Online Grocery Store System (OGSS)

# Overview

The purpose of the OGSS is to provide the capability for a grocery store to have an online interface for customers to purchase products and arrange for deliveries. By implementing the OGSS, the store would provide customers the option to shop from the convenience of their home and would allow for continuity of services during adverse conditions. The store previously had to shut down as a result of pandemic conditions, and saw a decline in sales upon reopening, as potential customers were cautious about going out in public. The store would like to be able to continue its operations during an ongoing pandemic, or similar circumstances, in the future. The OGSS also provides an additional service for customers by allowing them to add several items to their virtual shopping cart at once by selecting recipes rather than the individual ingredients.

## Business Rules

Customers can register a new account, or log into an existing account if they have previously created one. They can search the store for specific items which they can then add to their virtual cart for eventual purchase. Customers can also add several items at once by selecting a specific recipe. If a specific ingredient in the recipes is unavailable, the customer is prompted to select a different recipe. A customer can decide to remove items from their cart before making their final purchase. A customer cannot add an item to their cart if it is not currently in stock. When the customer is ready, they can make their final purchase.

# Completing a Purchase Transaction

To complete a transaction, a customer must submit their name, address, payment method, delivery date, and payment details, and have a cart with at least one item. The customer may also enter a discount code to reduce the price of their purchase. The customer has the option of searching for additional items to add to their cart before making their purchase.

## Business Rules

The customer can select only one payment method. A discount code may be a promotional code or a coupon code. Promotional codes are for special events and can be applied to all purchases. A coupon code is only applied with the purchase of a specific item, which must be present in the customer’s cart for the discount to be applied. At time of purchase, a customer is shown the price and quantity of each item, the various discounts applied to their purchase, a subtotal, the total amount of tax added, and the final total amount. There is also a delivery charge applied to purchases with totals below a designated amount. When a purchase transaction is completed, the items purchased are deducted from the store’s inventory count.

# Delivery Driver

A delivery driver can log into the system to view deliveries assigned to them. The delivery driver can mark a delivery as “in progress”, “complete”, or “unable to complete”. The delivery driver can also add a comment to each delivery. A delivery driver is designated as either on-shift or off-shift.

## Business Rules

Deliveries are assigned only to drivers currently on-shift. Deliveries are queued until a delivery driver is available and are then assigned to available drivers in the order they were purchased. If multiple drivers are available, a delivery will be assigned to the driver with the fewest deliveries for the day, and randomly in the event of a tie. When a delivery is designated as “unable to be completed” a comment is mandatory. A delivery driver has access to view only deliveries that were assigned to them.

# Manager

A manager can log into the system to view lists of previous purchases, as well as all deliveries and their current statuses. The manager can see all of the delivery drivers currently on-shift. The manager can add items available for purchase, delete items available for purchase, alter the price of an item or alter the quantity currently in stock. The manager can also create discount codes.

## Business Rules

An item’s price cannot be below $0.00, and the quantity cannot be below 0. Duplicate items are not permitted. Only the manager has access to view the purchase transactions of all of the customers and the delivery details for all of the delivery drivers.