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1  /*static circular queue*/
2  #include <stdio.h>
3  #define size 5
4
5  void insertq(int[], int);
6  void deleteq(int[]);
7  void display(int[]);
8
9  int front = - 1;
10 int rear = - 1;
11
12 void insertq(int queue[], int item)
13 {
14     if ((front == 0 && rear == size - 1) || (front == rear +
15         1))
16     {
17         printf("queue is full");
18         return;
19     }
20     else if (rear == - 1)
21     {
22         rear++;
23         front++;
24     }
25     else if (rear == size - 1 && front > 0)
26     {
27         rear = 0;
28     }
29     else
30     {
31         rear++;
32     }
33     queue[rear] = item;
34 }
35 void deleteq(int queue[])
36 {
37     if (front == - 1)
38     {
39         printf("Queue is empty ");
40     }
41     else if (front == rear)
42     {
43         printf("\n %d deleted", queue[front]);
44         front = - 1;
45         rear = - 1;
46     }
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47     else
48     {
49         printf("\n %d deleted", queue[front]);
50         front++;
51     }
52 }
53
54 void display(int queue[])
55 {
56     int i;
57     printf("\n");
58     if (front > rear)
59     {
60         for (i = front; i < size; i++)
61         {
62             printf("%d ", queue[i]);
63         }
64         for (i = 0; i <= rear; i++)
65             printf("%d ", queue[i]);
66     }
67     else
68     {
69         for (i = front; i <= rear; i++)
70             printf("%d ", queue[i]);
71     }
72 }
73
74 int main()
75 {
76     int n, ch;
77     int queue[size];
78     do
79     {
80         printf("\n\n Circular Queue:\n1. Insert \n2.
Delete\n3. Display\n0. Exit");
81         printf("\nEnter Choice 0-3? : ");
82         scanf("%d", &ch);
83         switch (ch)
84         {
85             case 1:
86                 printf("\nEnter number: ");
87                 scanf("%d", &n);
88                 insertq(queue, n);
89                 break;
90             case 2:
91                 deleteq(queue);
92                 break;

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93         case 3:
94             display(queue) ;
95             break;
96         }
97     }while (ch != 0) ;
98 }
```