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Problem Statement:

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.

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#include <iostream>

using namespace std;

#define size 5

class pizza

{

int porder[size];

int front,rear;

public:

pizza()

{

front=rear=-1;

}

int qfull()

{

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

return 1;

else

return 0;

}

int qempty()

{

if(front==-1)

return 1;

else

return 0;

}

void accept\_order(int);

void make\_payment(int);

void order\_in\_queue();

};

void pizza::accept\_order(int item)

{

if(qfull())

cout<<"\nVery Sorry !!!! No more orders....\n";

else

{

if(front==-1)

{

front=rear=0;

}

else

{

rear=(rear+1)%size;

}

porder[rear]=item;

}

}

void pizza::make\_payment(int n)

{

int item;

char ans;

if(qempty())

cout<<"\nSorry !!! order is not there...\n";

else

{

cout<<"\nDeliverd orders as follows...\n";

for(int i=0;i<n;i++)

{

item=porder[front];

if(front==rear)

{

front=rear=-1;

}

else

{

front=(front+1)%size;

}

cout<<"\t"<<item;

}

cout<<"\nTotal amount to pay : "<<n\*100;

cout<<"\nThank you visit Again....\n";

}

}

void pizza::order\_in\_queue()

{

int temp;

if(qempty())

{

cout<<"\nSorry !! There is no pending order...\n";

}

else

{

temp=front;

cout<<"\nPending Order as follows..\n";

while(temp!=rear)

{

cout<<"\t"<<porder[temp];

temp=(temp+1)%size;

}

cout<<"\t"<<porder[temp];

}

}

int main()

{

pizza p1;

int ch,k,n;

do

{

cout<<"\n\t\*\*\*\*\* Welcome To Pizza Parlor \*\*\*\*\*\*\*\n";

cout << "\n1.Accept order\n2.Make\_payment\n3.Pending Orders\nEnter u r choice: ";

cin>>ch;

switch(ch)

{

case 1:cout<<"\nWhich Pizza do u like most....\n";

cout<<"\n1.Veg Soya Pizza\n2.Veg butter Pizza\n3.Egg\_Pizza";

cout<<"\nPlease enter u r order: ";

cin>>k;

p1.accept\_order(k);

break;

case 2:cout<<"\nHow many Pizza ?";

cin>>n;

p1.make\_payment(n);

break;

case 3:cout<<"\n Following orders are in queue to deliver....as follows..\n";

p1.order\_in\_queue();

break;

}

}while(ch!=4);

return 0;

}