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main.c  Stop  Share  Save  {} Beautify  Language
1  #include <stdio.h>
2  #include <stdlib.h>
3  #define MAX 3
4
5  int front=-1;
6  int rear=-1;
7
8  int queue[MAX];
9
10 void Enqueue(int);
11 int Dequeue();
12 void display();
13 int main(int argc, char **argv)
14 {
15     int option;
16     int item;
17     do{
18         printf("Circular Queue\n");
19         printf("\n 1. Insert to Queue (EnQueue)");
20         printf("\n 2. delete from the Queue (DeQueue)");
21         printf("\n 3. Display the content ");
22         printf("\n 4. Exit\n");
```

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main.c
23     printf("Enter the option :");
24     scanf("%d",&option);
25     switch(option)
26     {
27         case 1: printf("Enter the element\n");
28                 scanf("%d",&item);
29                 Enque(item);
30                 break;
31         case 2: item=Deque();
32                 if(item==-1)
33                     printf("Queue is empty");
34                 else
35                     printf("Removed element from the queue %d",item);
36                 break;
37         case 3: display();
38                 break;
39         case 4: exit(0);
40     }
41     } while (option!=4);
42     return 0;
43 }
```

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42     return 0;
43 }
44
45 void Enque(int ele)
46 {
47     if(((front == 0 && rear == MAX - 1)) || (front == rear + 1) )
48     {
49         printf("Queue is full\n");return;
50     }
51     else
52     {
53         rear=(rear+1)%MAX;
54         queue[rear]=ele;
55         if(front == -1)
56             front=0;
57     }
58 }
59
60 }
61
62 int Deque()
63 {

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main.c

Language: C

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61 }
62 int Dequeue()
63 {
64     int item;
65     if((front == -1)&&(rear == -1))
66     {
67
68         return(-1);
69     }
70     else
71     {
72         item=queue[front];
73
74         if(front==rear)
75         {
76             front=-1;
77             rear=-1;
78         }
79         else
80         {
81             front=(front+1)%MAX;
82         }
83     }
84 }
```

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82     }
83     return item;
84 }
85
86 }
87
88 void display()
89 {
90     int i;
91     if(((front == -1) && (rear == -1)) || (front == rear))
92     {
93         printf("Queue is empty\n"); return;
94     }
95     else
96     {
97         printf("\n Queue contents:\n");
98         for(i = front; i <= rear; i++)
99             printf("%d", queue[i]);
100     }
101 }
102
103 )

```