queuell\_07.cpp

**Compile:** g++ queuell\_07.cpp -o queuell\_07

**Run:** ./queuell\_07

**Program:**

#include<iostream>

#include<stdlib.h>

using namespace std;

int ch,data1,data2,front=0,rear=-1 ;

struct node

{

int data;

struct node \*next;

};

struct node \*list=NULL,\*p,\*q,\*r,\*s;

class queue

{

public:

void menu()

{

do

{

cout<<"\n Enter your choice \n 1.Enqueue \n 2.Dequeue \n 3.Display \n 4.Exit\n";

cin>>ch;

switch(ch)

{

case 1: enqueue(); break;

case 2: dequeue(); break;

case 3: display(); break;

case 4: break;

}

}while(ch!=4);

}

voidenqueue()

{

p=new node;

cout<<"\n Enter data";

cin>>data1;

p->data=data1;

if(front>rear)

{

p->next=NULL;

list=p;

}

else

{

p->next=NULL;

q=list;

while(q->next!=NULL)

{

q=q->next;

}

q->next=p;

}

rear++;

cout<<"Rear= "<<rear<<"\n Front= "<<front;

}

voiddequeue()

{

if(front>rear)

{

cout<<"Queue underflow"<<endl;

}

else

{

if(list->next==NULL)

{

cout<<"The element deleted is: "<<list->data<<endl;

//free(list);

list=NULL;

}

else

{

q=list;

cout<<"The element deleted is: "<<q->data<<endl;

list=list->next;

free(q);

}

}

front++;

cout<<"Rear= "<<rear<<"\n Front= "<<front;

}

void display()

{

if(list==NULL)

{

cout<<"\n List is empty :( :(";

}

else

{

q=list;

while(q!=NULL)

{

cout<< q->data<<"===>";

q=q->next;

}

}

}

};

int main()

{

queue q;

q.menu();

}

**Output:**

