

 circularqueue - Notepad

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```
#include<stdio.h>
#include<stdlib.h>
#define QUE_SIZE 5
int item,front=0,rear=-1,q[QUE_SIZE],count=0;
void insertrear(){
if(count==QUE_SIZE)
{
printf("Queue Overflow!\n");
return;
}
rear=(rear+1)%QUE_SIZE;
q[rear]=item;
count++;
}
int deletefront(){
if(count==0)return -1;
item=q[front];
front=(front+1)%QUE_SIZE;
count=count-1;
return item;
}
void displayQ(){
int i,f;
if(count==0){
printf("Queue is empty!\n");
return;
}
f=front;
printf("Contents of queue:\n");
for(i=1;i<=count;i++){
printf("%d\n",q[f]);
f=(f+1)%QUE_SIZE;
}
}
```

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```
}  
}  
int main() {  
    int choice;  
    for(;;) {  
        printf("\n1.insertrear\n2.deletefront\n3.display\n4.exit\n");  
        printf("Enter choice:\n");  
        scanf("%d",&choice);  
        switch(choice) {  
            case 1:printf("Enter item to be inserted:\n");  
                scanf("%d",&item);  
                insertrear();  
                break;  
            case 2:item=deletefront();  
                if(item==-1)  
                    printf("Queue empty!\n");  
                else  
                    printf("Item deleted=%d\n",item);  
                break;  
            case 3:displayQ();  
                break;  
            default:exit(0);  
        }  
        return 0;  
    }  
}
```

---

```
❏ clang-7 -pthread -lm -o main main.c
❏ ./main
```

```
1.insertrear
2.deletefront
3.display
4.exit
```

Enter choice:

1

Enter item to be inserted:

10

```
1.insertrear
2.deletefront
3.display
4.exit
```

Enter choice:

1

Enter item to be inserted:

20

```
1.insertrear
2.deletefront
3.display
4.exit
```

Enter choice:

1

Enter item to be inserted:

30

```
1.insertrear
2.deletefront
3.display
4.exit
```

Enter choice:

1

Enter item to be inserted:

40

1.insertrear  
2.deletefront  
3.display  
4.exit

Enter choice:

1

Enter item to be inserted:

50

1.insertrear  
2.deletefront  
3.display  
4.exit

Enter choice:

1

Enter item to be inserted:

60

Queue Overflow!

1.insertrear  
2.deletefront  
3.display  
4.exit

Enter choice:

2

Item deleted=10

1.insertrear  
2.deletefront  
3.display  
4.exit

Enter choice:

3

Contents of queue:

20

```
30
40
50

1.insertrear
2.deletefront
3.display
4.exit
Enter choice:
2
Item deleted=20

1.insertrear
2.deletefront
3.display
4.exit
Enter choice:
2
Item deleted=30

1.insertrear
2.deletefront
3.display
4.exit
Enter choice:
2
Item deleted=40

1.insertrear
2.deletefront
3.display
4.exit
Enter choice:
2
Item deleted=50

1.insertrear
```

```
2.deletefront
3.display
4.exit
Enter choice:
2
Queue empty!

1.insertrear
2.deletefront
3.display
4.exit
Enter choice:
4
❖ □
```