

CS2810 - Group Report

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Description Of Components

Views

Customer

Start Order Page

The Customer Start Order page is the initial page the customer sees. It contains a carousel element, a Start Order button, and three images. The central Start Order button directs the customer to the menu page. See *Figure 1*.



Figure 1: The customer landing page

Menu Page

Once the customer has clicked Start Order, they will be brought to the Menu Page. The customer can now pick which items they want to order by searching through four different categories. See *Figure 2* and *Figure 3*.

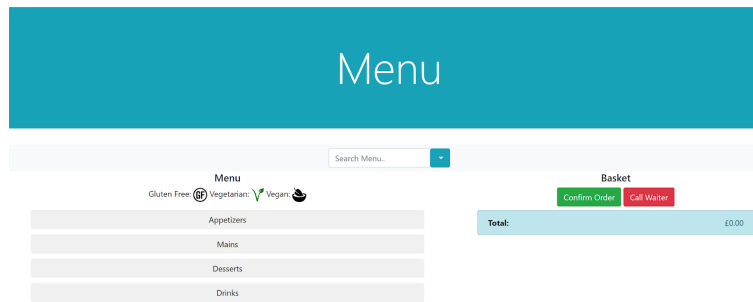


Figure 2: The Menu Page with Closed Categories

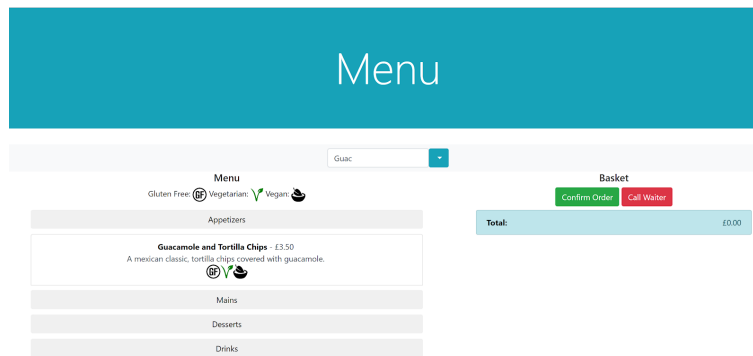


Figure 3: The Menu Page with Open Categories

A customer can also search for an item, filtering by a specific category (vegan/vegetarian/gluten free) which will only display items that meet the category criteria. See *Figure 4*.

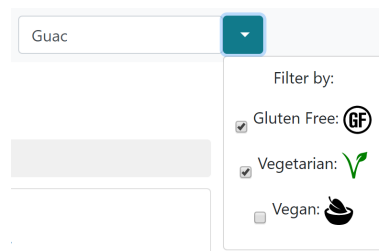


Figure 4: The Menu Filtering Section

Once the customer clicks on the menu item they want to order, an item summary will pop up and will display more information such as the Price and the description of the item. They can also add specific instructions that

will then be seen by the chefs that cook the meal. When the customer clicks the Add to Order button, the order is added to the list. See *Figure 5*.

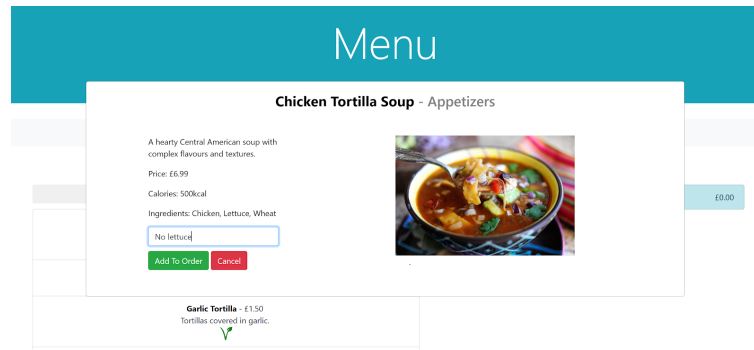


Figure 5: The Menu Item Modal

The menu items that the customer has added to the order is then displayed under the basket order list. This list will show the items that have been added, their individual price and the total price. Once the customer is happy that they have all the items they want to order, they will click Confirm Order to send the list to the basket page. See *Figure 6*.

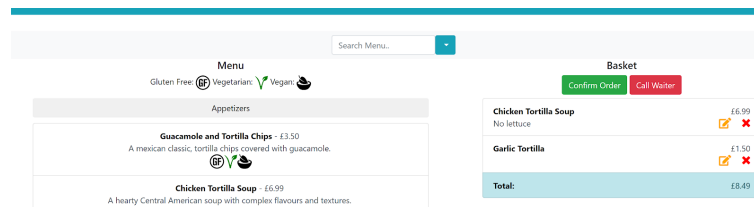


Figure 6: The Menu Page with an Order

Basket Page

See *Figure 7*.

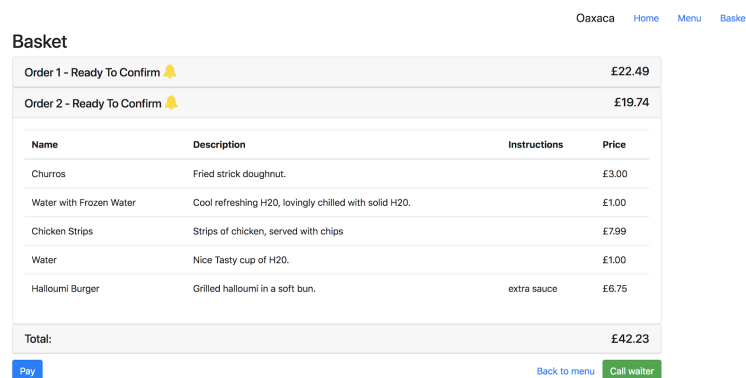
This is the page the customer is taken to once they have selected and confirmed what they want to order. Customers can add to the same order by navigating to the basket page via the link in the top right of the page, or can start a new order by navigating to the home page.

Each order has an order number, shows the status of the order (along with a little symbol that reflects this) and the price for that order. Orders contain a table with all the items in that order. The table includes the name of each item, a short description, any instructions that were added and the

price. If more than one of the same item is added to the order, it is shown by a repetition of the item in the order table.

At the bottom of the accordion element the total price is displayed for all orders so that customers have an up to date idea of how much their meal is costing them. The call waiter button simply notifies a waiter that the particular table needs assistance and confirms with the customer that this has been done via a modal. There is also a back to menu button next to call waiter for convenience.

This view gives the customer a good idea of what is going on with their orders and allows them to plan what else they may want to get accordingly.



The screenshot shows a web interface for a restaurant's basket. At the top right, there are navigation links: "Oaxaca", "Home", "Menu", and "Basket". The main heading is "Basket". Below it, there are two order summaries: "Order 1 - Ready To Confirm" with a price of £22.49 and "Order 2 - Ready To Confirm" with a price of £19.74. Below these is a table of items. The table has four columns: "Name", "Description", "Instructions", and "Price". The items listed are: Churros (£3.00), Water with Frozen Water (£1.00), Chicken Strips (£7.99), Water (£1.00), and Halloumi Burger (£6.75). The Halloumi Burger has an additional instruction "extra sauce". At the bottom of the table, a "Total:" row shows a price of £42.23. Below the table, there are three buttons: a blue "Pay" button, a blue "Back to menu" button, and a green "Call waiter" button.

| Name | Description | Instructions | Price |
|-------------------------|---|--------------|--------|
| Churros | Fried strick doughnut. | | £3.00 |
| Water with Frozen Water | Cool refreshing H2O, lovingly chilled with solid H2O. | | £1.00 |
| Chicken Strips | Strips of chicken, served with chips | | £7.99 |
| Water | Nice Tasty cup of H2O. | | £1.00 |
| Halloumi Burger | Grilled halloumi in a soft bun. | extra sauce | £6.75 |
| Total: | | | £42.23 |

Figure 7: The Customer's Basket Page

Payment

This is the payment form, see *Figure 8*. It forms a part of the Basket page and is made visible when the pay button is pressed. On this page, the customer enters several details. Their email address is used to send the customer an email receipt, and their card details are used to debit their account. The user enters these details and then clicks the Pay button, which also displays the total for the Transaction. Upon successful payment, the customer will be redirected to the start order page and they will be free to leave.

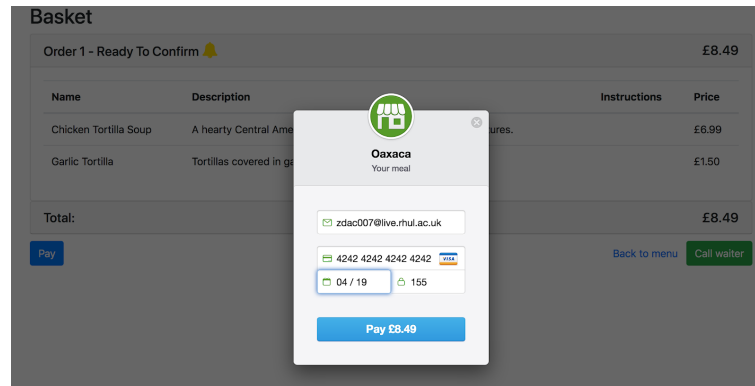


Figure 8: The Customer's Payment Form

Waiter

Orders Page

This is the view the waiter sees, on the left is the list of tables that the waiter is assigned to. On the right is the details of the order that the waiter has selected. There are a number of symbols to show the waiter at a glance the state of their tables once they have learnt them. There are action buttons that modify the state of the selected order and they are activated and de-activated depending on the state of the order to minimise human error. See *Figure 9*

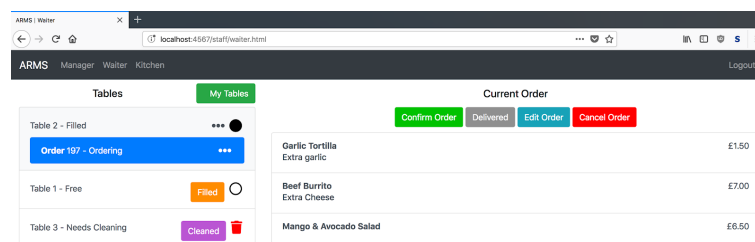


Figure 9: Order Page - My Tables

The waiter can also press the toggle at the top of the list of tables to see all the tables in the restaurant in case they have to cover another waiters tables for example. See *Figure 10*

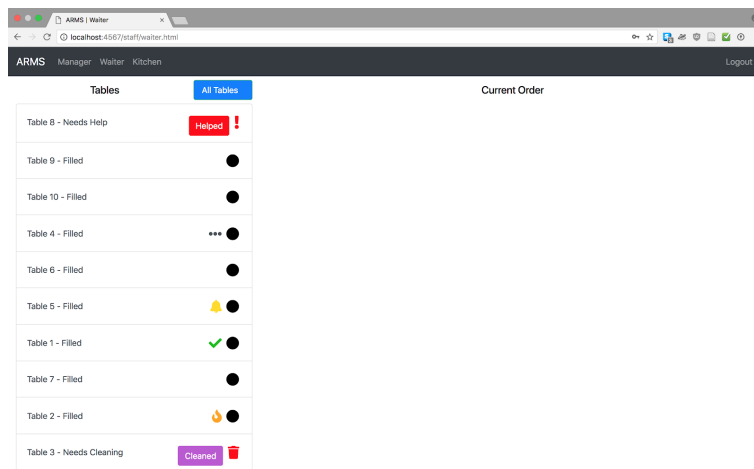


Figure 10: Order Page - All Tables

When a customer indicates that they are ready to confirm their order a notification appears on the relevant waiters page. This also triggers an update so the most up to date information is displayed. See *Figure 11*

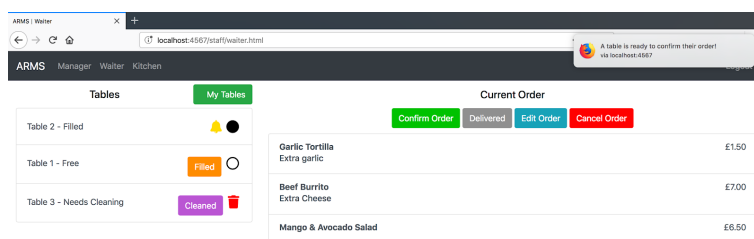


Figure 11: Order Page - Selected Order

If at any point the customer needs help they can press a button and the waiter will get a notification and the table status indicator will change. This gives a quick visual indicator that action is required. See *Figure ??*

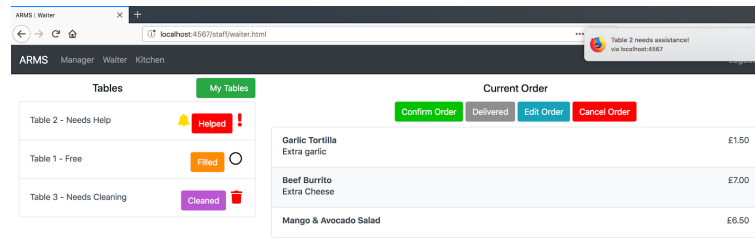


Figure 12: Order Page - Notification

Edit Order View

Kitchen

This is the view the kitchen staff see. The orders are displayed with the oldest (and most important) in the main part of the page, the background colours are visual cues for the kitchen staff to quickly assess the backlog. If there are more than 4 orders the list overflows to the sidebar still with background colour indicating priority. As older Orders are finished they pop off the sidebar onto the main page. See *Figure 13*.

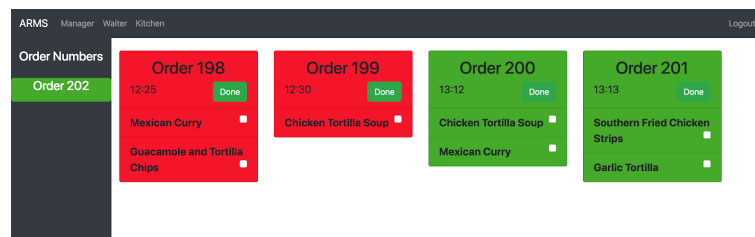


Figure 13: The Kitchen Page

When orders are confirmed by the waiter a notification is shown for the kitchen, this also updates the page. See *Figure 14*

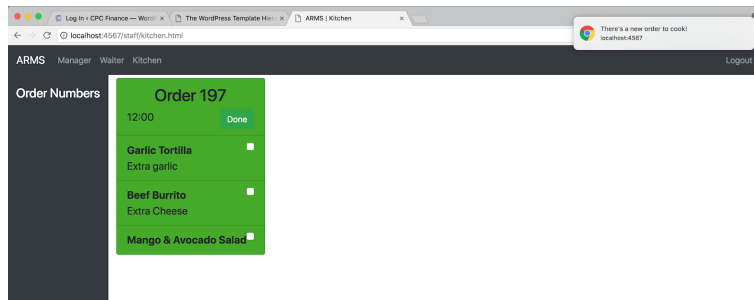


Figure 14: Kitchen Notifications

Manager

Manager Home Page

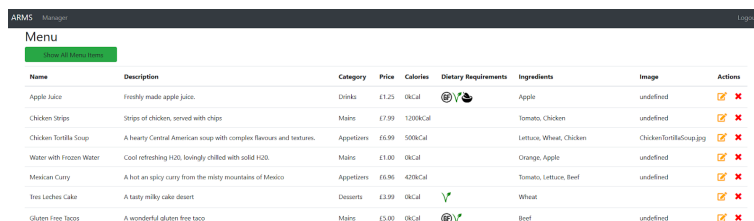
This is the manager home page *Figure 15*. You are taken here after logging in with a manager account. From here you can access the all of the manager pages and also the staff portals.



Figure 15: The Manager's Menu

Edit Menu Page

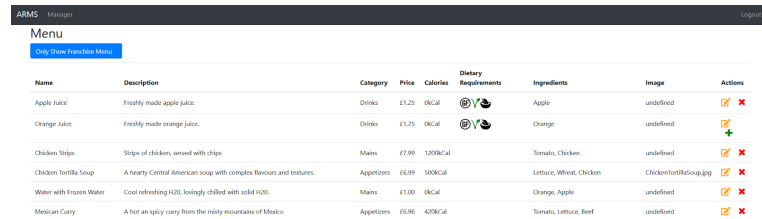
This page lists all the menu items currently on the franchises menu. You can edit any item by clicking the yellow edit button next to it, or remove it from the menu by clicking the red cross. Clicking the Show All Menu Items will also show the items which are not on the menu. See *Figure 16*



| Name | Description | Category | Price | Calories | Dietary Requirements | Ingredients | Image | Actions |
|-------------------------|---|------------|-------|----------|----------------------|-------------------------|-------------------------|---------|
| Apple Juice | Freshly made apple juice. | Drinks | £1.25 | 0KCal | @ V | Apple | undefined | |
| Chicken Strips | Strips of chicken, served with chips | Maine | £7.99 | 1200KCal | | Tomato, Chicken | undefined | |
| Chicken Tortilla Soup | A hearty Central American soup with complex flavors and textures. | Appetizers | £6.99 | 500KCal | | Lettuce, Wheat, Chicken | ChickenTortillaSoup.jpg | |
| Water with Frozen Water | Cool refreshing H2O, lovingly chilled with solid H2O. | Maine | £1.00 | 0KCal | | Orange, Apple | undefined | |
| Mexican Curry | A hot and spicy curry from the misty mountains of Mexico | Appetizers | £6.96 | 420KCal | | Tomato, Lettuce, Beef | undefined | |
| Tres Leches Cake | A tasty milky cake dessert | Desserts | £3.99 | 0KCal | Y | Wheat | undefined | |
| Gluten Free Tacos | A wonderful gluten free taco | Maine | £5.00 | 0KCal | @ Y | Beef | undefined | |

Figure 16: Editing Menu

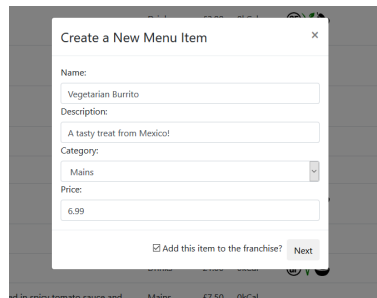
If the item is not on the menu, it will have a green plus instead of a red cross. Clicking on that will add it to the franchise menu. If you want to add a new menu item which does not exist, you can select the Add New Menu Item button at the bottom of the page. See *Figure 17*.



| Name | Description | Category | Price | Calories | Dietary Requirements | Ingredients | Image | Actions |
|-------------------------|--|------------|-------|----------|----------------------|-------------------------|-------------------------|---------|
| Apple Juice | Freshly made apple juice. | Drinks | £1.25 | 0KCal | GF, V | Apple | undefined | |
| Orange Juice | Freshly made orange juice. | Drinks | £1.25 | 0KCal | GF, V | Orange | undefined | |
| Chicken Strips | Strips of chicken, served with chips | Mains | £7.99 | 1200KCal | | Tomato, Chicken | undefined | |
| Chicken Tortilla Soup | A hearty Central American soup with complex flavours and textures. | Appetizers | £6.99 | 500KCal | | Lettuce, Wheat, Chicken | ChickenTortillaSoup.jpg | |
| Water with Frozen Water | Cool refreshing H2O, lovingly chilled with solid H2O. | Mains | £1.00 | 0KCal | | Orange, Apple | undefined | |
| Mexican Curry | A hot an spicy curry from the misty mountains of Mexico | Appetizers | £6.95 | 420KCal | | Tomato, Lettuce, Beef | undefined | |

Figure 17: Editing Menu

Clicking this button will bring up a wizard which will guide you through the process of creating a new menu item. See *Figures 18, 19 and 20*.



Create a New Menu Item

Name: Vegetarian Burrito

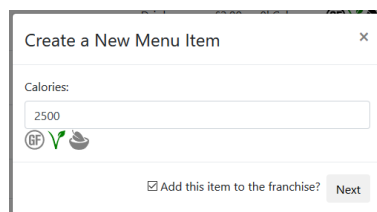
Description: A tasty treat from Mexico!

Category: Mains

Price: 6.99

☒ Add this item to the franchise? Next

Figure 18: Editing Menu Wizard



Create a New Menu Item

Calories: 2500

GF V

☒ Add this item to the franchise? Next

Figure 19: Editing Menu Wizard

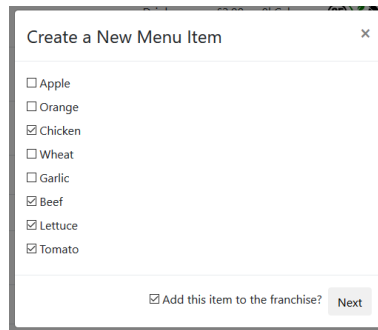


Figure 20: Editing Menu Wizard

Assign Tables Page

Employee Page

Server

The server is responsible for providing communication and authentication between the user interface and the database. We use Spark to handle the communication between the front end and the server itself. We have created numerous classes for the purpose, more detail is provided in *Endpoints*. Also handled by the server is the communication and the creation of the database, we use the Hibernate ORM and JPA to create and communicate to the PostgreSQL database. More detail on how this is done is provided in *Database*.

Database

We have a database with 19 related tables, see *Figure 21*.

The database stores everything including the staff, the menu and the customers orders. It also stores the logged in sessions and the data needed for push notifications. The database was designed to allow the user to start multiple orders and store them onto a transaction that allows the users to pay for all there orders in one go.

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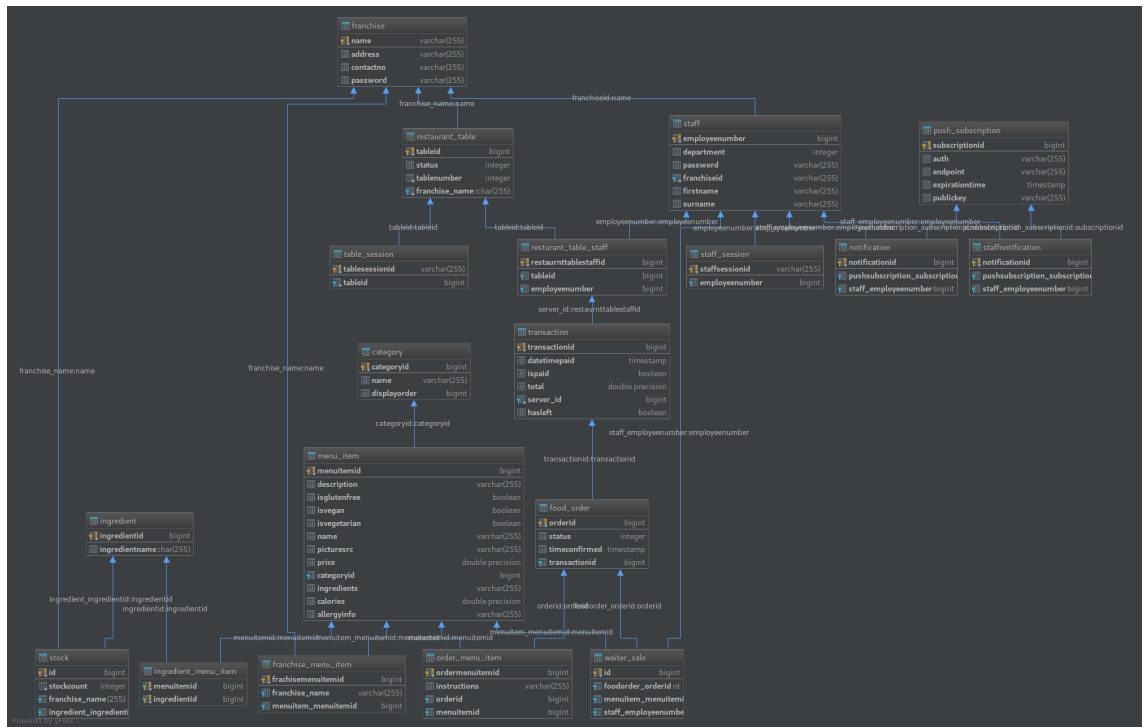


Figure 21: Generated by DataGrip

Description Of Packages

Database

Implemented Components

This package implements the following components:

- A fully relational database in hopefully third normal form. All created with Hibernate ORM.

See *Table Overview* for more details.

- A Database Manager Singleton for easy access to creating JPA Entity Managers, without the need of creating more than one factory.

See *Database Overview* for more details.

Endpoints

Implemented Components

This package contains classes that link the front end to the database.

- Authentication classes to authenticate a users login to stop unauthorized access.

See *Authentication Overview* for details.

- Ingredient classes to provide end points that interact with the ingredient table in the database.

See *Ingredients Overview* for details.

- Manger classes to provide the end points necessary to create the implemented manager user stories.

See *Manger Overview* for details.

- Menu classes to provide the end points needed to load and edit the menu.
See *Menu Overview* for details.
- Notification classes that provide our push notification service, including auto updating the web pages.
See *Notification Overview* for details.
- Order classes to provide the ability to create, view and edits for both the customer view and the waiter view.
See *Order Overview* for details.
- Payment classes to provide the Stripe functionality so they customers can pay by card.
See *Payment Overview* for details.
- Table classes to get the list of table, change there status and change which waiters are assigned to which table.
See *Tables Overview* for details.
- Transaction classes to allow the front end to get details on the current transaction.
See *Transaction Overview* for details

Static

Implemented Components

- An AJAX Wrapper to easily make Post and Get requests.
See *AJAX Wrapper* for more details.
- A Customer landing page, that allows the users to start an order.
See *Customer Home* for more details.
- A Customer menu page, that allows the customer to view the menu and add items to there order.
See *Customer Menu* for more details.

- A Waiter page, that allows a waiter to see the current orders for a table, confirm and edit those orders. As well as manage the status of tables.
See *Waiter* for more details.
- A Kitchen page, that allows kitchen staff the orders that need to be cooked and indicate when they are done cooking.
See *Kitchen* for more details.
- An Edit Menu page for the manager, so the manager can update the menu.
See *Edit Menu* for more details.
- An Edit Employee page for the manager, so the manager can edit and create new employees.
See *Edit Employee* for more details.
- An Assign Tables page for the manager, that allows them to assign waiters to table.
See *Assign Tables* for more details.
- Push notifications that allow both waiters and kitchen staff to be kept up to date.
See *Notifications* for more details.

Utility

Implemented Components

This package implements a GSON Singleton to limit the need of creating numerous GSON objects for each of the end point classes.

See *Utility Package* for more details.

User Stories

Fully Completed

These are the completed user stories.

Customer Stories

- Electronic Payment
- View Menu
- Ordering
- Menu Filtering
- Calling The Waiter
- Allergies And Calories
- Food Pictures
- Order Tracking
- Intuitive Ordering

Waiter Stories

- Notification For Delivery
- Cancel Order
- Order Times
- Payment Information
- Order Confirmation

- Table Assignment
- Mark Order as Delivered
- Client Needs Help
- Add Extra Sales
- Change Status Of An Order

Kitchen Stories

- Notify Waiters
- Confirmed Customer Order
- Order Times

Manager Stories

- Assign Tables
- Set Prices







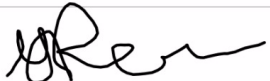
Nearly Completed

These stores are worthy of a mention as they are very nearly finished.

Manager Stories

- Adjust Menu: The only feature left uncompleted is uploading an image to the new menu item or when editing a menu item.
- Add Staff: The only feature left is the ability to reset a users password.

Statement of Relative Contribution

| Name | Design Mark | Coding Mark | Other Mark | Signature |
|----------|-------------|-------------|------------|---|
| Toby | 20% | 16% | 13% |  |
| Andrew | 12% | 14% | 13% |  |
| Marcus | 20% | 16% | 18% |  |
| Roger | 12% | 15% | 17% |  |
| Robin | 12% | 13% | 13% |  |
| Jonathon | 12% | 13% | 13% |  |
| Johan | 12% | 13% | 13% |  |