

```

9  #include<stdio.h>
10 #include<stdlib.h>
11 #define QUE_SIZE 3
12 int item,front=0,rear=-1,q[QUE_SIZE],count=0;
13 void insertrear()
14 {
15     if(count==QUE_SIZE)
16     {
17         printf("queue overflow\n");
18         return;
19     }
20     rear=(rear+1)%QUE_SIZE;
21     q[rear]=item;
22     count++;
23 }
24 int deletefront()
25 {
26     if(count==0) return -1;
27     item=q[front];
28     front=(front+1)%QUE_SIZE;
29     count=count-1;
30     return item;
31 }
32 void displayQ()
33 {
34     int i,f;
35     if(count==0)
36     {
37         printf("queue is empty\n");
38         return;
39     }
40     f=front;
41     printf("Contents of queue \n");
42     for(i=1;i<=count;i++)

```

input

```

31 }
32 void displayQ()
33 {
34     int i,f;
35     if(count==0)
36     {
37         printf("queue is empty\n");
38         return;
39     }
40     f=front;
41     printf("Contents of queue \n");
42     for(i=1;i<=count;i++)
43     {
44         printf("%d\n",q[f]);
45         f=(f+1)%QUE_SIZE;
46     }
47 }
48 void main()
49 {
50     int choice;
51     for(;;)
52     {
53         printf("\n1:insertrear\n2:deletefront\n3:display\n4:exit\n");
54         printf("enter the choice\n");
55         scanf("%d",&choice);
56
57         switch(choice)
58         {
59             case 1:printf("enter the item to be inserted\n");
60                 scanf("%d",&item);
61                 insertrear();
62                 break;
63             case 2:item=deletefront();
64                 if(item==-1)
65                     printf("queue is empty\n");
66                 else
67                     printf("item deleted =%d\n",item);
68                 break;
69             case 3:displayQ();
70                 break;
71             default:exit(0);
72         }
73     }

```



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

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

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

```
1:insertrear
2:deletefront
3:display
4:exit
enter the choice
1
enter the item to be inserted
4
queue overflow
```

```
1:insertrear
2:deletefront
3:display
4:exit
enter the choice
2
item deleted =1
```

```
1:insertrear
2:deletefront
3:display
4:exit
enter the choice
3
```

```
1:insertrear
2:deletefront
3:display
4:exit
enter the choice

enter the item to be inserted
```

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

```
1:insertrear
2:deletefront
3:display
4:exit
enter the choice
1
enter the item to be inserted
4
queue overflow
```

```
1:insertrear
2:deletefront
3:display
4:exit
enter the choice
2
item deleted =1
```

```
1:insertrear
2:deletefront
3:display
4:exit
enter the choice
3
Contents of queue
2
3
```

```
1:insertrear
2:deletefront
3:display
4:exit
enter the choice
```