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1  #include <stdio.h>
2  #include <stdlib.h>
3
4  #define MAX 3
5
6  int front = -1;
7  int rear = -1;
8  int Q[MAX];
9
10 void enQ()
11 {
12     int element;
13     if((front == 0 && rear == MAX-1) || (front == (rear+1)%MAX))
14         printf("Q is full!\n");
15
16     else
17     {
18         if(front == -1 && rear == -1)
19             front = 0;
20         rear = (rear+1)%MAX;
21         printf("Enter element: ");
22         scanf("%d",&element);
23         Q[rear] = element;
24     }
25 }
26
27 void deQ()
28 {
29     if(rear == -1)
30         printf("Q is empty!\n");
31     else if(front == rear)
32     {
33         printf("Element removed is: %d\n",Q[front]);
34         front = rear = -1;
35     }
36     else
37     {
38         printf("Element removed is: %d\n",Q[front]);
39         front = (front+1)%MAX;
40     }
41 }

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41 }
42
43 void display()
44 {
45     if(rear == -1)
46         printf("Q is empty!\n");
47     else if(front <= rear)
48     {
49         for(int i=front;i<=rear;i++)
50             printf("%d\t",Q[i]);
51         printf("\n");
52     }
53     else
54     {
55         for(int i=front;i< MAX;i++)
56             printf("%d\t",Q[i]);
57         for(int i=0;i<= rear;i++)
58             printf("%d\t",Q[i]);
59         printf("\n");
60     }
61 }
62
63 int main(int argc,char** argv)
64 {
65     int choice;
66     while(choice != 4)
67     {
68         printf("----Circular Q----\nEnter choice:\n1.Insert\n2.Delete\n3.Display\n4.exit\n");
69         scanf("%d",&choice);
70         switch(choice)
71         {
72             case 1:enQ();
73                 break;
74             case 2:deQ();
75                 break;
76             case 3:display();
77                 break;
78             case 4:exit(0);
79             default:exit(0);
80         }
81     }
82     return 0;

```