circularqueue\_07.cpp

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

**Run:** ./circularqueue\_07

**Program:**

#include<iostream>

using namespace std;

constint max1=100;

int front=-1;

int rear=-1;

classcircular\_queue

{

public:

int a[max1],n;

circular\_queue()

{

cout<<"Enter the size of queue"<<endl;

cin>>n;

}

voidenqueue(int x)

{

if((front==0 && rear==n-1) || (rear+1==front))

cout<<" Circular Queue is Full";

else

{

if(rear==n-1)

rear=0;

else

rear++;

a[rear]=x;

}

if(front==-1)

front=0;

}

intdequeue()

{

int k;

if(front==-1)

cout<<"Circular Queue is Empty";

else

{

k=a[front];

if(front==rear)

front=rear=-1;

else

{

if(front==n-1)

front=0;

else

front++;

}

}

return k;

}

void display()

{

inti;

if(front==-1)

cout<<"Circular Queue is Empty";

else

{

if(rear < front)

{

for(i=front;i<=n-1;i++)

cout<<a[i]<<" ";

for(i=0;i<=rear;i++)

cout<<a[i]<<" ";

}

else

{

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

cout<<a[i]<<" ";

cout<<endl;

}

}

}

};

int main()

{

circular\_queue a;

intx,n;

do

{

cout<<endl<<"enter the option : "<<endl;

cout<<"1.euque the element ";

cout<<"2.deque the element ";

cout<<"3.display the elements ";

cout<<"4.exit"<<endl;

cin>>n;

switch(n)

{

case 1:

{

cout<<"enter element :"<<endl;

cin>>x;

a.enqueue(x);

break;

}

case 2:

cout<<"element is :"<<a.dequeue()<<endl;

break;

case 3:

a.display();

break;

default:

cout<<"enter correct option "<<endl;

break;

}

}while(n!=4);

return 0;

}

**Output:**



