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.

```cpp
#include<iostream>

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
```

```cpp
        {
                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
```

```cpp
            {
                    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];
        }
```

```cpp
}
void intro()
{       char name[50]={"\n Vaibhav Cafe \n"};
                for(int i=0;name[i]!='\0';i++)
        {
                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: ";
```

```cpp
            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.";


}
```