

```

8
9  #include<stdio.h>
10 #include<stdlib.h>
11 #define QUE_SIZE 3
12 int item,front=0,rear=-1,q[10];
13 void insertrear()
14 {if(rear==QUE_SIZE-1)
15 {
16     printf("queue overflow\n");
17     return;
18 }
19 rear=rear+1;
20 q[rear]=item;
21 }int deletefront()
22 {if (front>rear)
23 {front=0;
24 rear=-1;
25 return -1;
26 }return q[front++];
27 }void displayQ()
28 {int i;
29 if (front>rear)
30 {
31     printf("queue is empty\n");
32     return;
33 }
34 printf("contents of queue\n");
35 for(i=front;i<=rear;i++)
36 {
37     printf("%d\n",q[i]);
38 }}
39 int main()
40 {

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37     printf("%d\n",q[i]);
38 }
39 int main()
40 {
41     int choice;
42     for(;;)
43     {
44         printf("1:insertrear 2:deletefront 3:display 4:exit\n");
45         printf("enter the choice\n");
46         scanf("%d",&choice);
47         switch(choice)
48         {
49             case 1:printf("enter the item to be inserted\n");
50                 scanf("%d",&item);
51                 insertrear ();
52                 break;
53             case 2:item=deletefront();
54                 if(item==-1)
55                     printf("queue is empty\n");
56                 else
57                     printf("item deleted=%d\n",item);
58                 break;
59             case 3:displayQ();
60                 break;
61             default:exit (0);
62         }
63     }
64 }
65 }
66 }
67
68

```

```
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
10
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
20
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
30
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
1
enter the item to be inserted
40
queue overflow
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
3
contents of queue
10
20
30
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
item deleted=10
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
```

```
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
3
contents of queue
10
20
30
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
item deleted=10
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
item deleted=20
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
item deleted=30
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
2
queue is empty
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
3
queue is empty
1:insertrear 2:deletefront 3:display 4:exit
enter the choice
4

...Program finished with exit code 0
Press ENTER to exit console.
```