



# Gather

Point of Sale System

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Midpoint Proposal  
March 26th 2014 2:30PM  
Midpoint Original

# Table of Contents

## Project Details

Abstract	4
Statement of Interest	5
Unique Positioning Statement	6

## Research

Target Audience	8
Mind Map	12
Comparative Product Analysis	13

## Proof of Concept

Information Architecture	18
User Flow	19
Wireframes	20

## Visual Design

Moodboards	26
Branding & Logo	28

## Project Planning

Technology Specifications	30
Timeline	31
Usability Testing Schedule	32

## Personal Background

Autobiography	34
Resume	35
Portfolio	37

Bibliography	46
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# Project Details

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# Abstract

Gather is a tablet based Point Of Sale (POS) system that can double as an information kiosk designed specifically for specialty grocery stores. As a web based application, it will allow stores to be more flexible and run it on any device from anywhere in the store.

An easy to customize and learn UI functions as a POS but allows cashier's to view relevant information about items enabling them to better field customer questions. This database will be available to all employees in the store on their mobile devices allowing them to help customers more effectively. This database will focus as a mobile kiosk and help answer questions like, "is this gluten free?" or "where is this product grown?" Questions like this get asked all over the store but most often at the check stand. Giving the cashier the tools to learn more about the products and educate themselves and the customer right then and there. This cuts down on line times while waiting to hear from another department in the store.

The target audience for an application like this would be cashiers and other team members of specialty grocery stores where food items are constantly being updated and come from different sources throughout the year. Stores and corporations who take pride in educating their team members and their customers about new food trends.

This project will serve me well in my professional career by giving me the design and user experience skills to pursue my goal of developing touch UI based applications. I am motivated by the frustration of having worked as a cashier at a specialty grocery store and not having the information that I needed to help customers on the spot. You are physically stuck as a cashier, having to rely on calling other departments to get specialty questions answered. Working in a store where we had new specialty products in almost every couple of days, it was hard to keep up with what was in the store and the new trends in food.

# Statement of Interest

My interest in pursuing this topic stems from my personal experience as a cashier and supervisor at specialty markets Bristol Farms and Whole Foods. There are plenty of horribly designed POS systems run on old systems that I had to use for years and even the slightly more advanced touch interfaced systems were only marginally better. The UI was never pretty to look at, easy to use or organized logically based on how we actually used the systems every day.

Cashiering is about being efficient and providing great customer service at the same time. I always felt helpless not having the information that I needed to assist customers on the spot. You are physically stuck behind the register, having to rely on calling other departments to get specialty questions answered.

Questions like: how to use Orange Flower Water? Is this gluten free? What is a Star Fruit? We had new specialty products and food in almost every couple of days, it was hard to keep up with what was in the store and the new trends in food. Stores do their best to educate their employees on new trends/products but we learn faster by doing and having that information at our fingertips is essential.

This project will serve me well in my professional career by giving me the design and user experience skills to pursue my goal of developing touch UI based applications. It will also teach me how to organize and complete a large project from start to finish. Designing a practical use application like this will help me learn how businesses choose and implement new technology. Allowing me to understand the unique needs of a particular business and create better applications for them.



An Extraordinary Food Store.



# Unique Positioning Statement



Gather is a unique web application for management and employees of specialty grocery stores who want a point of sale system that can double as an information kiosk for employees, with no platform restrictions, and is easy to use and customize. Gather is a valuable tool for grocery stores who have complicated and ever changing inventory of products. Gather allows employees to better educate themselves and their customers on new foods, products and trends.

# Research

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# Target Audience

The target audience for an application like Gather would be cashiers and other team members of specialty grocery stores where food items are constantly being updated and come from different sources throughout the year. Stores and Corporations who take pride in keeping their team members educated and want to pass information about new food trends on to their customers. Due to the large number of types of users, ages could would range from 18-65, involve males and females, full time employees and part-time. The personas that follow are real people whom I have met over the years; I have changed their names for privacy reasons.



# User Persona #1

Name: Heather

Age: 32

Job: Full time Supervisor for Prepared Foods at Whole Foods Market.

Cashier Experience: Cashiers when running the bar service area. Has been cashiering for over 4 years at this location.

Interests: Music, going to shows, dancing, craft beer and hanging out with friends.

Technical Skills: Heather is fairly technically savvy, she has some graphic design skills and loves finding and using the latest apps on her iPhone.

Backstory: Heather has been working at Whole Foods for 6 years now, she began working there as a part time job while going back to school. Now that she is finished with school, she has gone to full time employment. She has worked her way up, starting as a Team Member, then Team Educator now and Supervisor. She loves the fast paced and social atmosphere of working at the store.

Frustrations/Motivation: Heather does not use the register during her whole shift like a front end cashier would. She uses it intermittently to ring up customers who want to purchase a beer from the bar or food from the Prepared Foods area. Because she is not a full time front end cashier,

when customers bring up produce items or bulk items that need to be weighed, she always has to look up the code for the product. Looking up a code takes her a long time in the current system and a lot of the time she can not find a code for the exact product because it has not been updated in the system. This is frustrating and she often turns customers with lots of produce items to a full register. She dislikes doing that, saying that it is not good customer service and wants an easier way to help them.

Ideal Experience: An ideal cashiering experience for Heather would be a system that is nice to look at, logically organized, user friendly and allows her to look up items without having to call a cashier or the department where the item comes from. She wants to speed up the process of checking out a customer so she can return to serving customers at the bar. She wants a touch screen system that is more responsive than the current one used.



# User Persona #2

Name: Nick

Age: 43

Job: Part time Crew Member at Trader Joe's. Full time Art Teacher.

Cashier Experience: Cashiers in the main lanes when needed, has been working at Trader Joe's for over 20 years.

Interests: Surfing, comic books, drawing, hanging out with close friends and of course, cats.

Technical Skills: Nick is not naturally tech savvy and needs to use a system/device a few times in order to become comfortable with it. He has taught himself over the years and now knows his way around his Android Phone, MacBook and recently began teaching Digital Arts.

Backstory: Nick began working at Trader Joe's over 20 years ago and has worked at various stores in his area. Even after he graduated and began teaching art full time, he kept working at Trader Joe's part-time. He still works on the weekends and sometime weeknights. Trader Joe's does not have separate departments like a traditional grocery store, so Nick gets scheduled in different areas every time he works. Usually cashiering for a couple hours once every couple of weeks.

Frustrations/Motivation: Nick is frustrated because he is not always on the registers and he often has to re-learn where things are on the system. He does not think it is not organized in a logical way and can never seem to find what he is looking for. Because Nick works in the rest of the store he usually knows the price, location, and information of regular items for the customer. But, he often has to look up new items since he doesn't work often enough to learn what has changed in the store.

Ideal Experience: He wants an easy to use system with everything clearly labeled. His biggest pet-peeve about the registers is the lack of organization and the learning curve of the system.



# User Persona #3

Name: Carol

Age: 56

Job: Full time Front End Cashier and Shift Lead at Bristol Farms

Disabilities: Carpal Tunnel Syndrome

Cashier Experience: Carol has been cashiering for various stores since she began working, after high school.

Interests: Flowers, being creative, hosting parties and her family.

Technical Skills: Carol does not consider herself technically savvy, she uses Facebook and her phone.

Backstory: Carol has been working at Bristol Farms for 8 years and stayed during the re-branding to Lazy Acres. She began in the Floral Department as a designer. She would cashier rarely when customers just came in for floral arrangements, usually passing the job to the Front End cashiers.

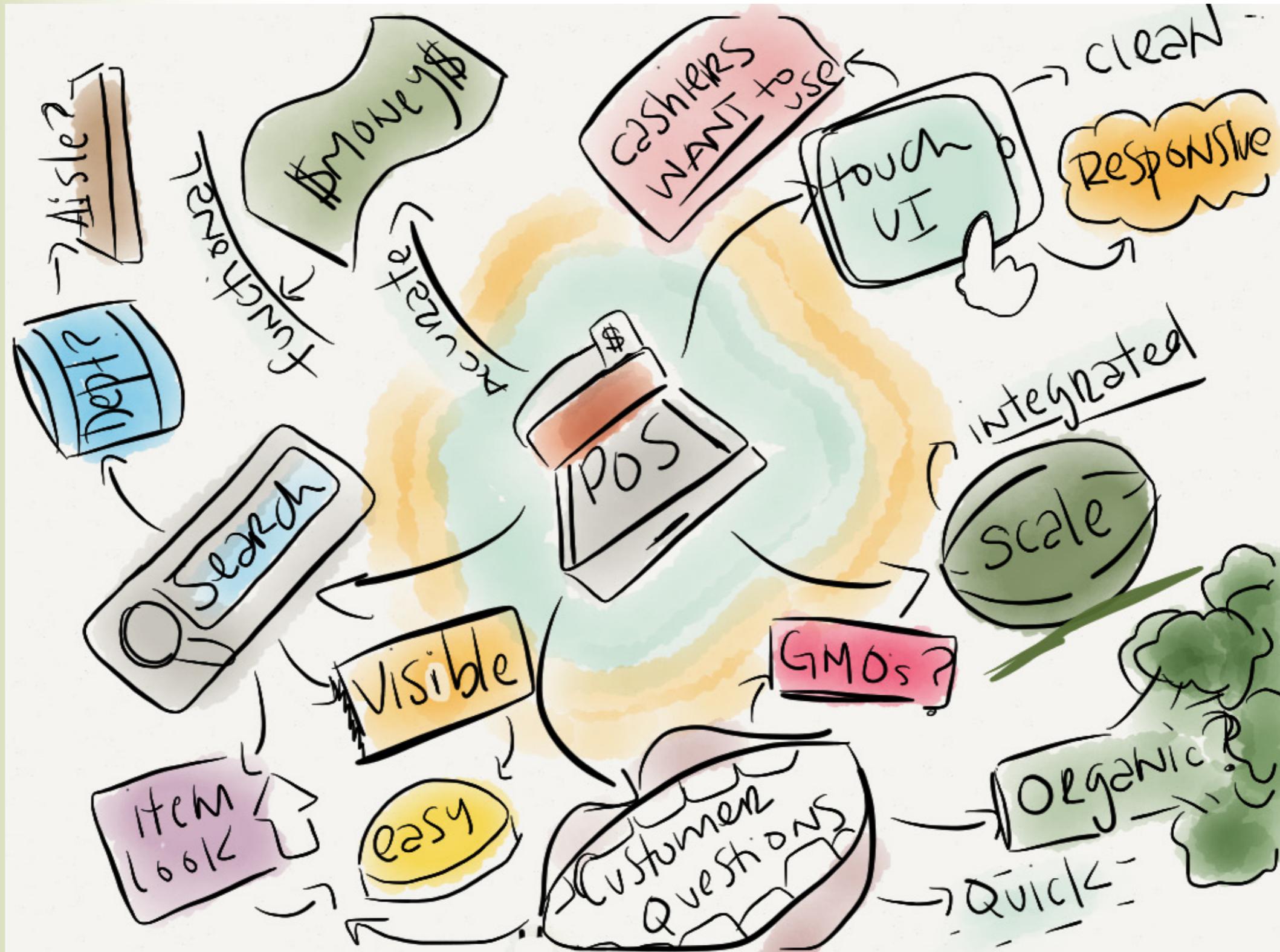
Carol wanted to move up in the company but did not want to manage the Floral Department because she would have to switch stores. She instead moved to the Front End to cashier full time and is now a Shift Lead.

Frustrations/Motivation: Carol is comfortable with the system that is

currently used on registers but is frustrated by how outdated it is. Even after the remodel the old systems were re-installed and have yet to be upgraded. Carol thinks the system is sluggish and says that it often crashes/freezes causing her to re-boot the PC, lose all of the items rung up for the customer, and having to re-ring everything. She is also frustrated with using a physical keyboard because she suffers from Carpal Tunnel Syndrome and using the keyboard for hours everyday can become painful. Ideal Experience: She wants a system that is up to date, reliable and maybe has a touch screen so that she does not have to use a keyboard.



# Mind Map



# Comparative Product Analysis Matrix

Comparing Point of Sale Systems:

	Inventory Management	Process with No Internet Connection	Double as Kiosk	Search by Category	User Friendly	Cross Platform	Integrates Grocery Hardware
Revel Grocery POS	X	X	X	X			X
Square Register		X			X	X	
ZingCheckout	X			X	X	X	

# ZingCheckout

## Overview

Zing Checkout is a cloud based, cross-platform point of sale system for physical shops and stores. They offer one of the only cross-platform cloud solutions that I could find. Zing maintains the database in the cloud so that no matter which device you are using you can access up to date information about your store. Their design is responsive, clean, and easy to use with lots of options to customize. ZingCheckout offers lots of integration with popular POS payment and ecommerce services.

## Pros

- » web based system
- » web app is cross-platform HTML5
- » theme-able customizable interface
- » integrates with other services
- » user friendly interface
- » can search by category

## Cons

- » no integration with scales
- » navigation is clunky
- » native app is only for iPad & Android Tablets
- » not able to complete purchases w/o internet connection

## User Interface & Usability

ZingCheckout has a clean interface that can be customized to your business. From my testing and research it seems that the customizations are limited to changing icons and colors but not the wood panel background of the application. There are lots of features hidden in drop-down menus that can be a bit cumbersome on small screen devices. Overall fairly easy to use and seems to function well in the limited testing environment I had.



# Square Register App

## Overview

Square is a mobile credit card dongle and payment system that has become very popular in the last few years. Recently, they have redesigned their Register app to include custom items, photos and descriptions. They also began selling a device that serves as a countertop mount for your iPad running the Square Register software. This allows you to connect to a cash drawer, scanner and printer. Because the app and initial Square account is free, I was able to set up a test account. I still need to test the limits of the items/products and organization. Just this year, Whole Foods added a few Square Register systems to test out in stores but only in areas that do not need a full register and scale like the Bar, Prepared Foods and Specialty departments.

## Pros

- » very clean easy to read design
- » easily integrates with common cash register hardware
- » free iPad app with a square account, cross platform app
- » can be tailored to meet just about any business

## Cons

- » integrates with all hardware but no mention of a produce scale
- » items can not be sorted by category

- » item look up/search is only by item name
- » the sale interface does not scale well for large orders
- » no way to manually enter in a scaled weight
- » not all features are cross-platform

## User Interface & Usability

Fun user interface that is easy to learn, use and relatively simple to set up. Design is clean, features are clearly labeled and easy to find. Functionality is limited, does not provide item categories, and seems to be tailored for businesses selling a few items at a time. Does not scale well for large orders containing lots of items, items get lost in the small side menu. Only credit card signature option is signing the screen, may not be ideal in high traffic stores.



# Revel POS

## Overview

Revel POS system designed for Grocery Service is my top competitor. They currently offer the only grocery specific iPad POS system that can integrate with a cash drawer, scanner and scale. There are other touch UI options but none for the iPad specifically at this time. So far my only experience with this system is through the manual and short tutorial video. I am currently in contact with the company to see if they will grant me some test software.

## Pros

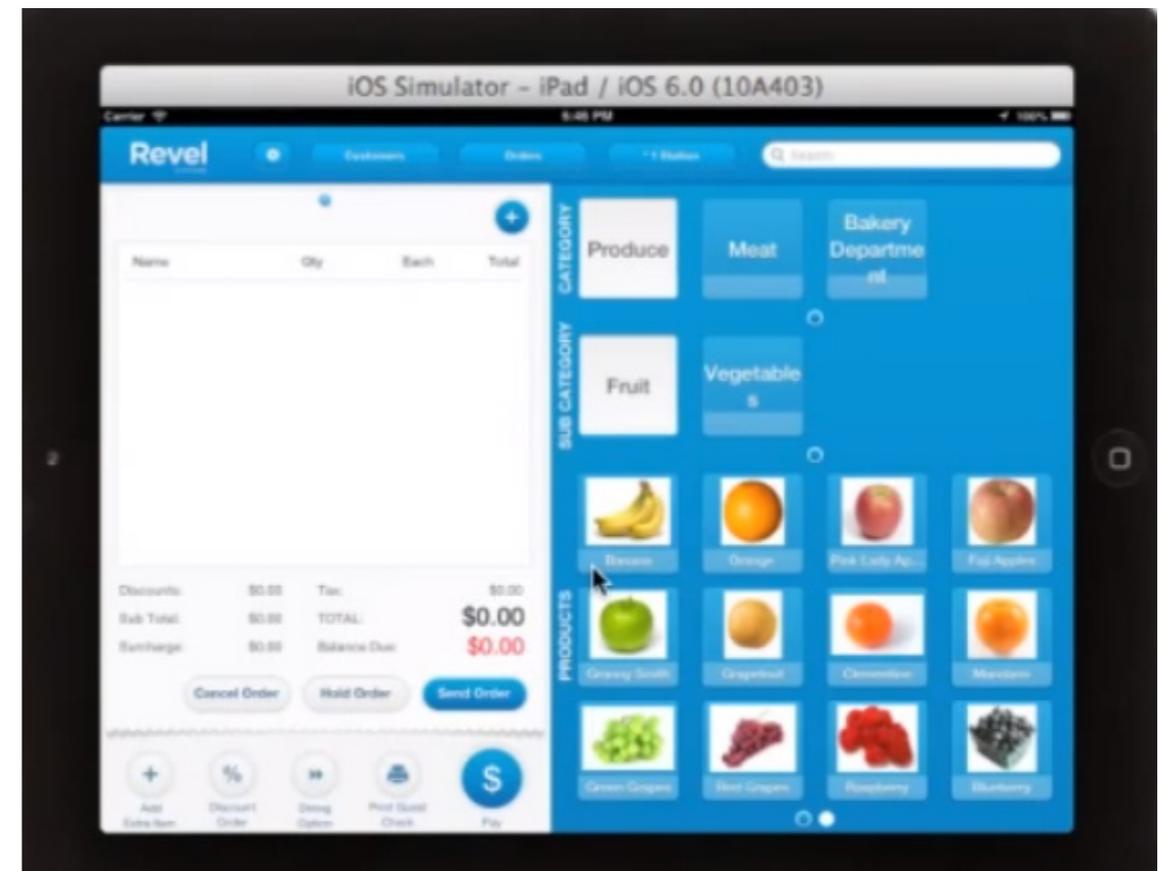
- » streamlined design
- » easily integrates with common cash register hardware
- » allows you to add as many photos of an item as you want
- » can search for items by name or category
- » all in one system (Management/Inventory)

## Cons

- » white on blue can make text hard to read
- » only works with an iPad, no Android or other touch device support
- » does not provide space for additional product information
- » only two categories per item allowed

## User Interface & Usability

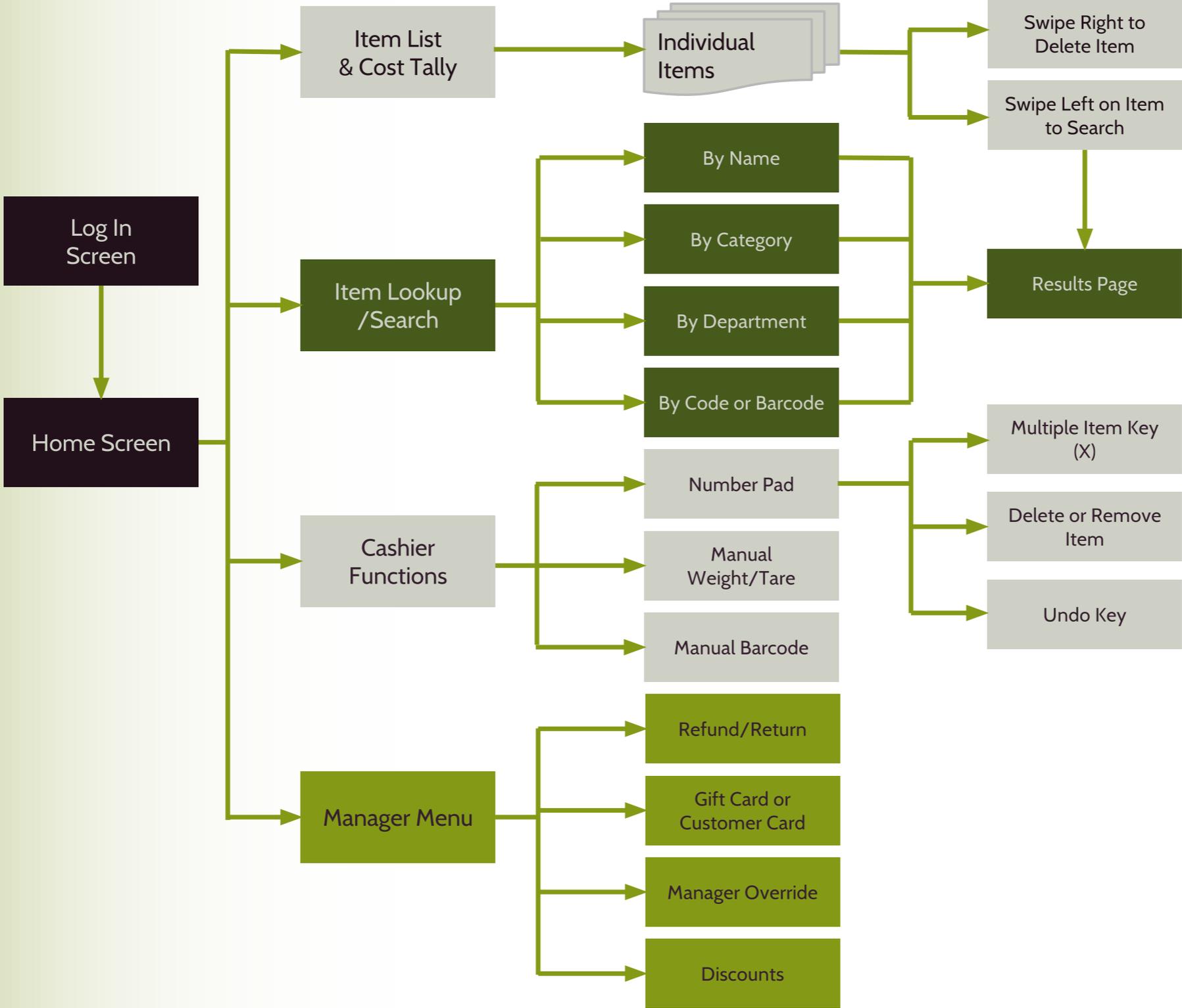
Interface takes advantage of the iPad's touch capabilities with sliding menus and large touch friendly buttons and input options. Design is a bit bland with an overwhelming amount of blue that does not offer enough contrast in some situations. Some menu items are hidden and are not obvious. For example: the row of icons below the item list can scroll to reveal more options.



# Proof of Concept

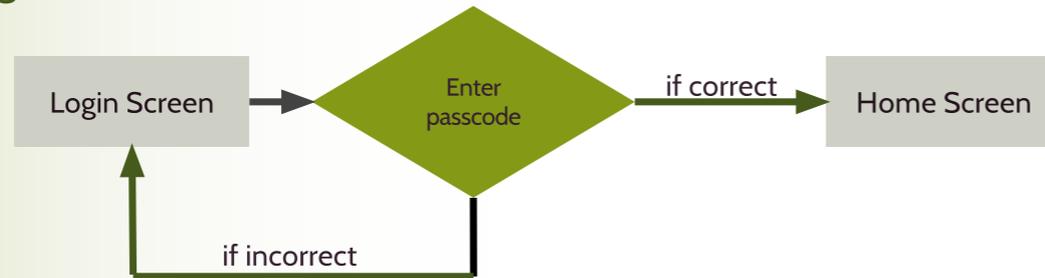
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# Information Architecture

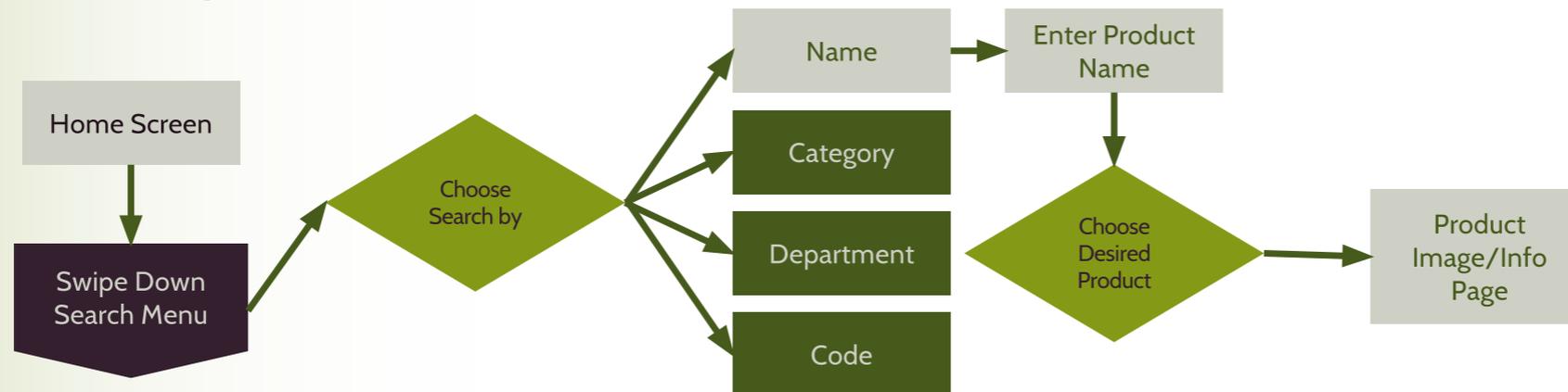


# User Flows

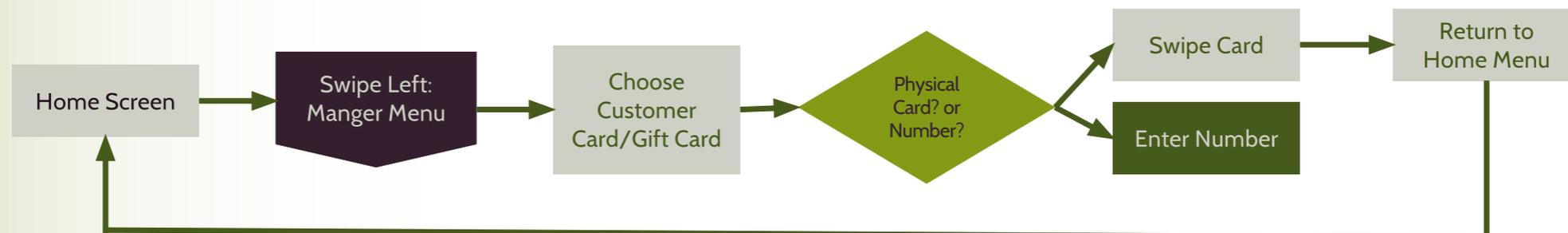
## #1 Log in Flow



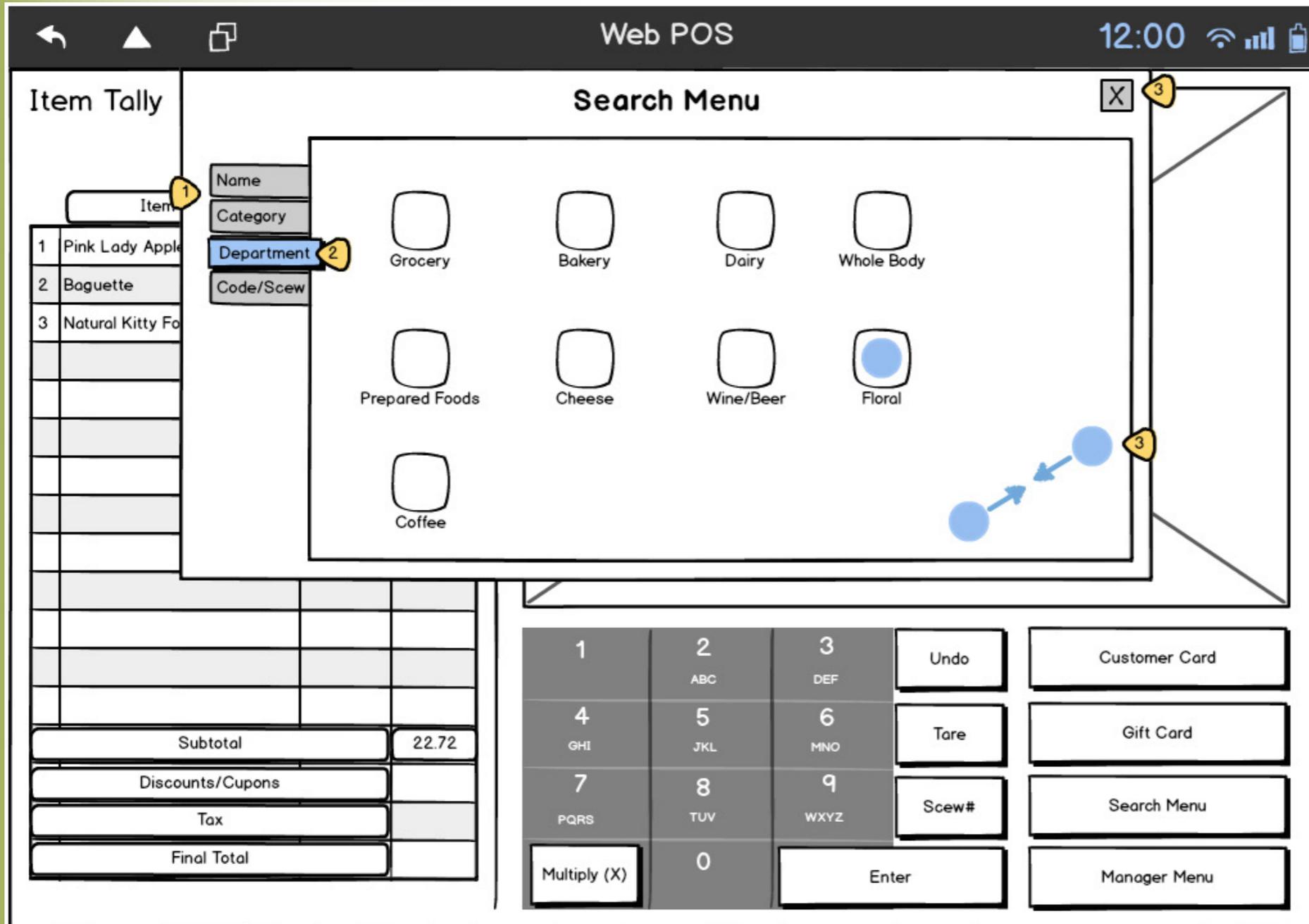
## #2 Item Look Up



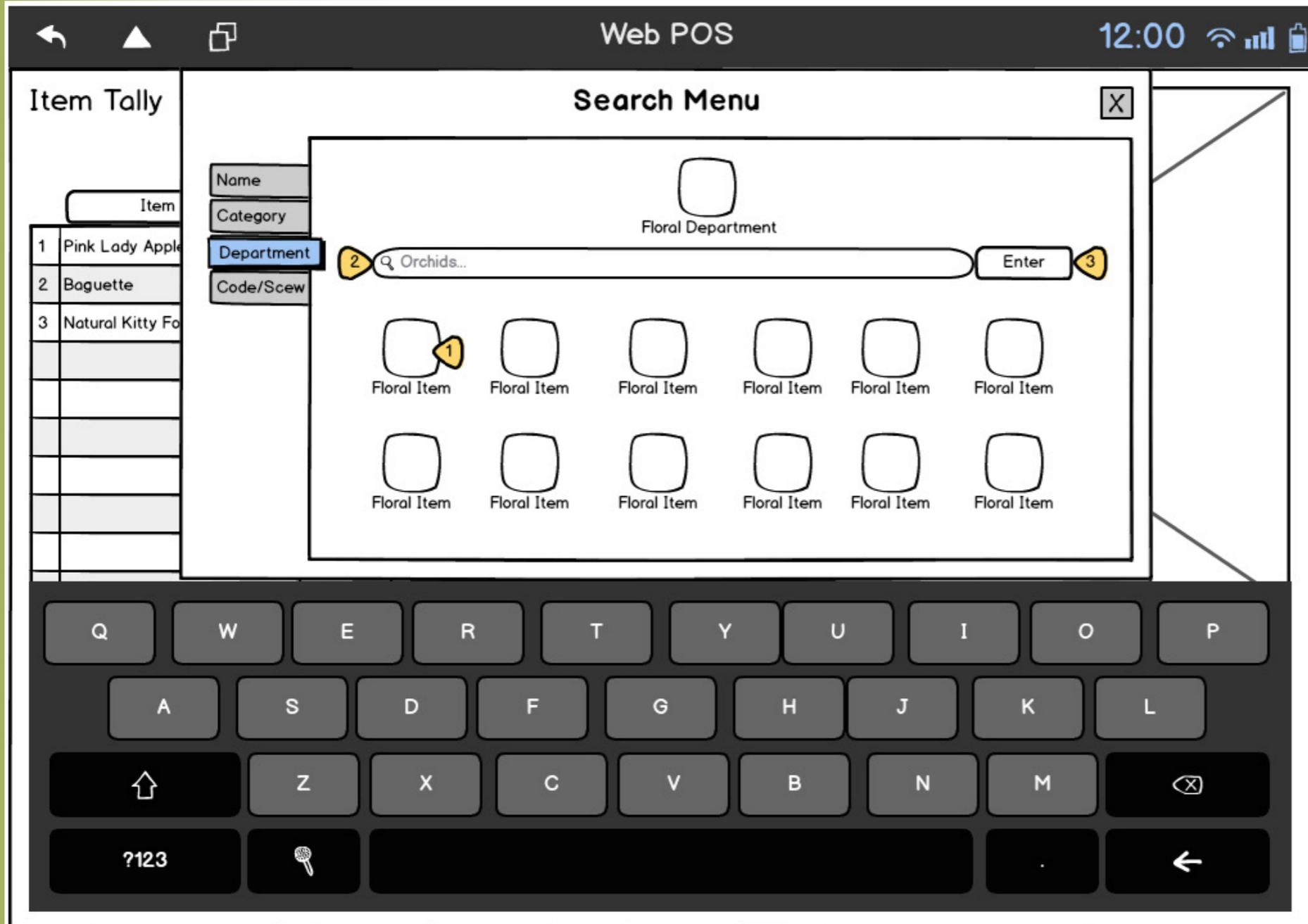
## #3 Using Manager Menu Scan Customer Card







- #1 Toggle between the Categories available for searching. In this case the User has chosen Department.
- #2 Choose the Department to Search. User chooses Floral Department.
- #3 Users can exit the Search Menu at any time by using the gesture "pinch close" anywhere on the screen. Or if using from a PC, clicking the close "X" in the upper right hand corner.



- #1 User can choose new/seasonal items in this department from the images/titles in the grid.
- #2 User can search just this department for an item. Type in the item being searched for. Recent searches will autocomplete.
- Clicking on the Search Bar brings up Full Touch Keyboard (No keyboard will appear if using an external Bluetooth Keyboard or app is running on PC).
- #3 When desired item is found hit Enter.





# Visual Design

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# Visual Style Mood Board



# Utility Mood Board

**Gather**  
Point of Sale System

**Search Optimized Point of Sale Solution**  
Cross Platform, Cloud Based, Focused on Search, Point of Sale system for Specialty Grocery Stores.

# Branding & Logo



# Project Planning

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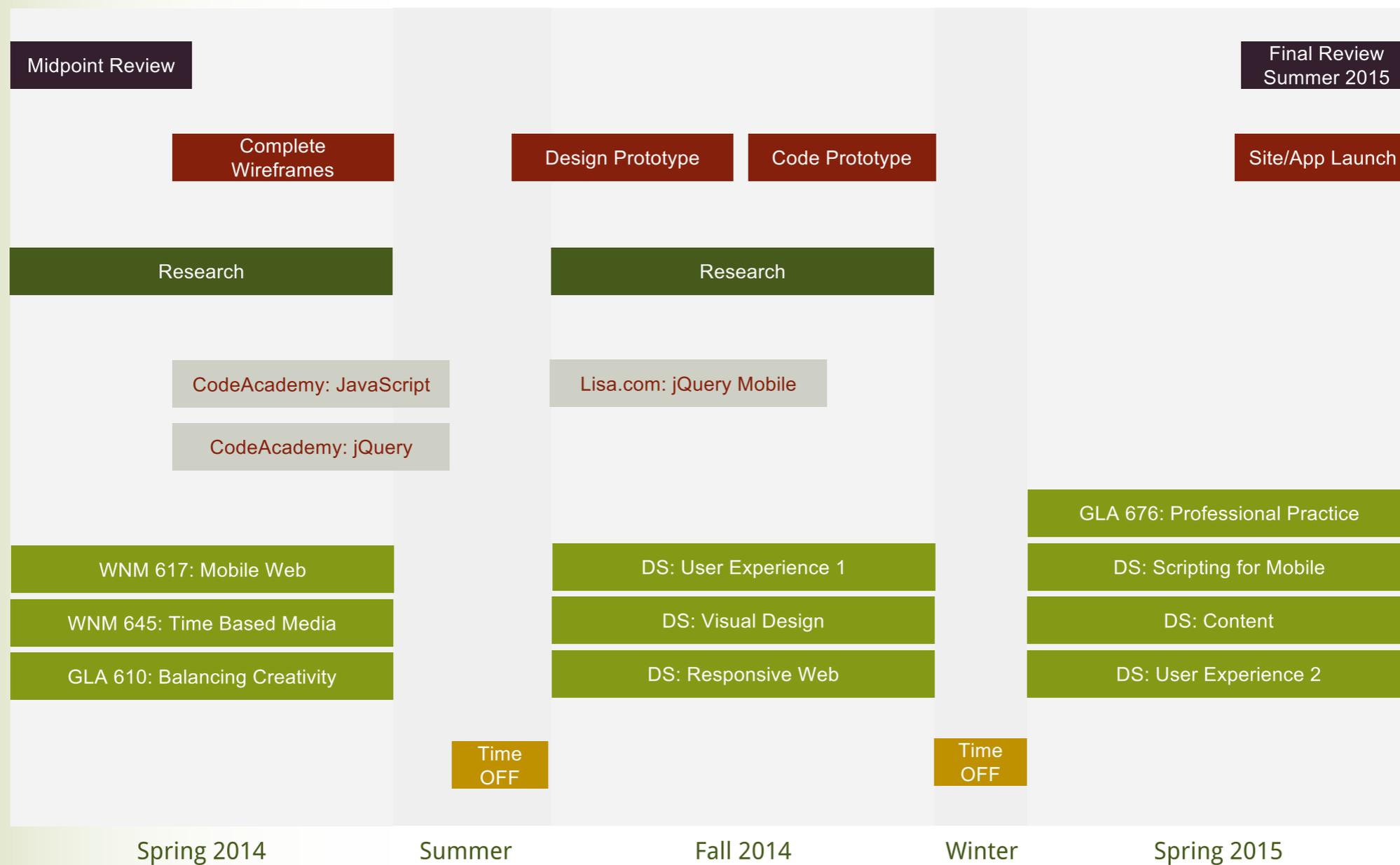
# Technology Specifications

To build the Gather Point of Sale System I will be using HTML5, CSS, JavaScript, jQuery, and web based databases. I have been taking courses on JavaScript and jQuery through Codecademy and currently covering these topics in WNM 617: Mobile Web. I have an overview of the basic functions but I want to finish the courses through Codecademy and on Linda.com to become confident and proficient. Databases using MySQL, PHP and Web Storage are newer to me. I have some experience with them but I need to learn more about how they function, advantages and disadvantages of each and which would be most effective for this application.



# Timeline

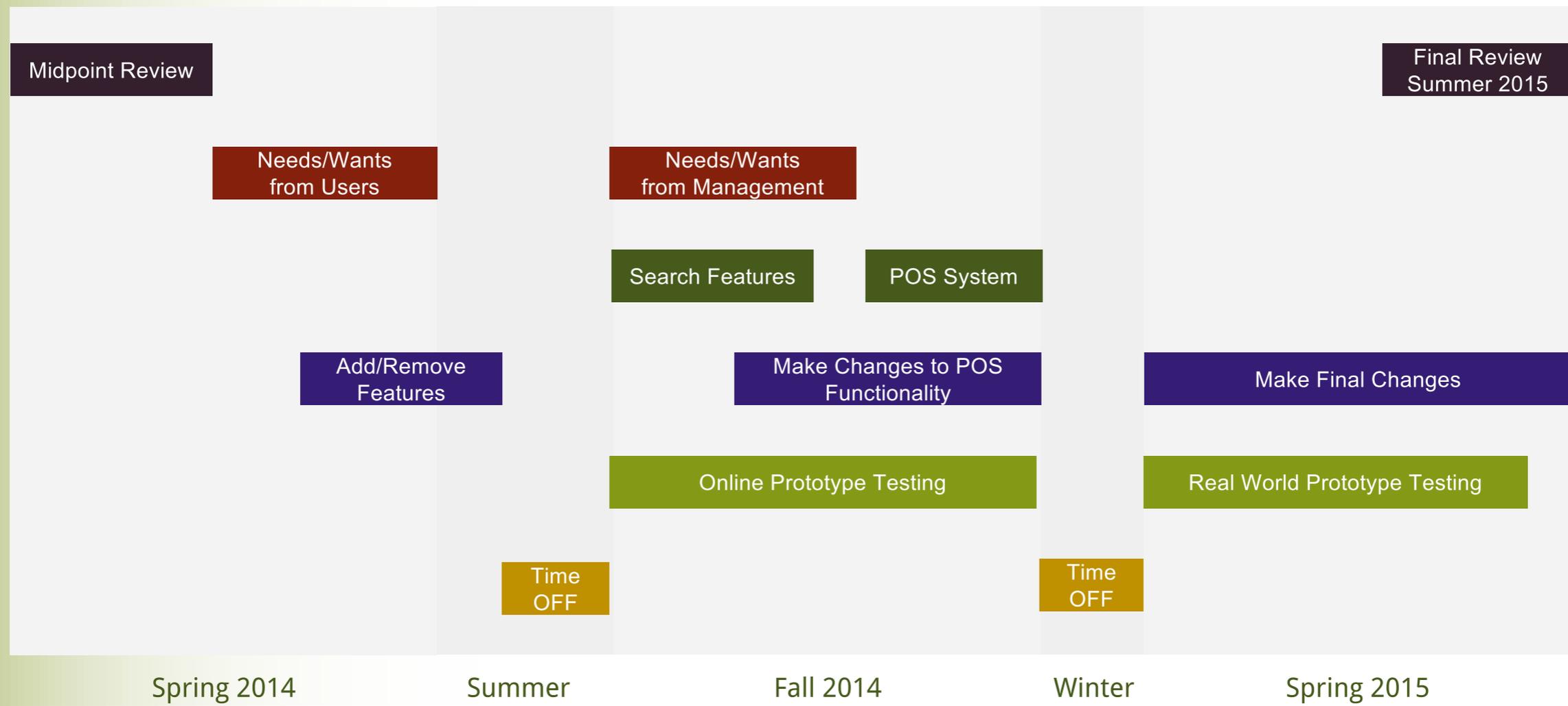
## Thesis Project Timeline



- ➡ Presentations
- ➡ Research
- ➡ Outside Learning
- ➡ Planned Time Off
- ➡ Project Milestones
- ➡ Testing/UX
- ➡ Directed Study/AAU Courses

# Usability & Testing Schedule

## Usability & Testing Schedule



- Presentations
- Interview Users
- Card Sorting
- Evaluate Results
- Prototype Testing with Users
- Planned Time Off (Intermittent)

# Personal Background

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# Autobiography

A culmination of family history, habits and experiences I have always been creative and focused, interested in gadgets, technology, science, building things, and art. Web Design and Development ended up being a perfect choice for my set of skills, even though I was pushed into find that out.

My undergraduate career began at California State University, Long Beach right out of high school. I decided on Art even though I considered Biology. I love science and computers but was discouraged by high school AP tests that maybe it wasn't a great career option for me. My mother pushed me that being an artist was too broad and that I should focus on one area to make a career in. At the time, there was a shortage in teachers and I thought teaching art would be a great idea. My high school art teacher, Sandy Lucas, was amazing. We learned about art, life and culture in her class. She always looked like she was having a great time doing it to. You could hear her laugh from down the hall. She was my inspiration as a teacher and how to run a creative, fun yet structured classroom. She loved going to work every day and I wanted to have that more than anything.

As an Art teacher, I was always the one designing the school shirts/posters and helping people out with technology in their classrooms. I considered pursuing this technology and design hobby as a possible Masters Major. I took some community college courses on graphic design

and web design to test the waters. I absolutely loved it and felt at home working on the computer. I built up a portfolio, was admitted into the AAU Graduate program, quit teaching and pursued my MFA full time. It was a tough and scary decision to leave teaching behind but my job was not stable and I had a lot of support from my fiancé, family and friends. Now, into my second full year, I realize it was the right decision to make. I love the courses, the major, coding and I am getting more freelance work than I can handle allowing me to land my first job in web design this summer.

I am finally comfortable calling myself a "Web Designer" and I am working on adding "Developer" to that title too. As I spend more time on this new career path I am learning that many of my teaching skills are applicable to Web Design and Development. My organization, time management, presentation, and communication skills are proving to be very useful when working with clients and helping me set myself apart from other designers.

# Resume

## Andriana Garcia

254 Loma Avenue, Apt A, Long Beach, CA 90803 562-243-5266

andriana@andrianaart.com

Portfolio: andrianaart.com

## Skills

Creative problem solver with great Time Management who takes pride and ownership of her work. Loves to be challenged. Self started who works well independently and with a team. Takes direction well and is not afraid to speak up and lead a team. Able to present and communicate ideas clearly and effectively to clients and team members.

## Design Experience

Website design, wire frames, UX, CSS, HTML, Wordpress/CMS and Graphic Design experience. Mac & PC literate. Familiar with managing Servers, AdWords, Marketing, and SEO. Proficient with the Adobe Suite, Microsoft Office, iOS and Android. UX and Information Architecture. Mockups, Drawing and Storyboarding.

## Education

Academy of Art University, 950 Van Ness Avenue, San Francisco, CA 94109

-Masters of Fine Art, Web Design and New Media. Full time, online student. Projected Graduation Date: Spring 2015

Golden West College, 15744 Goldenwest Street, Huntington Beach, CA 92647

-DART G178 Intro to Web Design and DART G174 Intro to Page Layout/Design.

California State University, 1250 Bellflower Boulevard, Long Beach, CA 90840 -Bachelor of Arts, Art Education. Single Subject Credential, Art.

## Work Experience

The Computer Friend & Genius Web Marketing. Newport Beach, CA 92660. 888-349-7266

-Web Designer. Design, Create, Manage and Update sites for clients. Update and improve SEO and Usability.

Whole Foods Market, 6550 E. PCH, Long Beach, CA 92647. 562-598-8687.

-Prepared Foods Department: Customer Service, Sandwiches, Salad Bar, Pizza and Wine/Beer Bar. Huntington Beach Union High School District, 5832 Bolsa Avenue, Huntington Beach, CA 92649.

714-903-7000 -Drawing & Painting all levels, IB Visual Arts.

Long Beach Unified School District, 1515 Hughes Way, Long Beach, CA 90810. 562-997-8000

- 3D Art, Drawing and Painting, Instructional Supply Budget, T-shirt/logo design for PEACE Academy.

Young Artist Camp, CSULB 1250 Bellflower Boulevard, Long Beach, CA 90840. 562-985-4387

-Project Coordinator, Flyer Design, Created and manage website.

Bristol Farms, 2080 Bellflower Boulevard, Long Beach, CA 90815. 562-430-4134 -Closing Shift Supervisor, Cashier, Floral Clerk/designer, Coffee Clerk.

Art Education Department, CSULB. 1250 Bellflower Boulevard, Long Beach, CA 90840. 562-985-4385 -Student Aide, Dr. Elizabeth Hartung. Technology lab technician (Mac lab).

# Portfolio

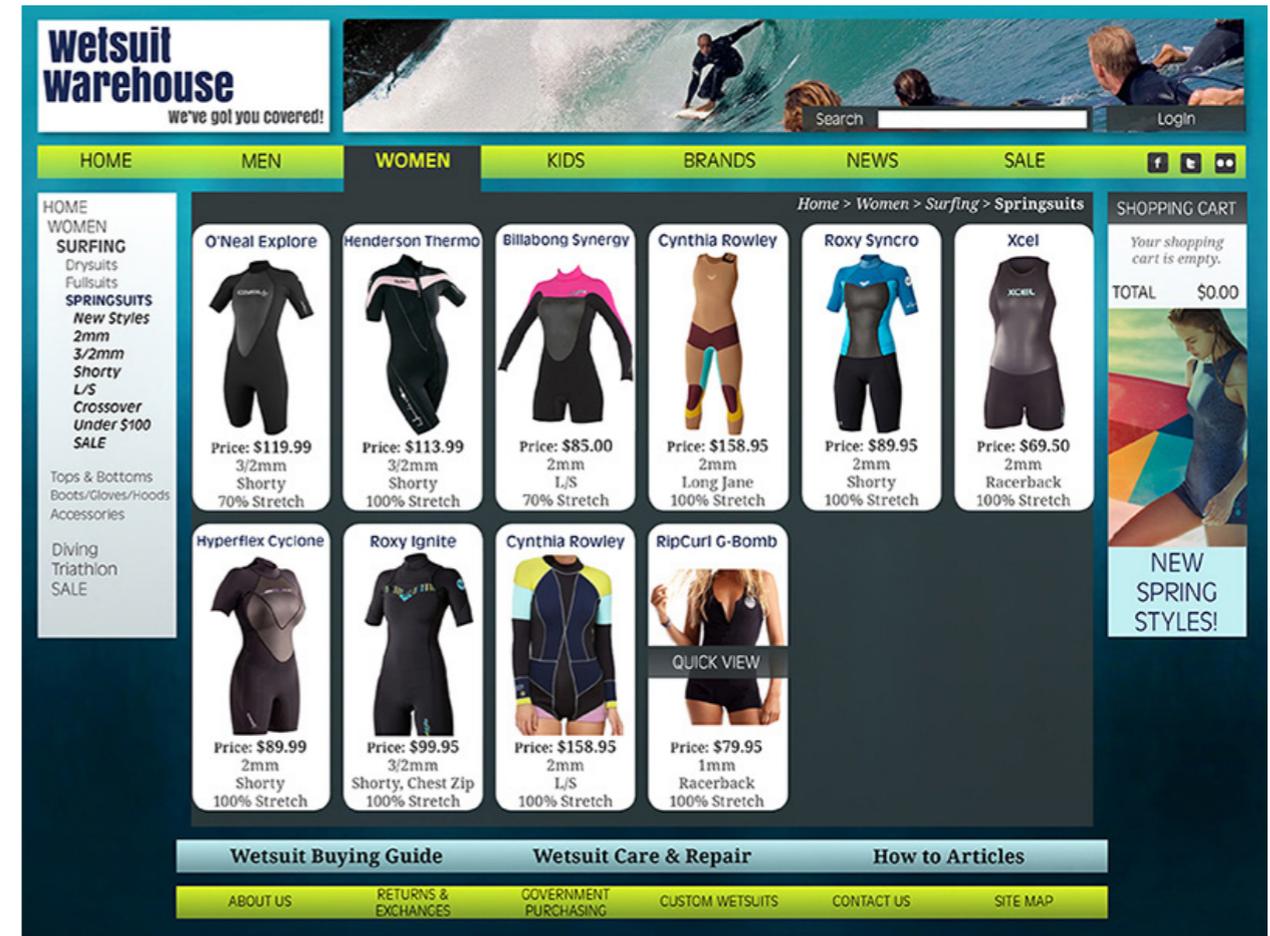
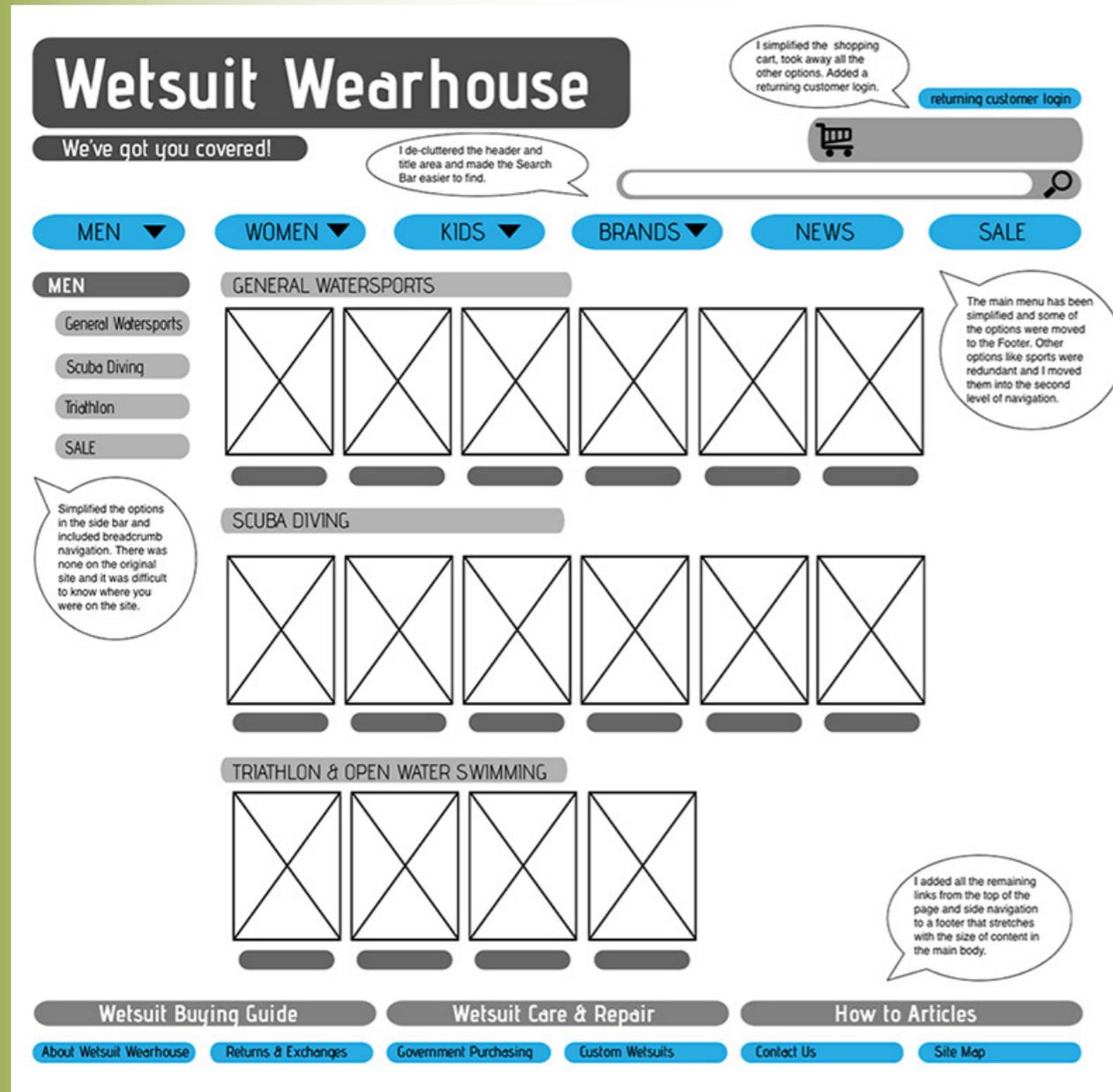
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# Re-design & Mockup: Wetsuit Warehouse

Medium: Photoshop & Illustrator

Date: Fall 2012

Concept: Take an existing website with design and usability problems and redesign it.



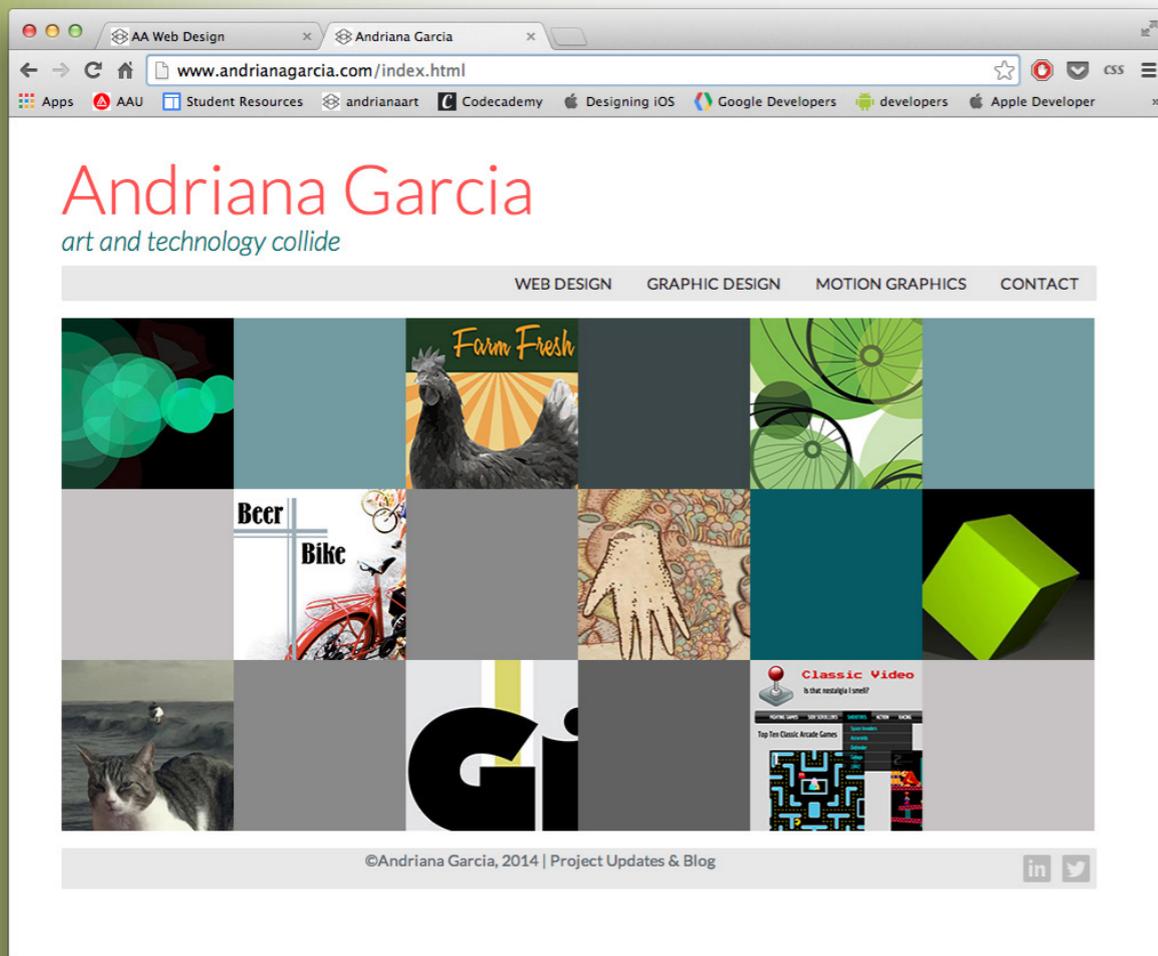
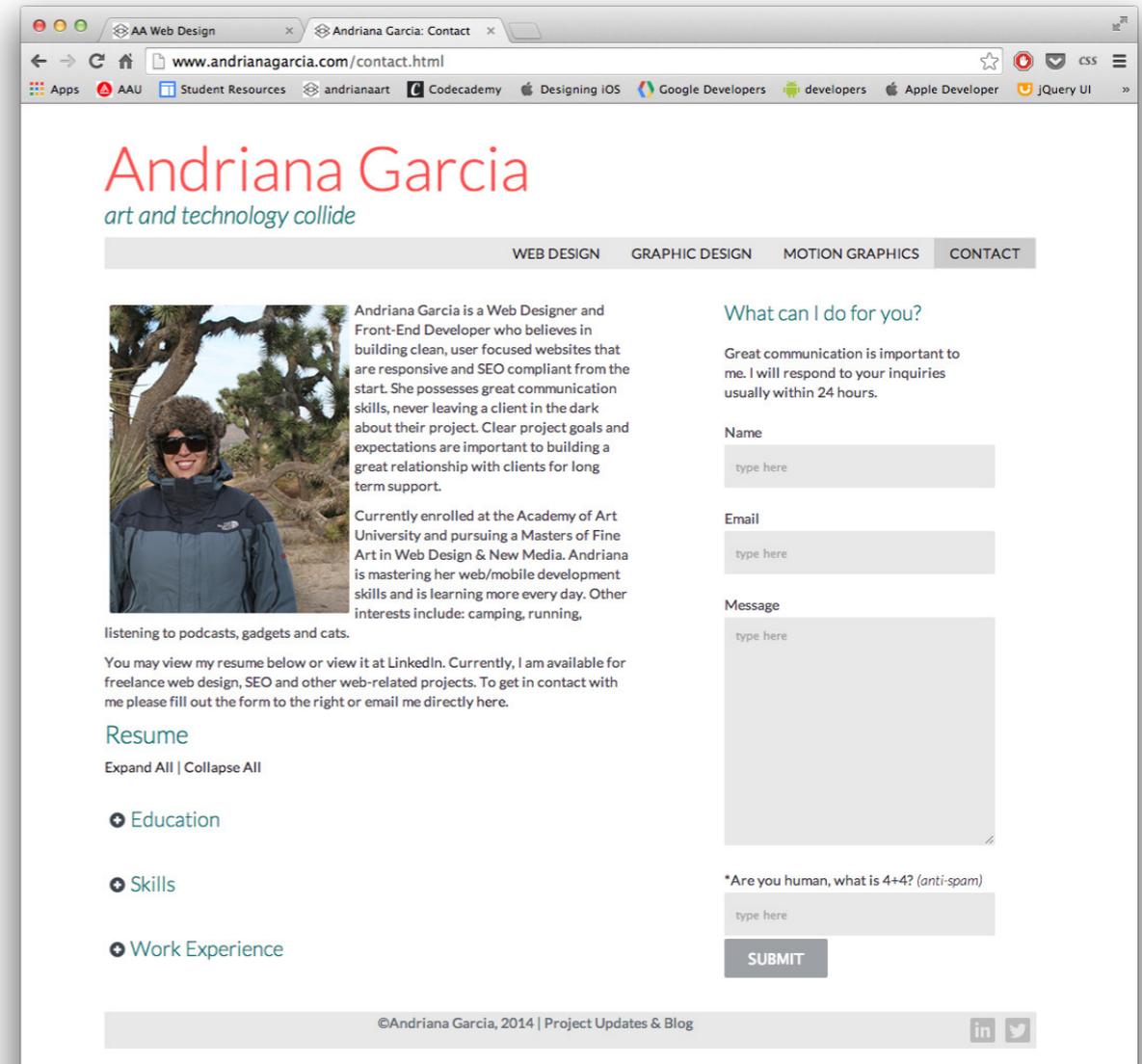
# Portfolio Site: AndrianaGarcia.com

Medium: Web, HTML/CSS/PHP

Date: Spring 2013

Concept: Create a portfolio site to showcase our work and build our coding skills.

Visit the Site: <http://andrianagarcia.com/>



# Action Script: Bad Drivers

Medium: Flash, Action Script 3.0

Date: Spring 2014

Concept: Develop a project from a list of dislikes that allows you to develop your Action Script development skills.

View the Project: <http://goo.gl/DX0fMq>



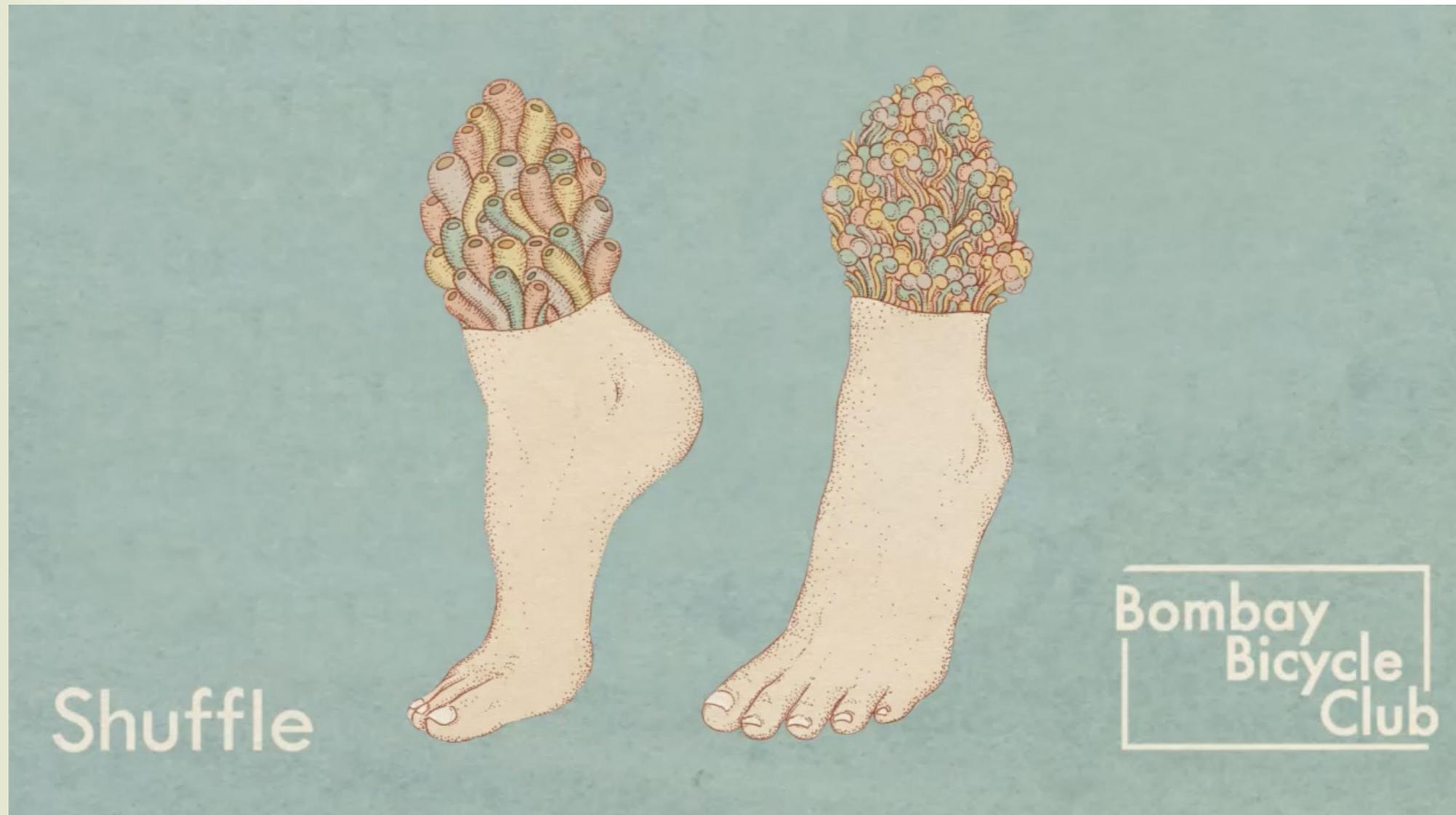
# Motion Graphics: Shuffle

**Medium:** After Effects, Photoshop

**Date:** Spring 2013

**Concept:** Create an original motion graphics piece. This is based on the album art and song from the band Bombay Bicycle Club.

**View the Video:** <http://vimeo.com/62923122>



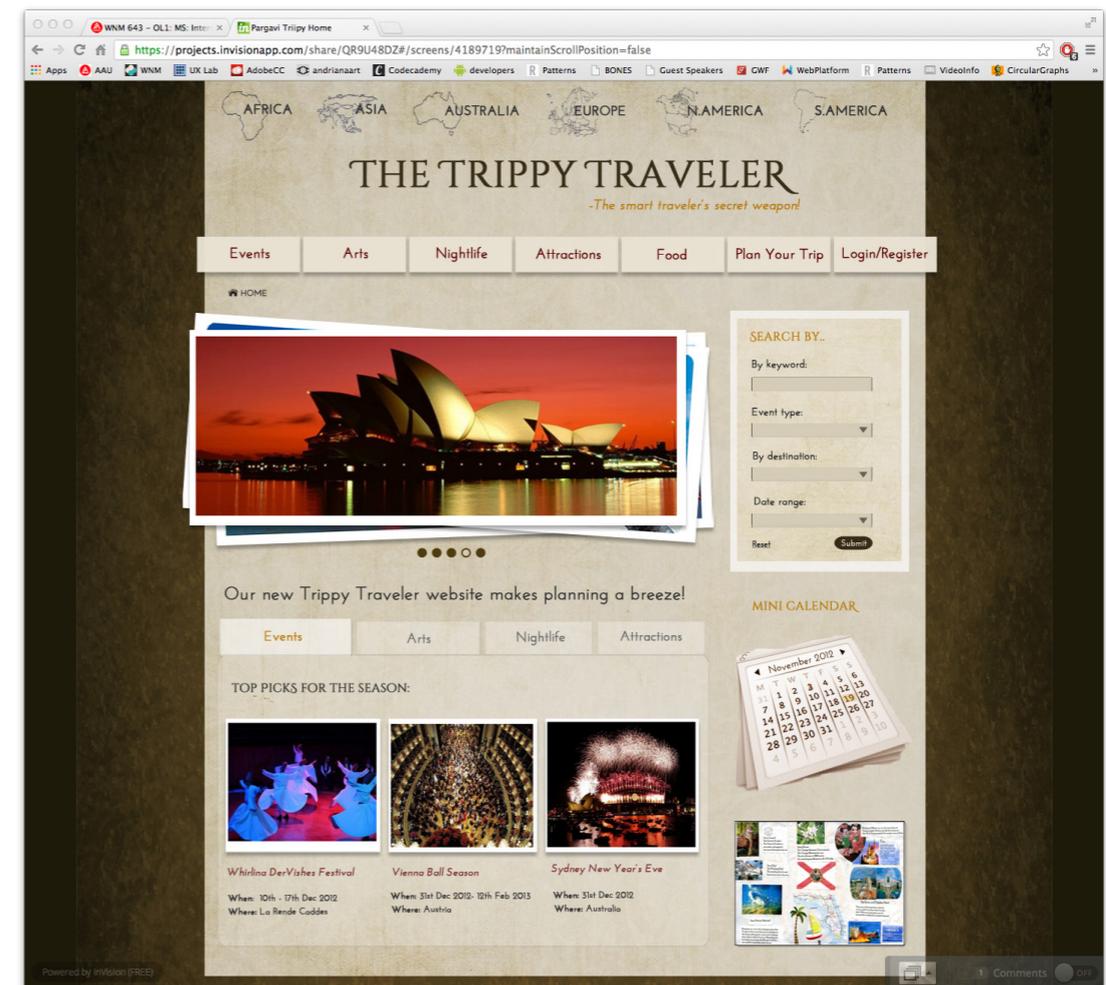
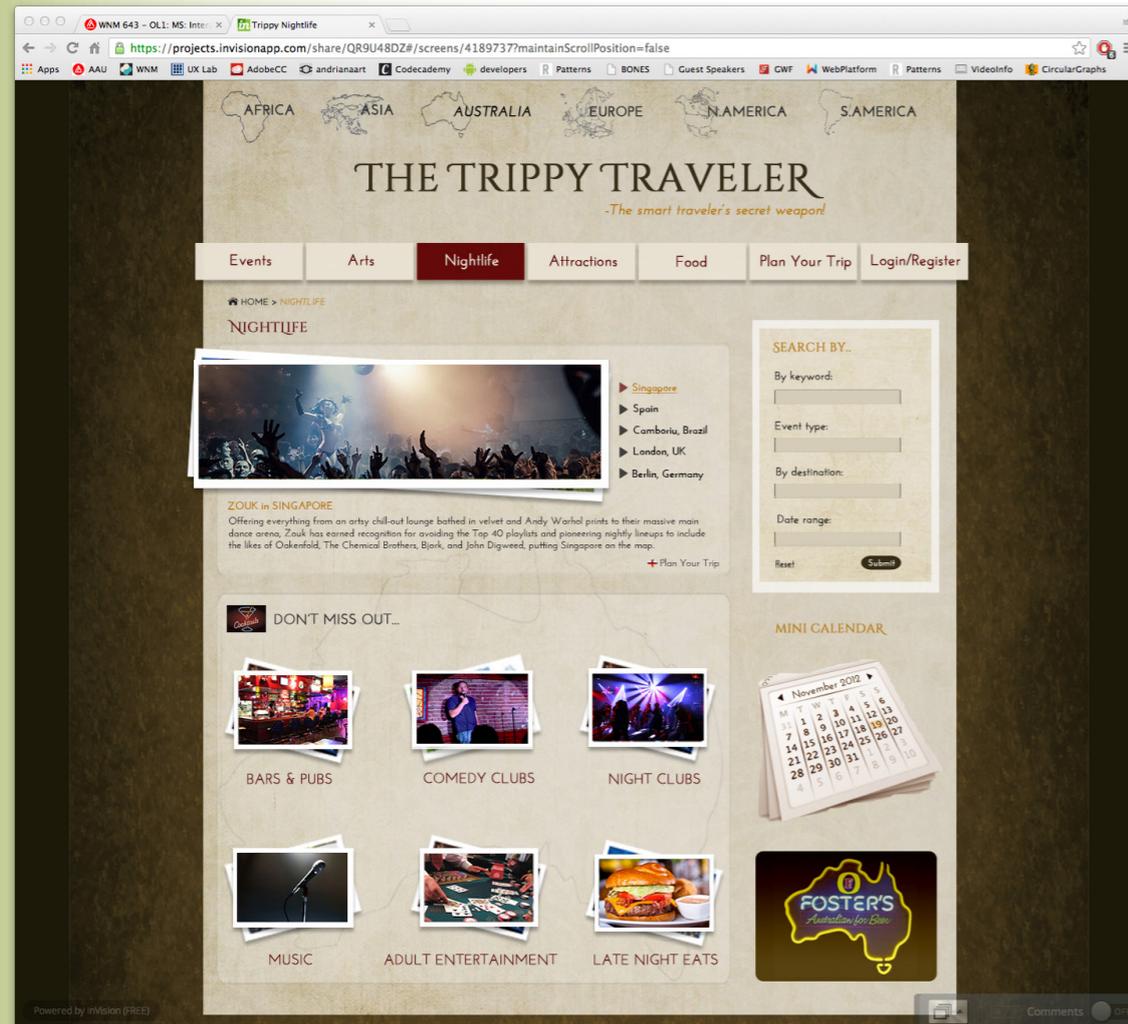
# Usability Group Project: Trippy Traveler

Medium: Photoshop, Google Docs, InVison

Date: Fall 2012

Concept: Work with a remote team to design, test and create a mock up of a fictional website.

Read the Final Document: <http://goo.gl/P82LOB>



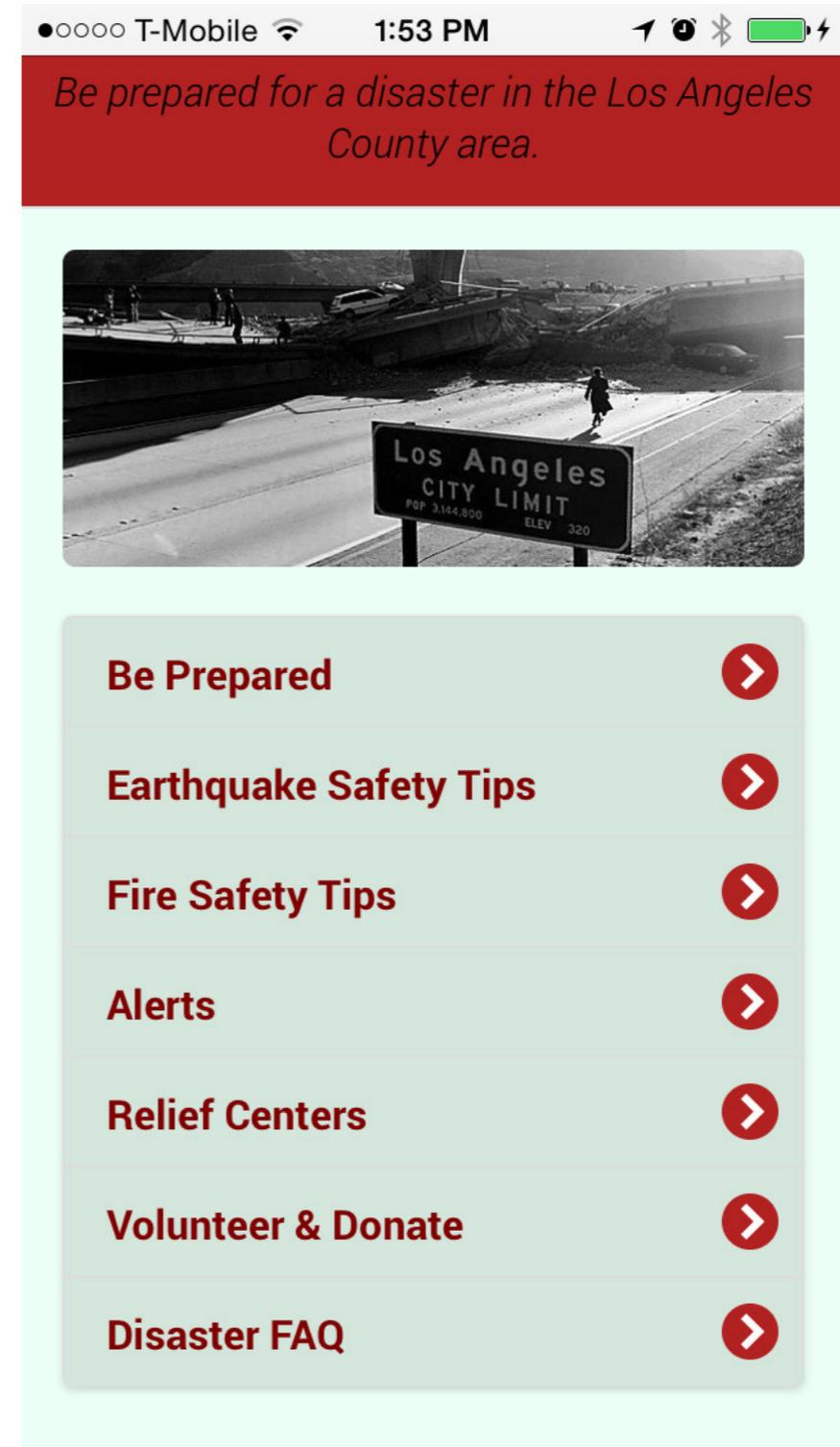
# Mobile Site: Disaster Preparedness

Medium: HTML, CSS, jQuery Mobile

Date: Spring 2014

Concept: Create a mobile site for disaster relief, utilize what we have learned so far in the Mobile Web course.

View the Project: <http://goo.gl/Xpl6zp>



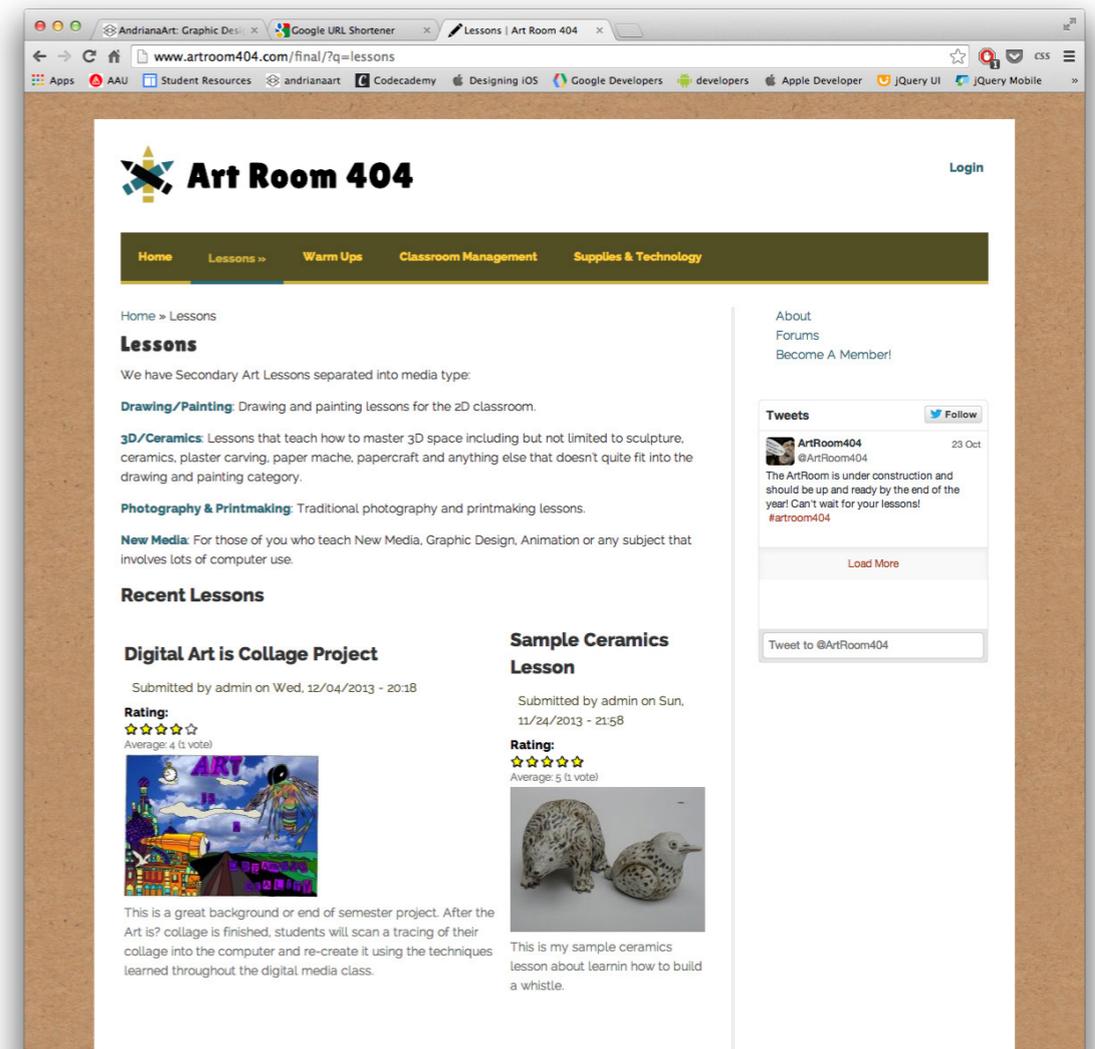
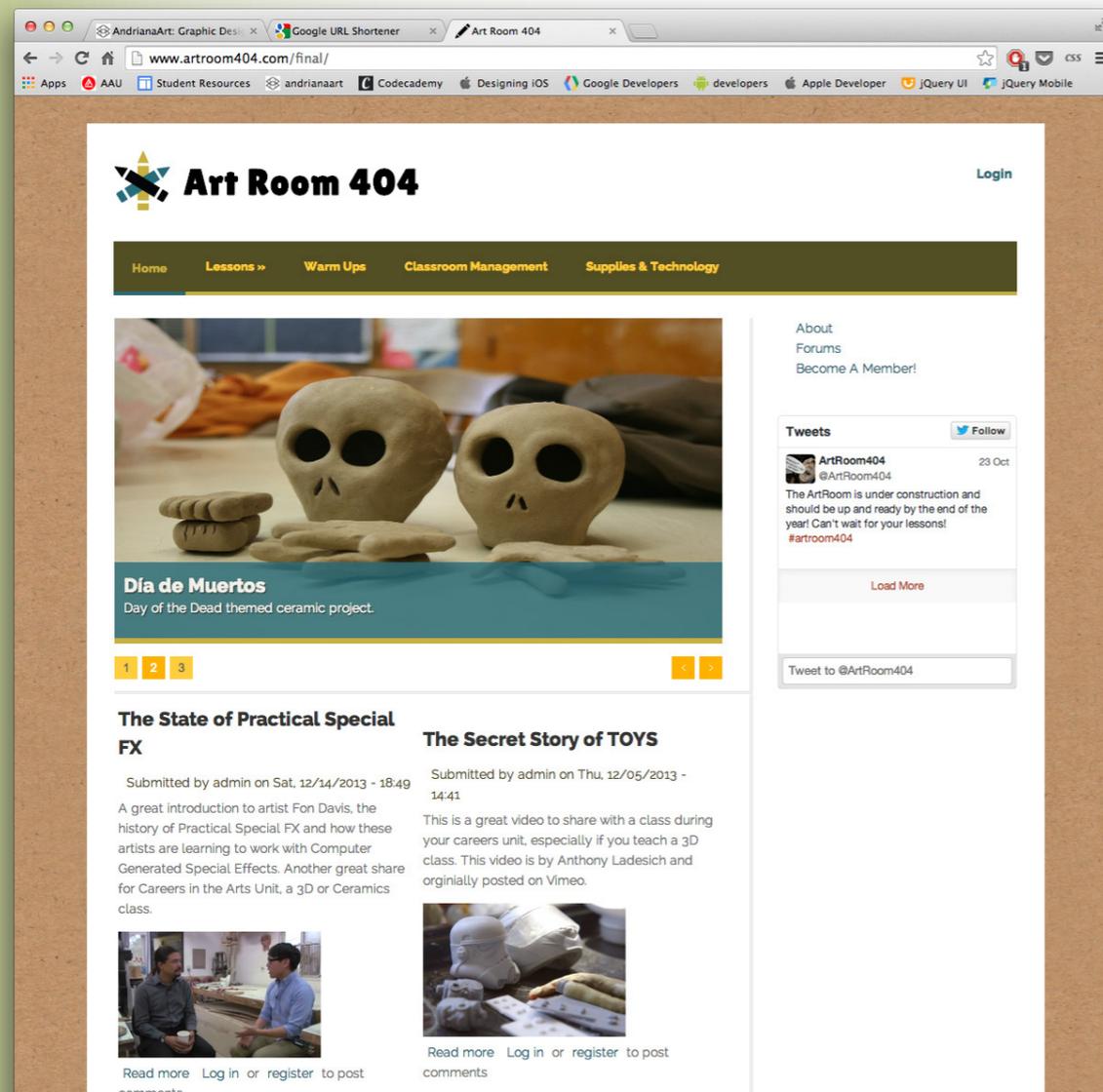
# Website: Art Room 404

Medium: Web, HTML/CSS/PHP, Drupal

Date: Fall 2013

Concept: Design and create a site using the CMS Drupal.

Visit the Site: <http://www.artroom404.com/final/>



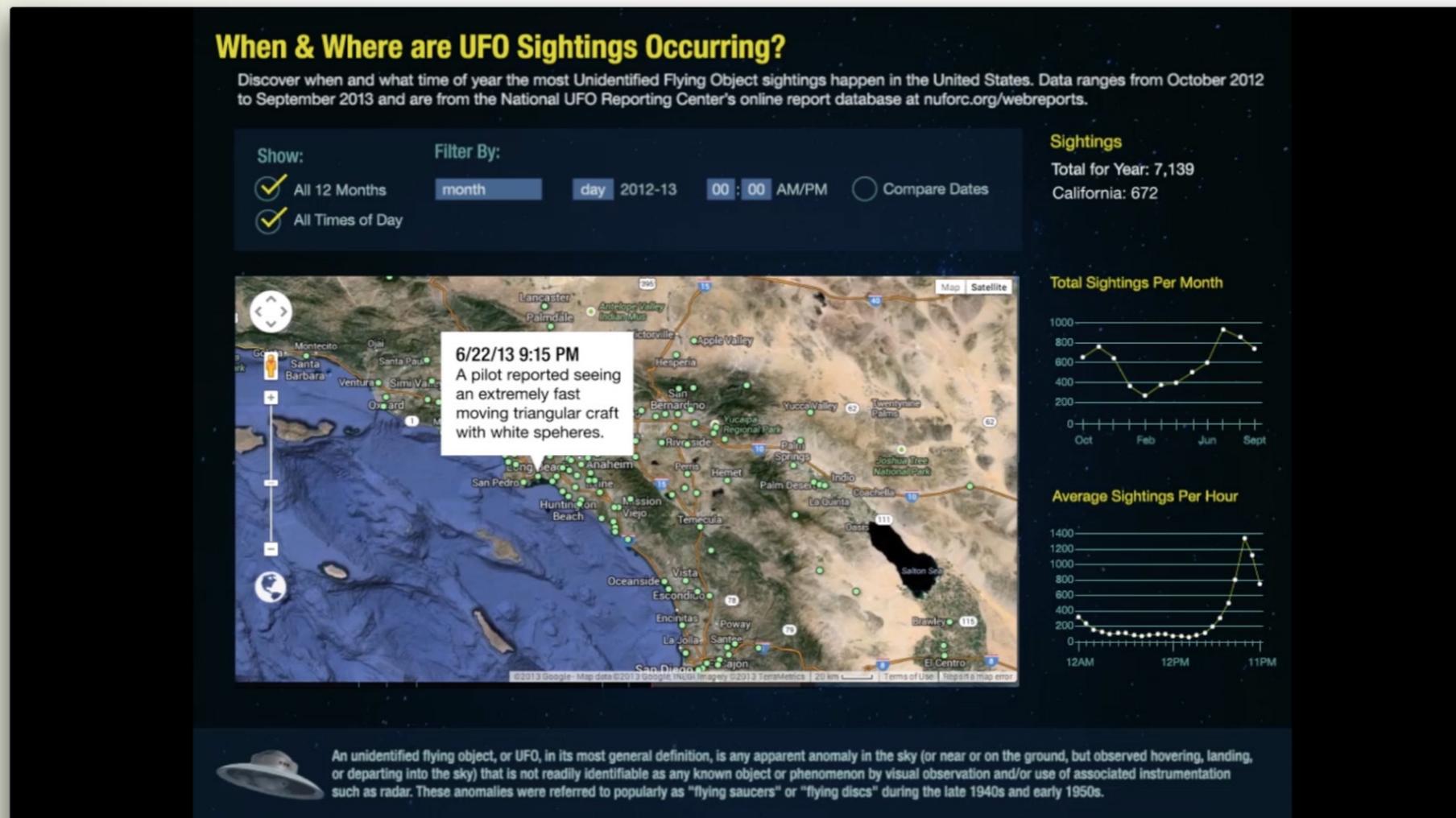
# Infographics: UFO Sightings Interactive Infographic

Medium: Illustrator, Photoshop, After Effects

Date: Fall 2013

Concept: Design an Interactive Infographic (animated prototype) from a dataset of our choice. I chose the National UFO Reporting Center's online database.

View the Animated Prototype: <https://vimeo.com/82485447>



**Thank you!**

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# Bibliography

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Whole Foods Market, Transparent Logo. Accessed from website 10/15/13.

## Page 14

ZingCheckout, Device Demo Image. Accessed from website 02/04/14.

## Page 15

Square, INC. Square Register set up. Accessed from website 11/20/13.

## Page 16

Revel Systems, iPad POS for Grocery Demo Video. Accessed from demo video 11/20/13.

## Page 30

The jQuery Foundation, jQuery Mobile device images. Accessed on 02/06/14.