

Requirements Specification

A fully functioning webpage that accommodates a manager, customer, and client sign in, where the business is an icecream delivery service.

Elements of experience that will be the same across all users and actions:

- When the customer enters data incorrectly into a field (eg. no text in a required field) and tries to submit it, they will get an error (type will depend on what is easiest to implement) that is quickly eye-grabbing in color or requires an action. It will include text making it clear to the user what they did wrong. We will refer to this as an “entry error”.
- Links vs buttons: Buttons will be brightly colored with a clear outline. The text inside will be larger than the body text of the rest of the page to further grab the user’s attention. All buttons will be styled the same, or if it makes sense with the theme there may potentially be two styles of buttons for two degrees of attention-grabbing. Their purpose is to immediately guide the viewer’s gaze towards an important step such as submitting a form or moving to the next step in a process. Links will be smaller, with no outline; the text will be the same size as the rest of the body text on the page, but the text color will be different and the text will be underlined. Links will be used for additional navigation outside of the main process the user is going through; for example, if the user would like to return to a previous step in the process.
- Side nav: When the page is large enough for it to fit, the user will see a medium-thick bar to the left side of any page they are on after sign-in. This will contain a square block for each page the user may need to visit, each with a small icon and short (one to two words) description of the destination.

Customer

The customer must be able to request an ice cream delivery to their location. The process is circular, with few opportunities to create shortcuts, and the option to freely return to previous steps.

0. Login

The customer is required to log in to an account before any orders can be submitted. Customers are free to sign up and log in to a personal account, where they would be able to add a username and password, but they are also given the freedom to use a guest user account.

A customer with a personal account will have access to their order history, and to save payment options for future use. Extensive features are to be saved for future versions (I.E. Saving favorites for fast order)

1. Menu

Customers must have a small variety of options to choose from for their ice cream.

- Cones (I.E. Waffle, Sugar, Cake)
- Flavors (I.E. Chocolate, Vanilla, Strawberry)
- Toppings (I.E. Mini Marshmallows, Strawberry Sauce, Chocolate Chips)

If any option is unavailable from stock, it should be communicated to the customer in such a way that is both easy to understand, and easy to see.

Customers will also be able to see their order history and be able to add them to cart.

An 'Add to cart' button should be easily accessible for the customer to allow them to prepare and modify their order before submission.

2. Cart

Customers are able to access their cart freely from the rest of the website. Should they leave the Cart page to view the menu again, they can return to their cart and see that any saved changes are still there.

Customers have the ability to modify their cart if they decide a certain order must be changed. A delete method should be implemented within the cart to give customers this option.

When customers are satisfied with their order, a submit button will allow them to pay for their order before requesting the delivery.

3. Checkout

Once customers are certain of their order, they must submit their order for delivery. No payment option is necessary, so the customer will simply hit some type of submit button.

A timer will be initiated to give the customer an approximation as to when the ice cream will be delivered. The timer need not continue to be displayed permanently on the webpage and will be determined by an arbitrary amount of time (i.e. 5 minutes). The customer should be aware that if they navigate away from the page, the timer will be affected, and therefore, inaccurate.

New customer experience:

- Customer navigates to the main DroneCones page, where the main object on the page is an invitation to sign in. The main element should be a large box. At the top should be a "Sign In" heading, in the body a short description, and centered and taking up the most space there will be two buttons that say "Sign In" and "Sign Up". They might also have

icons if we feel fancy. Below the Sign In and Sign Up buttons will be a smaller link (not a button) that says "Sign In as Guest". Possibility: we could have some advertising-type stuff below the box if the user decides to scroll down.

- Customer does not have an account so does not try to sign in. (If they do, they will run into an error, described below with the rest of the sign-in experience. This is of course assuming they don't manage to hack someone else's account.) Instead they click the Sign Up button.
- Customer is brought to a page with a form asking for a username, password, password re-entry, and display name. Potentially other information will be added to this form as the team realizes it is necessary for account creation. At the bottom will be a Sign Up button. Below the Sign Up button will be a link to the Sign In page, and below that a link to sign in as guest. Both of these links will have blurbs consisting of a couple words describing why the customer would want to click them (eg. "Don't have an account? Sign in").
- After entering information, customer will click the Sign Up button. If they did not enter anything in one of the fields, or if the passwords do not match, the customer will see an entry error explaining what they did wrong. There will be an attempt to add the new user to the database; if it fails because the username is already in use, the user will get an appropriate entry error.
- If sign up is successful, the customer will be redirected back to the home page, where they can sign in.

Returning customer sign-in experience:

- Customer navigates to the main DroneCones page, described above. Customer is uninterested in signing up a second time so clicks the Sign In button.
- Customer is brought to a sign-in page on which the main element is a box containing an input labeled "Username" and an input labeled "Password". Anything typed in the "Password" input will be hidden. Below these will be a "Sign In" button. Below that will be a small (but large enough to easily read, and centered to be easily noticeable) link to the aforementioned Sign Up page, and below that a similarly styled link to sign in as guest.
- Customer enters their username and password, then presses the Sign In button. If the customer tries to click Sign In without entering any text in one of the fields, they will get an appropriate entry error. If the customer clicks Sign In and no matching account information is found, an entry error with appropriate text will be shown.
- If the customer clicks Sign In and an account with a matching username and password is found, the customer will be redirected to the Menu page to begin ordering.

Sign in as guest experience:

- Customer navigates to the main DroneCones page (described above) and selects the "Sign in as guest" link. (Alternatively, customer navigates to the signup page and selects the "sign in as guest" link, or customer navigates to the sign-in page and selects the "sign in as guest" link. All three of these actions will exhibit the same behavior.)
- Customer is immediately redirected to the menu page, described below. Customer proceeds to order just the same as if they had signed in; since we are not currently worrying about payment, there will be no differences in their experience. However, if we do eventually add some sort of payment-entry page, theirs will be different.

Order experience:

- After sign-in (regardless of sign-in method), customer will be directed to the Menu page. They will see a navigation bar off to the side; this will contain nav buttons for Menu, Cart, Recent Order (name under consideration), and at the bottom, Order History and Account Information. The customer will be able to use these buttons to easily navigate between parts of the order process.
- The menu page will have a title (Menu) and four headings: one for Cone, one for Number of Scoops, one for Ice Cream Flavor, and one for Toppings. Under each will be selection options; the type will be based on how many items of that type the user can select. The cone and number of scoops will allow for one selection, so they will use radio inputs. The ice cream flavor will have a new radio input for each scoop the user decides. The toppings selection will be a multiselect so the user can add as many toppings as they want, and one of the options will be "No Topping".
- At the bottom of the page, there will be an Add to Cart button. When the user clicks this button, the user will be automatically redirected to the Cart page (described below). They can then use either the navigation on the page or the nav bar on the side to go back to the menu and add more cones, or to proceed to checkout. If the user clicks Add to Cart but does not have all parts of the order filled out, an error message (likely the default for our framework) will show up on that field and the user will not be redirected.
- The cart page will have a link at the very top leading the user back to the menu to add more items. Just below that will be a header, then a table structure in which each row contains an ice cream cone. The user will see an icon of an ice cream cone to the left side; the number of scoops in the icon will match the number of scoops they selected for that order. On the far right there will be a column for price, and in the middle a three-line description of the ice cream cone including cone, flavors, and toppings. If the cart is empty, there will be a row that does not contain those three columns but instead holds a message informing the user that the cart is empty. Below the table will be a line for total price. At the bottom, the user will see a Check Out button, which will be disabled if the cart is empty.
- When the user selects Check Out, they will be redirected to the Confirmation page. No matter what is on the screen, the bottommost element will be a link leading the user back to the menu to make another order. (hehehe money) There are three things the user might see on this page:
 - This may at first show a loading message as their order is registered and processed, depending on the customer's internet connection.
 - We assume that it will take 5 minutes for the drone to arrive with the ice cream cone (maybe in version 2.0 we could make this more precise), so as soon as our system registers the order, a 5-minute timer will appear on the screen in place of the loading message. Once the timer runs out, the customer will see a Success message with a big checkmark and a blurb saying that the order was delivered.
 - If the user navigates to this page without ordering anything within the past day, they will see a warning icon with a message saying that they have not ordered anything recently.

Customer order history experience:

- At any point in the process, the customer can click on the Order History tab in the side nav. This will lead them to a list of their recent orders. This will only show around 10 results at a time so that their page doesn't take forever to load. Each order item will show a timestamp as a header and then a short blurb about each cone in the order. On the right side will be an Order Again button. At both the top and bottom of the list, there will be a Next and a Previous button to load the next or previous 10 orders; if the user is at the first or the last page, the appropriate button will be disabled.
- If the user clicks Order Again on any item, each item from the old order will be added to their cart. Any items that were already in the cart will be preserved. The user will be redirected to the cart.

Customer account info experience:

- At any point in the process, the customer can click on the Account Information tab in the side nav. This will lead them to a page displaying all the personal information we are storing about them: their name, username, password, and other info as we deem it necessary.
- Next to each info item will be an Edit button. Clicking this will open an input to allow the customer to enter new information for that field. Next to the input will be a Save button, which will send the change off to be processed and close the input.

Client

A client is a website user who rents their drones to make deliveries on behalf of the business. They should have access to the information tied to their submitted drones, and have the opportunity to add or remove drones for delivery use.

0. Log in

It is important for the client to sign in. They can only have access to the drones under their login information, and must not be able to see any other client's drones.

If the client does not have an account, they will have the option to create one. During account creation the user will be asked to create a unique username and password.

1. Main Menu

Upon signing in, clients will be able to view relevant information for their registered drones. There will be an option to register new drones that will ask the client to specify the drone's size for the sake of delivery optimization.

The information displayed will include the size of the drones, as well as a simplified version of delivery history so that clients can make informed decisions about maintenance, and revenue

earned for each drone. Earnings are based on the number of deliveries made by the client's drones, and the size class of each drone.

Clients will be allowed to mark their drones as inactive with a simple toggle. Inactive drones will not be used for deliveries until they have been marked as active again.

New Employee Experience:

Login/Signup

- Employees will be taken to a screen with two fields prompting a username and password to Login. Following this will be a button that will be titled "sign up" This will redirect them to a separate page to create an account. The other button will be labeled "login"
- Pressing login with the user's correct information will redirect them to their general information page.
- If the sign up button is clicked then the user will be redirected to the create an account page where they will be prompted to enter a username password and then confirm the password following with a create account button.
- If the two passwords match, the create account button will display a message saying that they have successfully created an account and then to go back to the login page button will appear.
- If the passwords don't match text will appear to indicate the user has mismatched passwords.
- If something goes wrong while entering in the username or password fields the user will be informed that username or password is incorrect.

General information

- After a successful sign in has taken place the user will be taken to a screen that will display information about their account. The amount of money they have made in total, A list of their active drones along with the drones most recent order history up and cash that single drone has made. This first section displayed will be a general overview of that employee's account.
- There will be two buttons sitting on the bottom of this page. One will say "Register Drone" and the other will say Manage drones.
- Clicking "Register Drone" will redirect the user to a new page to register their drone
- Clicking "Manage Drones" will redirect the user to a new page to manage all registered drones

Register Drone

- By clicking the Register Drone the user will then be taken to a page that will prompt them to enter basic information about their drone.
- These are the following fields that the user will be required to fill out:
 - Serial Number
 - Size
 - Active/Inactive
- Once all the fields have been filled out they can hit the confirm drone registration button.
- If a field is not filled out. The user will be prompted to fill out the missing information

- If the field is filled out correctly the user will be redirected to their general information page

Manage Drones

- This page will display a list of different drones.
- Individual drones can be clicked on to view complete list of order history, total money made, and a status of active/inactive will be displayed
- Active and inactive toggle buttons for individual drones will be added
- Only one drone will be fully displayed at a time.

Manager

The manager is a user who has access to the numbers involving all customers and all clients. They can view sales trends when customers buy ice cream, and the numbers involved with client's and their drones.

0. Log in

All managers will have account privileges that no other account can have. It is important for the manager to be able to access specific information.

1. Main Menu

There are two specific sets of information that the manager needs access to.

- Inventory
 - The manager will need to be able to see when stock is running low. When ingredients need to be restocked, managers need to have the ability to update how much stock is newly available.
 - It is important when an update is made, if an ingredient was previously out of stock, customers will again be able to select that ingredient once more.
- Accounting
 - The manager will have to be able to see how much money is coming in, and how much money is expected to go out.
 - Managers will need to be able to visualize expenditure. Managers will need to know how much money will need to be paid to clients, and how much money is being spent on inventory.

Manager Experience:

Login/Signup

- Manager accounts will NOT have to follow the same signup flow as our other users. They must be approved and given Manager status by site admins.
- They will have a manager specific login page, where they may enter the credentials of their old account that has been made into a Manager account, or new credentials provided by a system admin. Entering the correct Username and Password on their login page will direct them to their Information Dashboard page.

Information Dashboard

- The dashboard for Manager accounts will be split between 3 sections. One section will display a list of the most recent orders that have been completed, along with some brief information on each, like the number of cones, drones, and price of each order. There will be an option to expand each order, displaying all details saved about the order. This will include the username of the customer who initiated the order, as a link that leads to their account on the Account Management page.
- Another section on the Information Dashboard will display basic accounting info for the Manager. The total income brought in via cone sales will be shown, along with expenditure calculated by the amount of stock that has been replaced in the last week/month. The amount deducted to pay drone owners will be shown as well, amounting to a total profit for the selected pay period to date.
- The third section displayed on the dashboard consists of current stock. Items that are closest to running out will appear first, with those that are least close to being out of stock at the end. An expand button will navigate the user to the full Inventory page.

Inventory

- The Inventory page will display an exhaustive list of all current items, their PPU (price-per-unit), and their current stock count. The fields for stock and PPU will be editable, if the Manager needs to replenish stock or update purchase costs. There will also be a button to create a new stock option. This button will open a dialog window where the user can input the name of the new item, the initial stock and PPU, and the type of item (cone, ice cream, topping). Save and Close buttons will allow the user to complete stock item creation or cancel the process.

Account Management

- The Account Management page will display a list of users, in order of the most recent purchase from the Manager's location. Short order details will be displayed as well, and each item can be expanded to show every detail of the order. Should a manager need to ban a known user, they can find the User's name based on their order, and click a button next to the User's name to deactivate their account. Banned users' names will be displayed in a different color from other users on this page. The same button can be used to reverse a ban, reactivating said user's account.