/\* Wap in c++ to implement **Queue as a linked list** \*/

#include<iostream.h>

#include<conio.h>

struct node {

int roll;

node\* next;

}\*front,\*rear,\*ptr,\*newptr,\*np;

node \*create(int a)

{

ptr=new node;

ptr->roll=a;

ptr->next=NULL;

return ptr;

}

void insert(node \*np)

{

if(front==NULL)

front=rear=np;

else

{

rear->next=np;

rear=np;

}

}

void delet()

{

if(front==NULL)

cout<<"\n Underflow!!!!";

else

{

ptr=front;

front=front->next;

delete ptr;

}

}

void display(node \*np)

{

while(np!=NULL)

{

cout<<np->roll<<"-> ";

np=np->next;

}

}

void main()

{

clrscr();

front=rear=NULL;

int n,m;

char ans,ch;

do

{ cout<<"\nChoose from the menu : "

<<"\n 1) Insert."

<<"\n 2) Delete

<<"\n 3) Display."

<<"\n\n Enter your choice : ";

cin>>n;

switch(n)

{

case 1: ans='y';

while(ans=='y'||ans=='Y')

{

cout<<"\n Enter element to be inserted .";

cin>>m;

newptr=create(m);

if(newptr==NULL)

cout<<"\n Cannot create !!!!";

insert(newptr);

cout<<"\n The Queue formed is : ";

display(front);

cout<<"\n Want to enter more nodes ?: ";

cin>>ans;

}

break;

case 2: ans='y';

while(ans=='y'||ans=='Y')

{

delet();

cout<<"\n Queue : ";

display(front);

cout<<"\n Want to delete more ?: ";

cin>>ans;

}

break;

case 3: cout<<"\n Queue : ";

display(front);

break;

default: cout<<"\n You entered wrong choice...";

}

cout<<"\n Want to return to main menu ? : ";

cin>>ch;

}while(ch=='y'||ch=='Y');

getch();

}

**OUTPUT**

Choose from the menu :

1. Insert

2. Delete

3. Display

Enter your choice : 1

Enter element to be inserted : 1

The Queue formed is :

1-->

Want to enter more nodes ?: y

Enter element to be inserted .2

The Queue formed is :

1-> 2->

Want to enter more nodes ?: y

Enter element to be inserted .3

The Queue formed is :

1-> 2-> 3->

Want to enter more nodes ?: n

Want to return to main menu ? : y

Choose from the menu :

1. Insert

2. Delete

3. Display

Enter your choice : 2

Queue :

2-> 3->

Want to delete more ?: n

Want to return to main menu ? : y

Choose from the menu : n

1. Insert

2. Delete

3. Display

Enter your choice : 3

Queue :

2-> 3->

Want to return to main menu ? : n