2
Item Deleted =10
```

```
1:Insert rear
2:Delete front
3:Display
4:exit
Enter the choice
2
Item Deleted =20
```

```
1:Insert rear
2:Delete front
3:Display
4:exit
Enter the choice
2
Item Deleted =30
```

```
1:Insert rear
2:Delete front
3:Display
4:exit
Enter the choice
3
Queue is Empty
```

```
1:Insert rear
2:Delete front
```

Enter the choice

2

Item Deleted =10

1:Insert rear

2>Delete front

3:Display

4:exit

Enter the choice

2

Item Deleted =20

1:Insert rear

2>Delete front

3:Display

4:exit

Enter the choice

2

Item Deleted =30

1:Insert rear

2>Delete front

3:Display

4:exit

Enter the choice

3

Queue is Empty

1:Insert rear

2>Delete front

3:Display

4:exit

Enter the choice

4

(program exited with code: 0)

Press any key to continue . . .