**PROGRAM: 28**

**5-10-2019** **QUEUE IMPLEMENTATION USING LINKED LIST.**

**OBJECTIVE:**

Write a program to implement a class queue implementation using Linked List.

**SOURCE CODE:**

#include<iostream.h>

#include<conio.h>

#include<stdlib.h>

struct node

{ int data;

node \*next;

};

class queue

{

node \*front,\*rear;

public:

queue()

{ front=rear=NULL; }

void add()

{ int value;

node \*ptr = new node;

cout<<"Enter a number to insert: ";

cin>>value;

ptr->data=value;

ptr->next=NULL;

if(front==NULL)

front= ptr;

else

rear->next=ptr;

rear=ptr;

cout<<"\nNew item is inserted to the queue!!!";

}

void Delete()

{

node \*temp;

if(front==NULL)

{

cout<<"\nThe queue is empty!!!";

}

temp=front;

front=front->next;

cout<<"\nDelete Operation........\nDeleted value is "<<temp->data;

delete temp;

}

void show()

{

node \*ptr=front;

cout<<"\nThe queue is\n";

if(ptr==NULL)

cout<<"empty!";

while(ptr!=NULL)

{

cout<<ptr->data<<" ";

ptr=ptr->next;

}

}

};

void main()

{ cout<<"\n-------------------------------------------------------------------";

cout<<"\n\t\tQUEUE USING LINKED LIST\n\n";

cout<<"-------------------------------------------------------------------\n";

queue q;

int choice;

while(1)

{

cout<<"\n\t\tMENU\n\n";

cout<<"1:ADD\n2:DELETE\n3:DISPLAY QUEUE\n4:EXIT";

cout<<"\nEnter your choice(1-4): ";

cin>>choice;

switch(choice)

{

case 1:

q.add(); break;

case 2:

q.Delete(); break;

case 3:

q.show(); break;

case 4:

exit(0);

default: cout<<"\nPlease enter correct choice(1-4)!!";

break;

}

}

getch();

}

**Sample output:**



