NET .22 –Notifying Client Objects of an Event

In this assignment we will create a customer reservation system for a fine dining establishment. This restaurant is small but very busy and customers will line up to have a meal.

The restaurant has only one table and guests (once sitting at the table) have a 3 course meal appetizer, main and desert.

Part 1:

Create a table class that has the following properties:

* An event that will notify when the table is open and write "Table is open!" to the console

Part 2:

Create a customer class that has the following properties:

* First Name
* Last Name
* Meal (use an enum - public enum Meals { none, appetizer, main, desert, done })
* A method to listen for a table open event. This method should write "{0} {1} got a table.", this.firstName, this.lastName to the console.
* An event that fires when the customer changes from 1 meal to the next (e.g. from none to appetizer …)

Part 3:

In your Main method:

* Create a queue of customers (at least 5).
* Create a table object
* Loop through each of the customers and have them go through all meals for the customer

Part 4:

In the program class:

* Create a method that writes: {0} {1} is having {2}.", e.customer.firstName, e.customer.lastName, e.customer.meal to the console when a customer’s meal changes (associate with the event)
* When all customers have completed their meals the program should write "Everyone is Full!" to the console.

When complete your application output should look similar to the following:

|  |
| --- |
| Table open! |
| Joe Smith got a table. |
| Joe Smith is having appetizer. |
| Joe Smith is having main. |
| Joe Smith is having desert. |
| Joe Smith is having done. |
| Table open! |
| Jane Jones got a table. |
| Jane Jones is having appetizer. |
| Jane Jones is having main. |
| Jane Jones is having desert. |
| Jane Jones is having done. |
| Table open! |
| Jack Jump got a table. |
| Jack Jump is having appetizer. |
| Jack Jump is having main. |
| Jack Jump is having desert. |
| Jack Jump is having done. |
| Table open! |
| Jeff Run got a table. |
| Jeff Run is having appetizer. |
| Jeff Run is having main. |
| Jeff Run is having desert. |
| Jeff Run is having done. |
| Table open! |
| Jill Hill got a table. |
| Jill Hill is having appetizer. |
| Jill Hill is having main. |
| Jill Hill is having desert. |
| Jill Hill is having done. |
| Table open! |
| John Winstone got a table. |
| John Winstone is having appetizer. |
| John Winstone is having main. |
| John Winstone is having desert. |
| John Winstone is having done. |
| Everyone is full! |

Marking Scheme

|  |  |  |
| --- | --- | --- |
| Item | Max. Marks | Marks |
| Create table class and event | 3 |  |
| Create customer class and event | 4 |  |
| Create customers queue | 1 |  |
| Console output when customer switches meals | 1 |  |
| Console output when everyone is done | 1 |  |
| Total | 10 |  |