

```

Start here X linear.c X circular.c X
1  #include<stdio.h>
2  #include<stdlib.h>
3  #define QUE_SIZE 3
4  int item,front=0,rear=-1,q[10];
5  void insertrear()
6  {if(rear==QUE_SIZE-1)
7  {
8      printf("queue overflow\n");
9      return;
10 }
11 rear=rear+1;
12 q[rear]=item;
13 }
14 int deletefront()
15 {if (front>rear)
16 {front=0;
17 rear=-1;
18 return -1;
19 }return q[front++];
20 }
21 void displayQ()
22 {int i;
23 if (front>rear)
24 {
25     printf("queue is empty\n");
26     return;
27 }
28 printf("contents of queue\n");
29 for(i=front;i<=rear;i++)
30 {
31     printf("%d\n",q[i]);
32 }
33 }
34 int main()
35 {
36     int choice;
37     for(;;)
38     {
39         printf("1:insertrear 2:deletefront 3:display 4:exit\n");
40         printf("enter the choice\n");
41         scanf("%d",&choice);
42         switch(choice)
43         {
44             case 1:printf("enter the item to be inserted\n");
45                     scanf("%d",&item);

```

```

18 -}return q[front++];
19 -}void displayQ()
20 {
21     int i;
22     if (front>rear)
23     {
24         printf("queue is empty\n");
25         return;
26     }
27     printf("contents of queue\n");
28     for(i=front;i<=rear;i++)
29     {
30         printf("%d\n",q[i]);
31     }
32 }
33 int main()
34 {
35     int choice;
36     for(;;)
37     {
38         printf("1:insertrear 2:deletefront 3:display 4:exit\n");
39         printf("enter the choice\n");
40         scanf("%d",&choice);
41         switch(choice)
42         {
43             case 1:printf("enter the item to be inserted\n");
44                     scanf("%d",&item);
45                     insertrear ();
46                     break;
47             case 2:item=deletefront();
48                     if(item!=-1)
49                     printf("queue is empty\n");
50                     else
51                     printf("item deleted=%d\n",item);
52                     break;
53             case 3:displayQ();
54                     break;
55             default:exit (0);
56         }
57     }
58 }
59

```

```

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
45
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
56
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
67
queue overflow
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
3
contents of queue
23
45
56
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=45
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
item deleted=56
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
queue is empty
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
4
Process returned 0 (0x0)   execution time : 54.311 s
Press any key to continue.

```