**Assignment No:- 1.4.1**

**Title:- Implementation of Program based on QUEUES.**

-----------------------------------------------------------------------------------------------------------------------#include<iostream.h>

#include<conio.h>

class QUEUE

{

private:

int \*A,size,front,rear;

public:

QUEUE(int par);

void QUEUE\_ADD\_ (int ele);

int QUEUE\_DEL\_ ();

void LIST\_ALL\_ ();

};

QUEUE::QUEUE(int par)

{

front=rear=0, size=par;

A=new int [size+1];

}

void QUEUE::QUEUE\_ADD\_(int ele)

{

if(rear==size)

{

cout<<"QUEUE is full";

return;

}

else

if(front==0)

{

front=1;

}

rear=rear+1;

A[rear]=ele;

}

int QUEUE::QUEUE\_DEL\_()

{

if(front==0)

{

cout<<"QUEUE is empty";

return NULL;

}

int ele=A[front];

if(front==rear)

front=rear=0;

else

front=front+1;

cout<<"Element is deleted "<<ele;

return ele;

}

void QUEUE:: LIST\_ALL ()

{

cout<<"QUEUE element are: "<<endl;

if(front==0)

{

cout<<"QUEUE is Empty";

return;

}

else

for(int i=front;i<=rear;i++)

{

cout<<A[i]<<"\t";

}

}

void MENU()

{

int opt,ele,size;

cout<<"Enter size of List"<<endl;

cin>>size;

QUEUE\_ obj(size);

do

{

cout<<"\n 1. Add ";

cout<<"\n 2. Delete";

cout<<"\n 3. LISTALL";

cout<<"\n 4. Exit \n";

cout<<"Enter your option: ";

cin>>opt;

switch(opt)

{

case 1:

cout<<"Enter element to add in QUEUE: ";

cin>>ele;

obj.QUEUE\_ADD\_ (ele);

break;

case 2:

ele= obj.QUEUE\_DEL\_ ();

break;

case 3:

obj.LIST\_ALL\_ ();

break;

case 4:

return;

default:

cout<<"Invalid Option";

}

}while(1);

}

void main()

{

clrscr();

MENU();

getch();

}