Design

The following are the iterative designs and ideas that were tried, evaluated, and adapted for the project. In order to come up with the best possible design for the project, several ideas were evaluated according to the criteria rubric developed in Project 2.
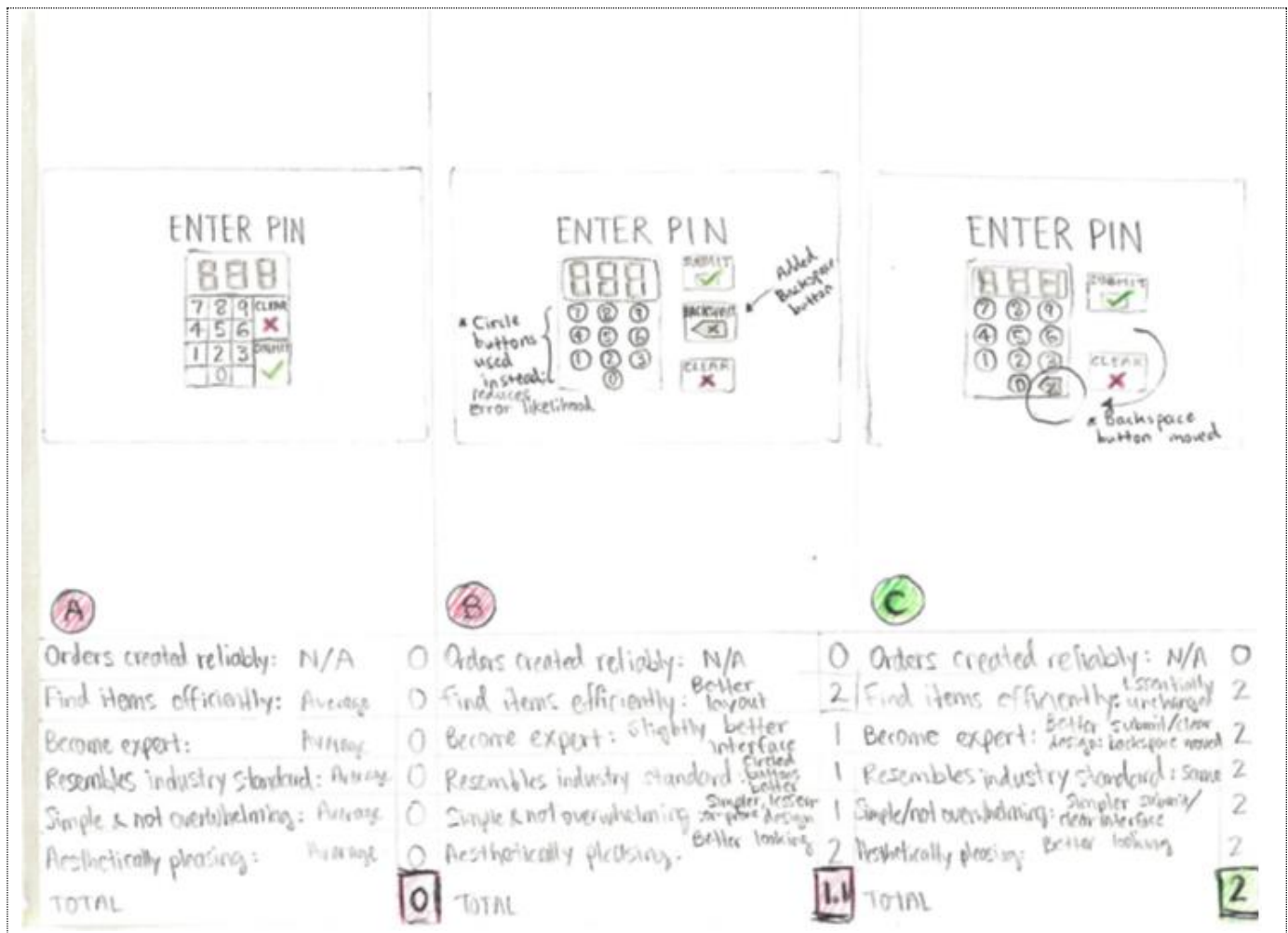

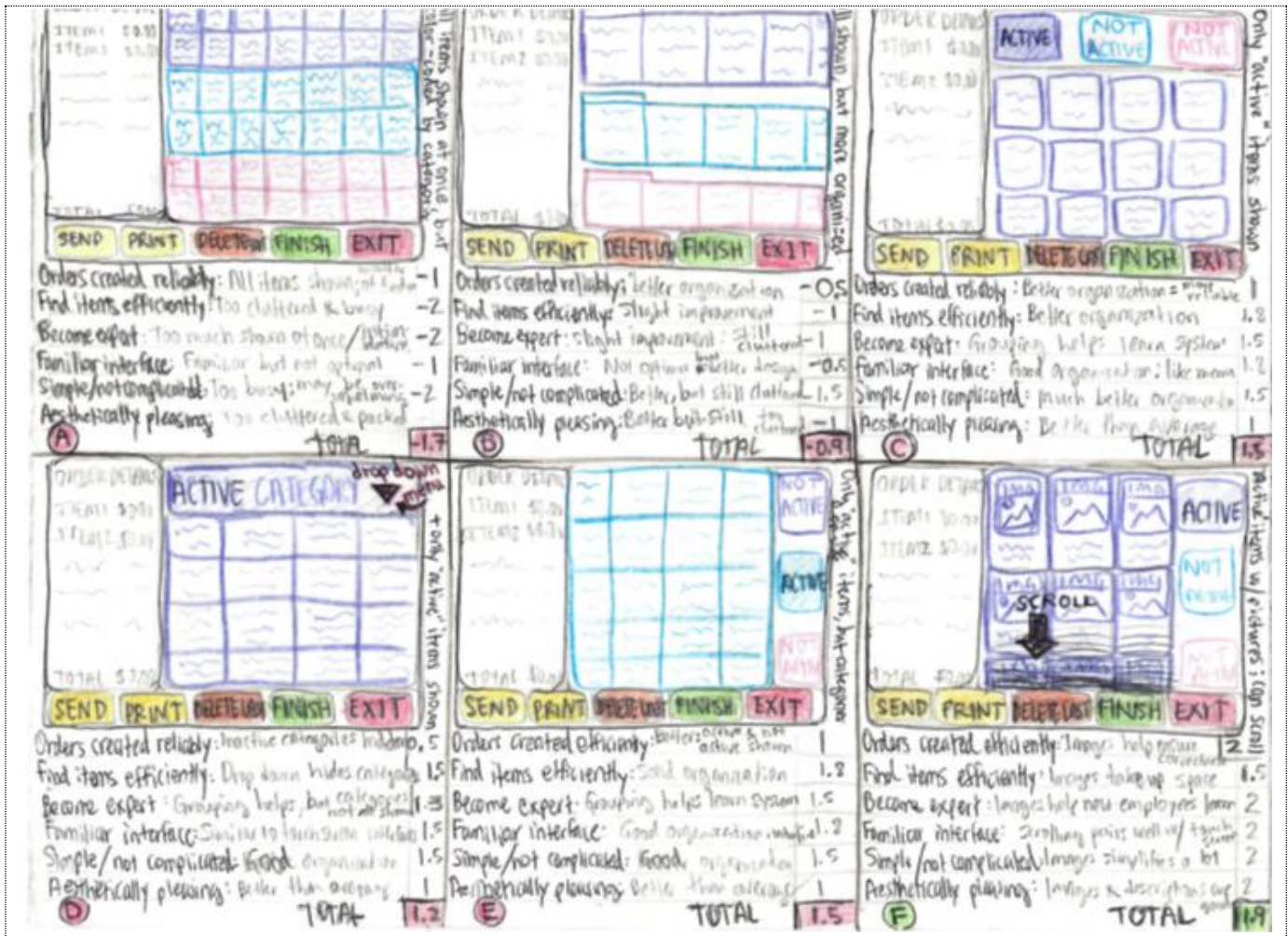*Figure 1 – Iterative designs for POS terminal log-in screen.*

Figure 2 – Iterative designs for POS terminal order-creation screen.

Prototype & Working Product

The designs were evaluated according to the criteria rubric developed in Project 2. The best designs were design (C) for the log-in screen and design (F) for the order-creation screen. To demonstrate a prototype, an interactive mockup was created, and a video was posted to YouTube.

Here is the link to the *prototype* demonstration: https://www.youtube.com/watch?v=6heExsBGhew

Here is the link to the *working product*: https://stormy-scrubland-40123.herokuapp.com/

Note: users may log in using any three-digit PIN.

Specification

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Executive Summary

By connecting front and back of house employees with intuitive, easy-to-use technology, our restaurant POS systems enable staff members to reach their full potential as productive, efficient, and caring service-providers.

Tailored to the restaurant industry's needs, our systems improve service delivery by increasing speed of service and reducing errors, thereby giving team members the power to deliver that "*wow*" experience for their guests.

Criteria

Success can be measured according to the following, prioritized criteria:

Priority 1	Priority 2	Priority 3
❖ *An employee must be able to locate menu items efficiently* ❖ Employees must be able to create and place orders for preparation correctly	❖ A new employee should be able to gain expertise with the POS system with relative easy ❖ The POS system should bear resemblance to other, standard restaurant industry POS systems and general touch-screen interfaces ❖ An employee with a sound understanding of the restaurant's menu should be able to use the system without much trouble	❖ The POS system's layout and appearance should be pleasing to the user

Persona

A resident of a coastal town in Massachusetts and a 45-year-old mother of two, Angela Smith has been in the seafood restaurant industry since she could remember. Driven by a passion for providing hospitality and warmth to her guests, Angela is an experienced waitress at *The Daily Catch*, a popular, local seafood restaurant, and she looks forward to every shift, where she gets to meet and interact with new people every day.

Angela's job can be very demanding, however, as *The Daily Catch* strives to give its guests the highest quality of service possible. Although not an avid fan of today's "gadgets," Angela is a quick learner and has done a good job of adapting as the restaurant industry has incorporated more technology in recent years.

An essential part of Angela's job is to use the restaurant's point of sale (POS) system to ring up orders and process payments. Angela's job performance relies heavily on efficiency, as she must be able to use the POS system to complete her tasks with as little effort and time as possible.

Scenario

After making her way over to The Daily Catch, Angela makes it just in time for her shift to begin but arrives to a full parking lot and rushes in. The restaurant is in chaos: they are short-staffed, the lobby is filled with impatient guests, and her coworkers are in a frenzy. Eager to help and begin, Angela quickly clocks in and is soon placed on the floor.

A few minutes elapse and Angela must now use the POS system to place an order. After logging in, with just a few taps and swipes, Angela creates her order and sends it directly to the kitchen. Her experience and familiarity with the system allowed her to do something in under a minute that would have taken a newer employee much longer.

After a while, Angela realizes she forgot to place one of her guests' appetizer orders! She nearly panics but composes herself and sprints towards the nearest POS system, where she logs in. The appetizer is a new, seasonal item, and Angela cannot seem to find it in the system. A few frustrating seconds go by, and Angela realizes the new item is likely under the "Promos & Specials" section of the system's menu. She navigates her way towards the section and quickly looks for it. After locating it, it takes just a few taps to be able to add the new item to the order and send it through to the kitchen: crisis averted!

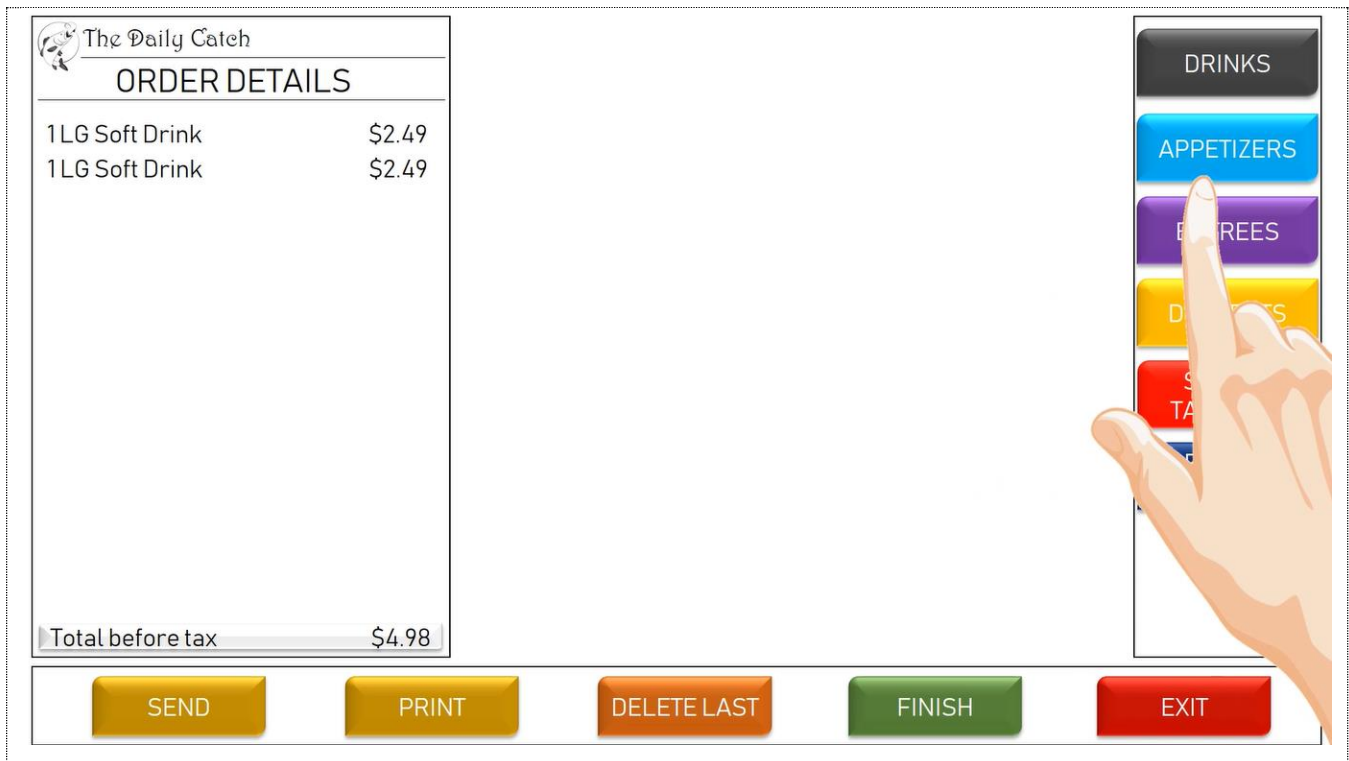## Prototype

Figure 3 - POS terminal log-in screen.

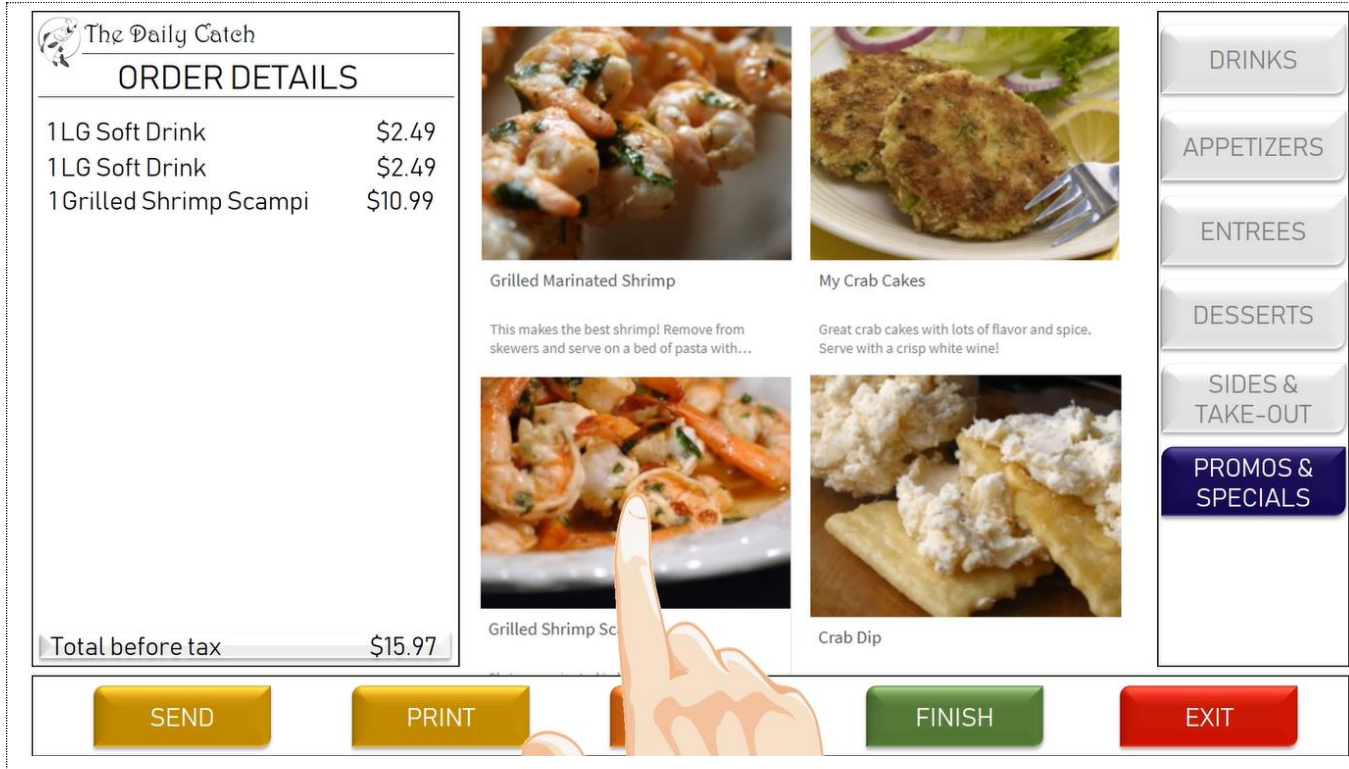*Figure 4 - POS terminal order creation screen.*

Figure 5 - POS terminal order creation screen.

Detailed Design

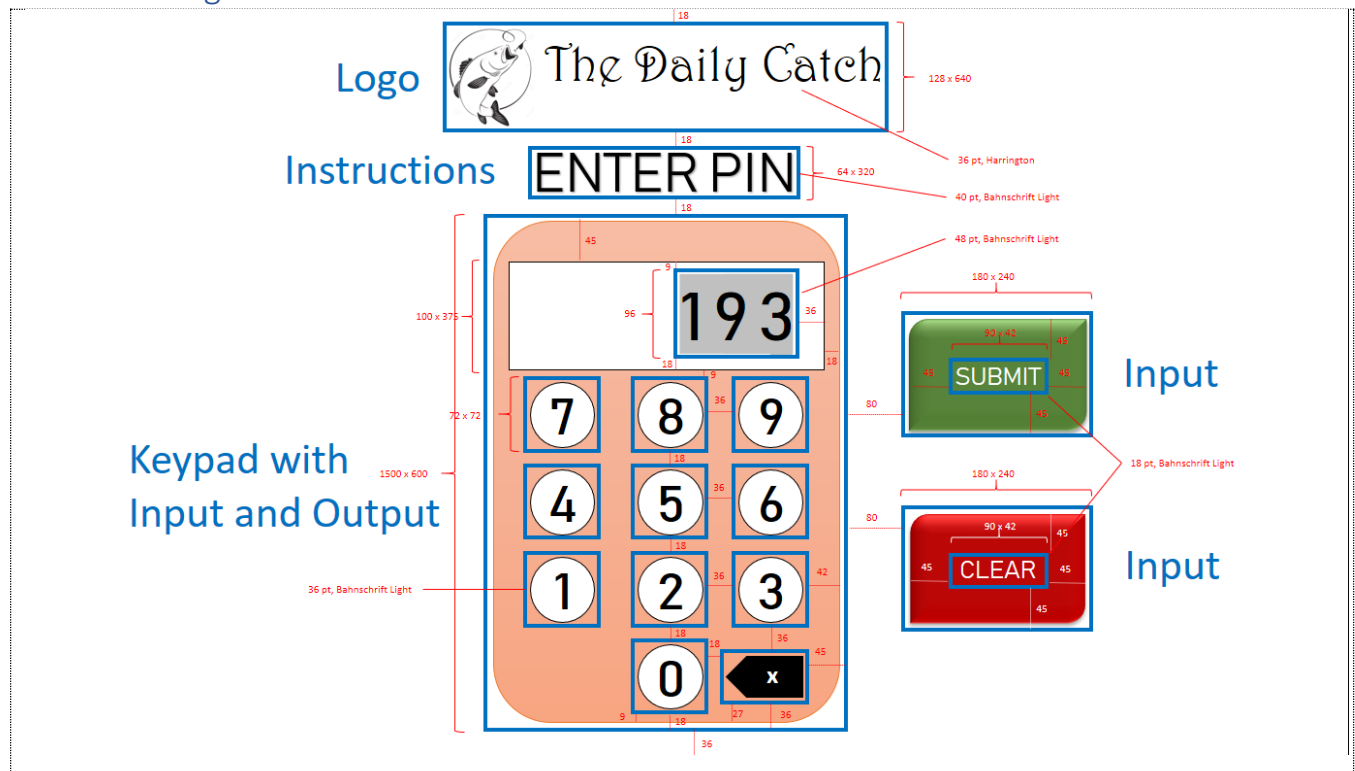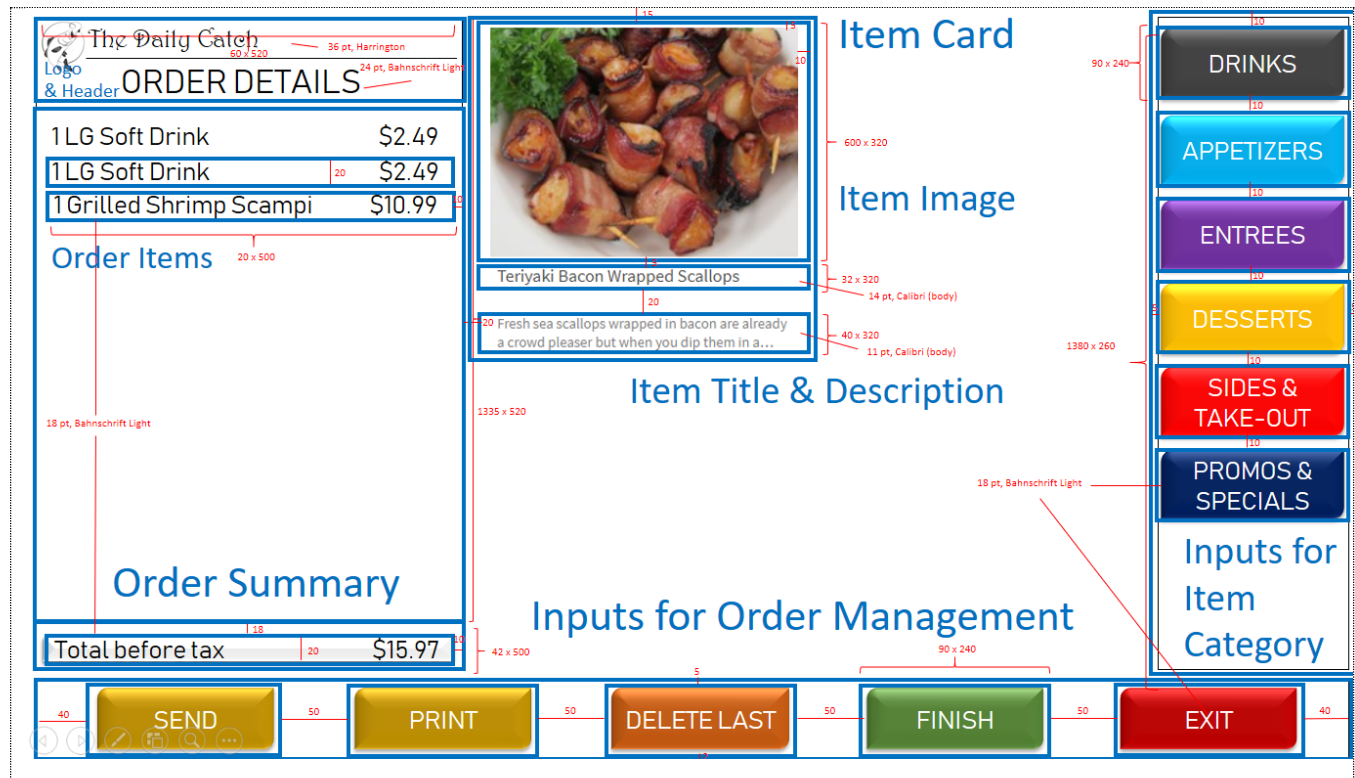## Structure: Log-in and Order-creation Screens

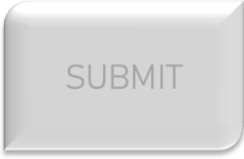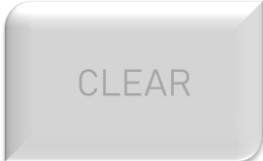*Figure 6 – Structure of POS terminal log-in screen.*

Figure 7 – Structure of POS terminal order-creation screen.

Details: Log-in and Order-creation Screens

Controls and State for Log-in Screen:

Name	Description	Active (pressed)	Inactive
Keypad Input – Number	Number keyed by user		
Keypad Input – Backspace	Deletes last entry		
Submit Input	Submits input		

SUBMIT (green)		SUBMIT (gray)	SUBMIT (green)
Clear Input CLEAR (red)	Clears Input	CLEAR (gray)	CLEAR (red)
Keypad Output 193	Displays input	193	(empty box)

Controls and State for Order-creation Screen:

Name	Description	Active (pressed)	Inactive
Order Input – Item Category APPETIZERS	Category of food for item	APPETIZERS (gray)	APPETIZERS (blue)
Order Input – Order Management SEND	Order creation functionality	SEND (gray)	SEND (gold)
Order Output – Order Summary	Displays items currently on order		

The Daily Catch — ORDER DETAILS 1 LG Soft Drink $2.49 1 LG Soft Drink $2.49 Total before tax $4.98		The Daily Catch — ORDER DETAILS 1 LG Soft Drink $2.49 1 LG Soft Drink $2.49 Total before tax $4.98	The Daily Catch — ORDER DETAILS Total before tax $0.00
Items for Category Coconut Shrimp — These crispy shrimp are rolled in a coconut beer batter before frying. For dipping sauce I use… Chef John's Crab Rangoon — These deep-fried crab and cream cheese wontons contain just as much crab meat as…	Displays items within food Category	 Coconut Shrimp — These crispy shrimp are rolled in a coconut beer batter before frying. For dipping sauce I use… Chef John's Crab Rangoon — These deep-fried crab and cream cheese wontons contain just as much crab meat as…	Blank screen.

Appendix: Change History

Date	Change
2/17/2010	Initial Design, Prototype, and Specification document completed
3/5/2018	Implemented functionality of login page with rough graphics
3/6/2018	Implemented limited functionality of order-creation page with rough graphics
3/7/2018	Implemented working functionality of order-creation page with rough graphics
3/7/2018	Set up Heroku database for application
3/7/2018	Populated database with various menu items
3/9/2018	Changed login "Enter Pin" font family to Poppins
3/9/2018	Changed login pin "Submit" button font family to Calibri
3/9/2018	Changed login pin "Clear" button font family to Calibri
3/9/2018	Changed backspace arrow to now use Google API material icons
3/9/2018	Changed color of keypad from orange to light gray
3/10/2018	Changed rounded edges of Submit and Clear buttons
3/10/2018	Changed pin output font family to Poppins
3/17/2018	Changed rounded edges for all buttons in order creation page
3/17/2018	Changed heading in order summary portion of order creation page to read "Order Summary" instead of "Order Details"
3/17/2018	Changed font family for order summary to Calibri
3/17/2018	Added item description (e.g. "Qty," "Item name," "Price") below order summary header in order summary portion of page
3/19/2018	Gave menu item images rounded edges
3/19/2018	Replaced item description in image cards with item prices
3/20/2018	Made total and price font weights bold in order summary portion of page
3/22/2018	Added more items to database.

Rubric

	Exceptional 100%	Good 90%	Acceptable 70%	Developing 50%	Missing 0%
Fully Implemented 20%	Every control works as the user expects	All the features in the spec are implemented	One feature does not work as the user expects or as the spec describes	One feature described in the spec is missing	More than one feature is missing
No Defects 20%	No bugs can be found	One or more minor bugs exist that the average user would probably not find	One obvious defect	A bug exists that severely impacts a common user scenario	There are many glaring bugs
Application of Standards 20%	There is no room for improvement in the use of color, typography, and layout as well as applicable web, mobile, or desktop standards	The design follows all relevant layout, color, and typography guidelines	One aspect of the design does not adhere to the standards	One obvious or gross violation of a standard seriously degrading the overall quality of the design	No knowledge of applicable standards is demonstrated in the product
Overall Impact 40%	Stunning	The target user is likely to be "pleased" with the design and all their needs will be met	One aspect of the design distracts from the overall visual impact	The quality of the visuals presents usability issues	The design is difficult to look at