

```

#include<stdio.h>

#include<stdlib.h>

#include<process.h>

#define que_size 3

int item,front=0,rear=-1,q[que_size],count=0;

void insertrear()
{
    if(count==que_size)
    {
        printf("queue overflow");
        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");
        return;
    }

```

```

    }

    f=front;

    printf("contents of queue \n");
    for(i=0;i<=count;i++)
    {
        printf("%d\n",q[f]);
        f=(f+1)%que_size;
    }
}

int main()
{
    int choice;
    for(;;)
    {
        printf("\n1.Insert rear \n2.Delete front \n3.Display \n4.exit \n ");
        printf("Enter the choice : ");
        scanf("%d",&choice);
        switch(choice)
        {
            case 1:printf("Enter the item to be inserted :");
                    scanf("%d",&item);
                    insertrear();
                    break;
            case 2:item=deletefront();
                    if(item== -1)
                        printf("queue is empty\n");
                    else
                        printf("item deleted is %d \n",item);
                    break;
            case 3:displayq();
                    break;
        }
    }
}

```

```
default:exit(0);
```

```
}
```

```
}
```

```
}
```

r:\np\Documents\qccircular.exe

```
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 : 1
Enter the item to be inserted :5
```

```
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 2
item deleted is 6
```

```
1.Insert rear
2.Delete front
3.Display
4.exit
Enter the choice : 3
contents of queue
5
0
```