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**ROLL NO:-SECOA115**

**ASSIGNMENT NO:-11**

**AIM** **:-** Pizza parlor accepting maximum M orders. Orders are served in first come first served basis. Order once placed cannot be cancelled. Write C++ program to simulate the system using circular queue using array.

**PROGRAM:-**

#include<iostream>

using namespace std;

#define size 5

class PizzaQue

{

struct queue

{

int que[size];

int front, rear;

}Q;

public:

PizzaQue()

{

Q.front=-1;

Q.rear=-1;

}

int Qfull();

int Qempty();

int Accept(int);

void Ready();

};

int PizzaQue::Qfull()

{

if(Q.front==(Q.rear+1)%size)

return 1;

else

return 0;

}

int PizzaQue::Qempty()

{

if(Q.front==-1)

return 1;

else

return 0;

}

int PizzaQue::Accept(int item)

{

if(Q.front==-1)

Q.front=Q.rear=0;

else

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

Q.que[Q.rear]=item;

return Q.rear;

}

void PizzaQue::Ready()

{

cout<<"\n The order no : "<<Q.que[Q.front]<<" is Ready";

if(Q.front==Q.rear)

Q.front=Q.rear=-1;

else

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

}

int main()

{

int choice,item;

PizzaQue obj;

while(1)

{

cout<<"\n Main Menu";

cout<<"\n 1.ADD Order \n 2.Ready Order \n 3. Exit";

cout<<"\n Enter Your Choice";

cin>>choice;

switch(choice)

{

case 1: if(obj.Qfull())

cout<<"\n Can not accept order";

else

{

cout<<"\n Enter The order number: ";

cin>>item;

obj.Accept(item);

}

break;

case 2: if(obj.Qempty())

cout<<"\n No Order Ready";

else

obj.Ready();

break;

case 3: return 0;

default : cout<<"\n wrong choice";

}

}

}

**OUTPUT:-**

Main Menu

1.ADD order

2.Ready order

3.Exit

Enter ur choice 1

Enter The order number 11

Main Menu

1.ADD order

2.Ready order

3.Exit

Enter ur choice 1

Enter The order number 22

Main Menu

1.ADD order

2.Ready order

3.Exit

Enter ur choice 1

Enter The order number 33

Main Menu

1.ADD order

2.Ready order

3.Exit

Enter ur choice 2

The order no: 11 is Ready

Main Menu

1.ADD order

2.Ready order

3.Exit

Enter ur choice 1

Enter The order number 44

Wrong choice

Main Menu

1.ADD order

2.Ready order

3.Exit

Enter ur choice 3