

circular\_q.cpp

```
1 #include<stdio.h>
2 #include<stdlib.h>
3 #include<process.h>
4 #include<conio.h>
5 #define que_size 3
6 int item, front=0, rear=-1, q[que_size], count=0;
7 void insertrear()
8 {
9     if(count==que_size)
10     {
11         printf("queue overflow");
12         return;
13     }
14     rear=(rear+1)%que_size;
15     q[rear]=item;
16     count++;
17 }
18 int deletefront()
19 {
20     if(count==0) return -1;
21     item = q[front];
22     front=(front+1)%que_size;
23     count=count-1;
24     return item;
25 }
26 void displayq()
27 {
28     int i, f;
29     if(count==0)
30     {
31         printf("queue is empty");
32         return;
33     }
34     f=front;
35     printf("contents of queue \n");
36     for(i=0; i<=count; i++)
37     {
38         printf("%d\n", q[f]);
```

```
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33 }
34 f=f+1;
35 printf("contents of queue \n");
36 for(i=0;i<=count;i++)
37 {
38     printf("%d\n",q[f]);
39     f=(f+1)%que_size;
40 }
41 }
42 int main()
43 {
44     int choice;
45     for(;;)
46     {
47         printf("\n1.Insert rear \n2.Delete front \n3.Display \n4.exit \n ");
48         printf("Enter the choice : ");
49         scanf("%d",&choice);
50         switch(choice)
51         {
52             case 1:printf("Enter the item to be inserted :");
53                     scanf("%d",&item);
54                     insertrear();
55                     break;
56             case 2:item=deletefront();
57                     if(item!=-1)
58                         printf("queue is empty\n");
59                     else
60                         printf("item deleted is %d \n",item);
61                     break;
62             case 3:displayq();
63                     break;
64             default:exit(0);
65         }
66     }
67     getch();
68     return 0;
69 }
```

C:\Users\sohan\Desktop\C Programs\Data Structures Lab\circular queue\circular\_q.exe

```
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 1
Enter the item to be inserted :34
```

```
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 1
Enter the item to be inserted :23
```

```
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 1
Enter the item to be inserted :6
```

```
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 2
item deleted is 34
```

```
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 3
contents of queue
23
6
34
```

```
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 4
```

```
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Process exited after 39.08 seconds with return value 0
Press any key to continue . . .
```

Type here to search



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