/\*Pizza parlor accepting maximum M orders. Orders are served in first come first served

basis. Order once placed can not be cancelled. Write C++ program to simulate the system

using circular queue using array.\*/

**#include**<iostream>

**#define** size 5

**using** **namespace** std;

**class** queue

{

**private**:

**int** que[size];

**int** front,rear;

**public**:

**queue**()

{

front=-1;

rear=-1;

}

**int** **qfull**();

**int** **qempty**();

**void** **addorder**(**int**);

**void** **deleteorder**();

**void** **display**();

}q;

**int** **queue::qfull**()

{

**if**(q.front==(q.rear+1)%size)

**return** 1;

**else**

**return** 0;

}

**int** **queue::qempty**()

{

**if**(q.front==-1)

**return** 1;

**else**

**return** 0;

}

**void** **queue::addorder**(**int** item)

{

**if**(q.front==-1)

q.front=q.rear=0;

**else**

q.rear=(q.rear+1)%size;

q.que[q.rear]=item;

}

**void** **queue::deleteorder**()

{

**int** item;

item=q.que[q.front];

**if**(q.front==q.rear)

q.front=q.rear=-1;

**else**

q.front=(q.front+1)%size;

cout<<"\ndeleted element is:"<<item;

}

**void** **queue::display**()

{

**int** i=q.front;

**while**(i!=q.rear)

{

cout<<"\n"<<q.que[i];

i=(i+1)%size;

}

cout<<"\n"<<q.que[i];

}

**int** **main**()

{

**int** ch,item;

**char** ans;

**do**

{

cout<<"1.insert order\n2.delete order\n3. display order queue\nenter your choice\n";

cin>>ch;

**switch**(ch)

{

**case** 1:

**if**(q.qfull())

cout<<"\nqueue is overflow";

**else**

{

cout<<"\nenter the data you want to insert\n";

cin>>item;

q.addorder(item);

}

**break**;

**case** 2:

**if**(q.qempty())

cout<<"\n queue is empty";

**else**

q.deleteorder();

**break**;

**case** 3:

**if**(q.qempty())

cout<<"\n queue is empty";

**else**

q.display();

**break**;

}

cout<<"\n do you want to continue?";

cin>>ans;

}**while**(ans=='y'||ans=='Y');

**return** 0;

}

1.insert order

2.delete order

3. display order queue

enter your choice

1

enter the data you want to insert

10

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

1

enter the data you want to insert

20

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

1

enter the data you want to insert

30

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

1

enter the data you want to insert

40

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

1

enter the data you want to insert

50

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

1

queue is overflow

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

3

10

20

30

40

50

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

2

deleted element is:10

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

2

deleted element is:20

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

3

30

40

50

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

2

deleted element is:30

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

3

40

50

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

1

enter the data you want to insert

60

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

1

enter the data you want to insert

70

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

3

40

50

60

70

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

1

enter the data you want to insert

80

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

3

40

50

60

70

80

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

1

queue is overflow

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

2

deleted element is:40

do you want to continue?y

1.insert order

2.delete order

3. display order queue

enter your choice

3

50

60

70

80

do you want to continue?n