NAME- HARDIK SHETH

DIV.- A BATCH-A3

ROLL NO.- 22558

EXPERIMENT NO.13

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 ci

rcular queue using array.

#include<iostream>

#include<windows.h>

using namespace std;

const int MAX=5;

class PizzaParlour

{

int front,rear;

int orders[MAX];

public:

PizzaParlour()

{

front=rear=-1;

}

bool addOrder(int data);

void serveOrder();

void display();

};

bool PizzaParlour::addOrder(int id){

if(rear==-1)

{

front=rear=0;

orders[rear]=id;

return true;

}

else

{

int pos=(rear+1)%MAX;

if(pos==front)

{

cout<<"\nCafe is Full.Please wait.\n";

return false;

}

else

{

rear=pos;

orders[rear]=id;

return true;

}

}

}

void PizzaParlour::serveOrder()

{

if(front==-1)

{

cout<<"\n No Orders in Cafe.[Cafe is Empty)\n";

return;

}

else

{

cout<<"\n Order No. "<<orders[front]<<" is processed.\n";

if(front==rear) //only one order

{

front=rear=-1;

}

else

{

front=(front+1)%MAX;

}

}

}

void PizzaParlour::display()

{

int i=0;

if(front==-1)

{

cout<<"\nCafe is Empty.No orders.\n";

return;

}

else

{

cout<<"Order Id’s: \n";

for(i=front;i!=rear;i=((i+1)%MAX))

{

cout<<orders[i]<<" ";

}

cout<<orders[rear];

}

}

void intro()

{ char name[50]={"\n Vaibhav Cafe \n"};

for(int i=0;name[i]!=’\0’;i++)

{

Sleep(50);

cout<<name[i];

}

}

int main()

{

int ch,id=0;

PizzaParlour q;

do

{

cout<<"\n-----------------";

intro();

cout<<"-----------------";

cout<<"\n\*\*\*\*Menu\*\*\*\*\*\n";

cout<<"1. Accept order\n";

cout<<"2. Serve order\n";

cout<<"3. Display orders\n";

cout<<"4. Exit";

cout<<"\nChoice: ";

cin>>ch;

switch(ch)

{

case 1:

id++;

if(q.addOrder(id))

{

cout<<"Thank you for order.Order id is : "<<id;

}

else

{

id--;

}

break;

case 2: q.serveOrder();

break;

case 3: q.display();

break;

}

}while(ch!=4);

cout<<"\nThank You.Keep Visiting.";

}