

```
#include<stdio.h>

#include<stdlib.h>

typedef struct Node

{

    int info;

    struct Node *next;

}node;

node *front=NULL,*rear=NULL,*temp;

void create();

void del();

void display();

int main()

{

    int chc;

    do

    {

        printf("\nMenu\n\t 1 to create the element : ");

        printf("\n\t 2 to delete the element : ");
```

```
printf("\n\t 3 to display the queue : ");
```

```
printf("\n\t 4 to exit from main : ");
```

```
printf("\nEnter your choice : ");
```

```
scanf("%d",&chc);
```

```
switch(chc)
```

```
{
```

```
    case 1:
```

```
        create();
```

```
        break;
```

```
    case 2:
```

```
        del();
```

```
        break;
```

```
    case 3:
```

```
        display();
```

```
        break;
```

```
    case 4:
```

```
        return 1;
```

```
    default:
```

```
        printf("\nInvalid choice :");  
    }  
}while(1);  
  
return 0;  
}
```

```
void create()  
{  
    node *newnode;  
    newnode=(node*)malloc(sizeof(node));  
    printf("\nEnter the node value : ");  
    scanf("%d",&newnode->info);  
    newnode->next=NULL;  
    if(rear==NULL)  
        front=rear=newnode;  
    else  
    {  
        rear->next=newnode;  
        rear=newnode;  
    }  
  
    rear->next=front;
```

```
}

void del()
{
    temp=front;
    if(front==NULL)
        printf("\nUnderflow :");
    else
    {
        if(front==rear)
        {
            printf("\n%d",front->info);
            front=rear=NULL;
        }
        else
        {
            printf("\n%d",front->info);
            front=front->next;
            rear->next=front;
        }

        temp->next=NULL;
        free(temp);
    }
}
```

```

    }
}

void display()
{
    temp=front;
    if(front==NULL)
        printf("\nEmpty");
    else
    {
        printf("\n");
        for(;temp!=rear;temp=temp->next)
            printf("\n%d address=%u next=%u\t",temp->info,temp,temp-
>next);
        printf("\n%d address=%u next=%u\t",temp->info,temp,temp-
>next);
    }
}

```

Output:

Menu

1 to create the element :

2 to delete the element :

3 to display the queue :

4 to exit from main :

Enter your choice : 1

Enter the node value : 12

Menu

1 to create the element :

2 to delete the element :

3 to display the queue :

4 to exit from main :

Enter your choice : 1

Enter the node value : 23

Menu

1 to create the element :

2 to delete the element :

3 to display the queue :

4 to exit from main :

Enter your choice : 1

Enter the node value : 34

Menu

1 to create the element :

2 to delete the element :

3 to display the queue :

4 to exit from main :

Enter your choice : 1

Enter the node value : 11

Menu

1 to create the element :

2 to delete the element :

3 to display the queue :

4 to exit from main :

Enter your choice : 3

12 address=138427008 next=138427040

23 address=138427040 next=138427072

34 address=138427072 next=138427104

11 address=138427104 next=138427008

#### Menu

1 to create the element :

2 to delete the element :

3 to display the queue :

4 to exit from main :

Enter your choice : 4