

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  typedef struct node{
5      int data;
6      struct node *link;
7  }node;
8
9  node *root=NULL;
10
11 void enqueue()
12 {
13     //insert at end (rear)
14     node *temp;
15     temp=(node *)malloc(sizeof(node));
16     printf("Enter the node element\n");
17     scanf("%d",&temp->data);
18     temp->link=NULL;
19     if(root==NULL)
20     {
21         root=temp;
22     }
23     else
24     {
25         node *p=root;
26         while(p->link!=NULL)
27         {
28             p=p->link;
29         }
30         p->link=temp;
31     }
32 }
33
34
35
36
```



```
38
39
40 void dequeue()
41 {
42     node *temp;
43
44     if(root==NULL)           //delete from front
45     {
46         printf("Queue is empty\n");
47     }
48
49     else
50     {
51         temp=root;
52         root=temp->link;
53         temp->link=NULL;
54         free(temp);
55     }
56 }
57
58
59 void display()
60 {
61     node *temp=root;
62     if(temp==NULL)
63     {
64         printf("Queue is empty\n");
65     }
66     else
67     {
68         while(temp!=NULL)
69         {
70             printf("%d ",temp->data);
71             temp=temp->link;
72         }
73         printf("\n ");
```



```

4 printf("Queue is empty\n");
5 }
6 else
7 {
8     while(temp!=NULL)
9     {
10         printf("%d ",temp->data);
11         temp=temp->link;
12     }
13     printf("\n ");
14 }
15 }
16
17 int main()
18 {
19
20     int op,len;
21     printf("Enter the operation\n1.Enqueue\n2.Dequeue\n3.Display\n4.Exit\n");
22     while(1)
23     { printf("Enter option ");
24       scanf("%d",&op);
25       switch (op)
26       {
27       case 1:enqueue();
28         break;
29       case 2: dequeue();
30         break;
31       case 3: display();
32         break;
33       case 4: exit(0);
34         break;
35       default: printf("No such operation\n");
36       }
37     }
38     return 0;
39 }

```



Enter the operation

1.Enqueue

2.Dequeue

3.Display

4.Exit

Enter option 1

Enter the node element

12

Enter option 1

Enter the node element

22

Enter option 1

Enter the node element

34

Enter option 1

Enter the node element

67

< Enter option 3

12 22 34 67

Enter option 2

Enter option 2

Enter option 3

34 67

Enter option

