

# Restaurant Management Business Rules and Solutions

## **Problem Statement:**

The popularity of restaurants has increased and the days of taking orders on paper have been inefficient in the past. Restaurants would hire employees who would take the orders from the customer. However, how would the waiter know what or the amount of food that is available for the customer to consume? The customer would place an order, then the waiter would generate an invoice of the customer's order and table number and send it to the kitchen. The kitchen should then check the amount of food and availability from what the restaurant's supplier has given them.

Whether or not that invoice is "do-able", the kitchen would update the number of items onto the database system. For future reference, the waiter will keep that information in mind and inform the customers if that item is available for them. The restaurant also has delivery boys/girls that are assigned to the customer's area code. A delivery boy is not allowed to go outside the area code. It would be efficient for the delivery boy/girl to know the area code of the customer without having to call the restaurant or the customer.

## **Proposed Solution:**

I propose the following solution; instead of waiters having to write down orders and bring them to the kitchen it's best to send a live update of the customer's invoice to the kitchen electronically. It's also an advantage because the waiter would know whether or not a meal is available from the restaurant's management system and can immediately inform the customer. Another proposed solution would be to stop the waste of paper from printed menus. Each time a menu is printed out that can take a toll on the restaurant's expense. So, since almost everyone has a mobile phone they can just scan a barcode which is an updated menu connected from the restaurant management system.

The delivery boys/girls should have something similar since there are customers that order online. This restaurant management system is meant to be efficient in every aspect and is meant to keep the business moving consistently and effectively. The area code is typically shown within the first three digits of someone's phone number provided by the customer including their address number. Once the customer places their order they should've already given their address and phone number to the online system or store that information with their log-in identification.

### **Business Solutions:**

- The restaurant has many employees.
- The employees take orders from many customers (**M:M** relationship)
- The employees consist of waiters and delivery boys/girls who are assigned to area codes and can't leave those boundaries.
- The customers make up an online and in-person portion of the restaurant so online customers are assigned a delivery boy/girl in their area code to take and deliver their order. The customer in person will be assigned a table and the waiters will then take their orders.
- Only one employee can generate many invoices created by the customer's order (**1:M**)
- The customer's order consists of meals (**1:1 or M:M**).
- The meals and drinks consist of ingredients and it can take many ingredients to create one drink or meal (**M:1**).
- The ingredients are provided by the supplier (**M:1**) and the supplier supplies the items to the executive chef (**1:1**).

### **User requirements:**

- Be able to see live updates from the website's Cloud when viewing the menu or any updates
- Be able to see wait time for meals
- A friendly and readable user interface