

Cover page

Xiang Herbs Tea Capstone Project

Submitted by

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Mercer University

Client – Xiang Herbs Tea

Supervisor - Dr. Feng Liu

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Executive summary

Overview

The goal of the Xiang Herbs Tea project is to develop a user-centered, responsive e-commerce website for purchasing flavored, herbal teas. Project planning have allowed me to strategized each development phases to ensure the project would be released in a timely manner. One of the procedures used to provide a positive user experience was the persona, 'Candice'. Candice was a customer used for scenarios, testing, and overall representation for Xiang Herbs Tea. Usability testing was later conducted on the prototype between versions 1.0 and 2.0. Both prototypes were used to test the functionality and examine human behavior from the tester.

Prior to usability testing, I have gathered four participants for testing. Each tester were avid tea and hot beverage drinkers. They were also online shoppers and have prior experiences with website navigations, online purchasing, customer input, and other web functionalities. The test was based on 'Candice' and the scenario, as well as the storyboard. The test included 18 tasks that had to be performed within 30 seconds.

After testing was concluded, the customers were given a 10-question survey to state their opinions or suggestions about the prototype. Results from the survey were instrumental to the researcher, because it helped generate new ideas for the new application release. One of the suggestions from the user was to add more pages and there were others who endured functionality issues, such as a button was harder to click.

Introduction

If a customer wanted to purchase teas from an online store, then the user would choose the flavor of the tea, place it in the cart, and continue to checkout. Somehow, the 'complete payment' button was broken and the customer was not able to complete their purchase. Therefore, the user has encountered a bad user experience with the online website and will probably contact the site's owner for assistance, before shopping with their competitor. This project used research methodologies and data collection to help improved user experiences and measured its usability of the website.

Usability is the measurement of how users can use a product or a model to effectively define a goal (Interaction-Design). Usability testing is used to determine the project's success measurement. Usability testing is a method that shows how a simple group of users can conduct multiple tasks on a design (Interaction-Design). The goal for usability is to provide a successful user experience and use data from the customers to understand their needs in order to fulfil that goal.

Acknowledgements

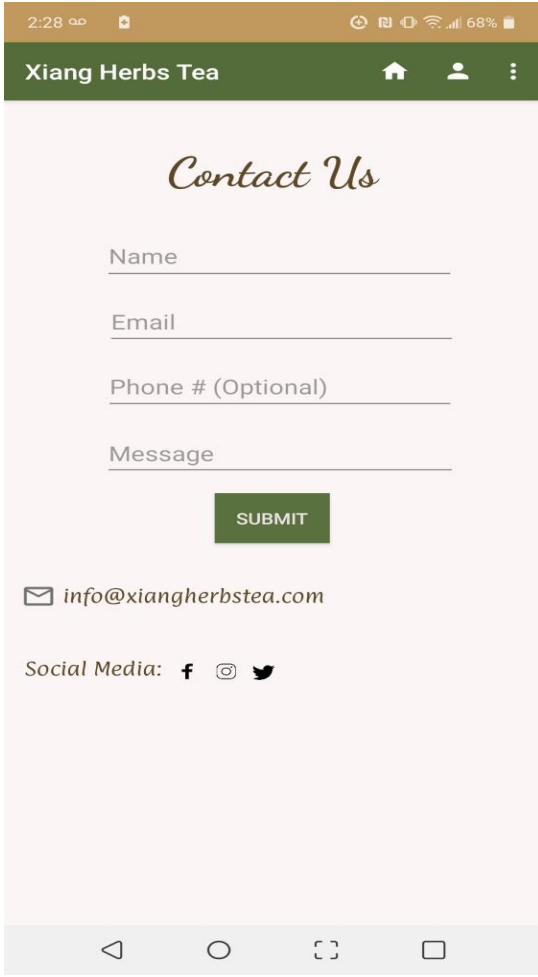
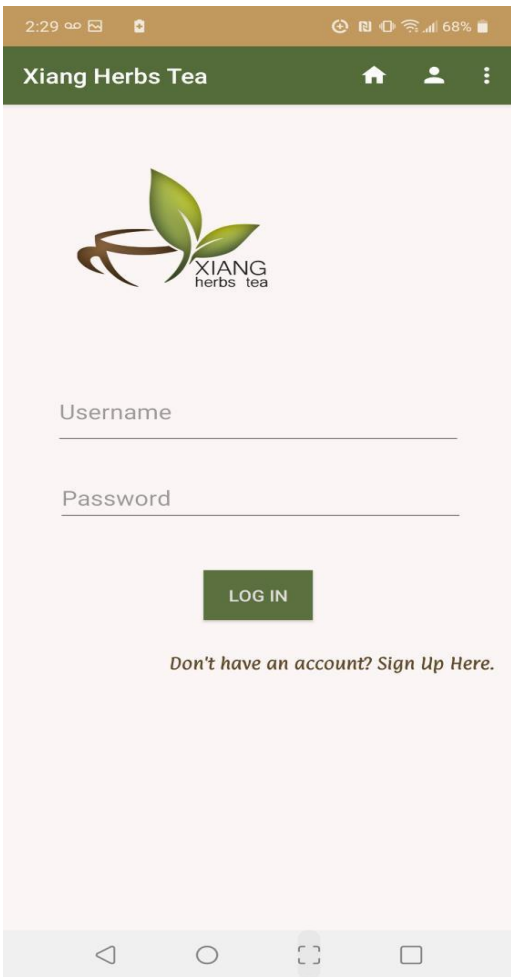
The Xiang Herbs Tea Capstone Project would serve as the final project prior to completing my degree for Software Application Development and Human Computer Interaction at Mercer University. This is where I will acknowledge those who helped make this Capstone possible. I would like to thank the testers, for taking the time out of their schedules to participate in this project. Thank you to Dr. Liu who provided a lot of thorough input for this Capstone. The one-on-one meetings have provided me with a lot of insight that will help me to become a better designer or developer. I really appreciate your help with this project.

Background

I was introduced to the Tea project in INFM 201: Introduction to Software Application Development and Human Computer Interaction with Dr. Rolon. In this class, I had to build a tea application using Android Studios. At the time, I have not yet worked with XD, so I used an Android mobile wireframe to develop my prototypes. After completing the prototype, it was time for me to use Android studios to create to my first app. I had no experience in using the program, so I used the textbook to get a better understanding. One of the issues that I had while building the Tea app. were constraint, where the images and texts would align to the side or at the top of the screen during preview. I designed the app. based on the given mobile devices included in the program, but did not think how it would look on an actual mobile.

First, I tested the app. on the emulator, but it kept freezing my laptop, until it crashed. The next option was to test the app. on my mobile phone and there were a lot of space between the images and buttons. If I were to aligned the elements based on the size of my mobile screen, then everything would end on the bottom and tangled with constraint lines. However, I was proud of my design, but it took a lot of work and time, hence choosing to design a full-stack website for my Capstone, instead of developing another app. Included below are some samples of the Xiang Herbs Tea app. project from INFM 201.





The purpose of this Capstone project is to adopt the user-centered design and implementation method to create a positive user experience e-commerce website. There were two methods, testing and surveys that were used to help create a satisfactory user experience for the user and the client. Prior to developing Application 1.0, there were two prototype designs, version 1.0 and 2.0. Version 2.0 was used to design Application 1.0 and testing with the help of human testers, known as 'customers. The customers will have the opportunity of performing the functional outcomes of the application, such as signing up and signing in to the website , the usability of the shopping cart and artificial payment system, sharing on twitter, subscribing, and leaving a customer review.

Some websites don't have the proper usability experience. There are websites with a non-functioning navigation bar, no back or home buttons, or elements that will ensure the user will be comfortable in using their website. Prototype reviews, research and testing, along with participant opinions helped the researcher have a better idea on the new application release, compared to other services that did not undergo the UX development process.

Project planning

The Capstone Tea project contained design and the development of the Xiang Tea website. In addition to that, testing the usability of a prototype. Project planning will capture the preparation and process of the project to make sure the tasks of the project are done correctly to support the usability. The five phases of Software Development; Planning, Design, Development, Usability, and Release will assist the researcher in creating a website, while remaining organized and preparing for its final release. Please, refer to the project timeline table for dates.

Purpose

Project planning keeps track of the design process of the Capstone Tea Project within the timeframe. The tasks will be completed from the 6 phases. The start date is the beginning of production, while end date determines the completion of the tasks. The amount of completion of per task will be calculated by percentage (%).

Objectives

The SMART (Specific, Measurable, Achievable, Realistic, and Timely) method is used to define the objectives for the Capstone Tea Project. The method helps the researcher organize and reach a goal in developing a website that is usable for the customer and the client.

- S - Understanding the customer's needs and influences of human user experience, by creating a responsive website that relies on testing and reactions.
- M - Project planning began in early October 2022. It will include 6 phases for each task: Planning, Design, Development, Usability, and Release.
- A - Tasks from Project planning and Design are nearly completed, while Development, Usability, and Release are still in process.
- R - Completing each task could take weeks, which includes designing, updating and revising.
- T - The Capstone Tea Project should be completed by December 2022.

Target audience

The Capstone Tea Project will be targeted towards customers, who are at least 18, avid tea drinkers and are also hot beverage drinkers, like coffee and hot chocolate. Customers who love the e-commerce shoppers are used in this project as well.

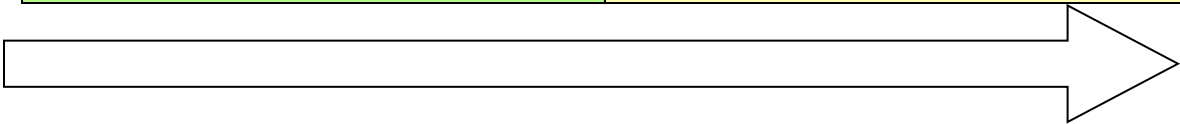
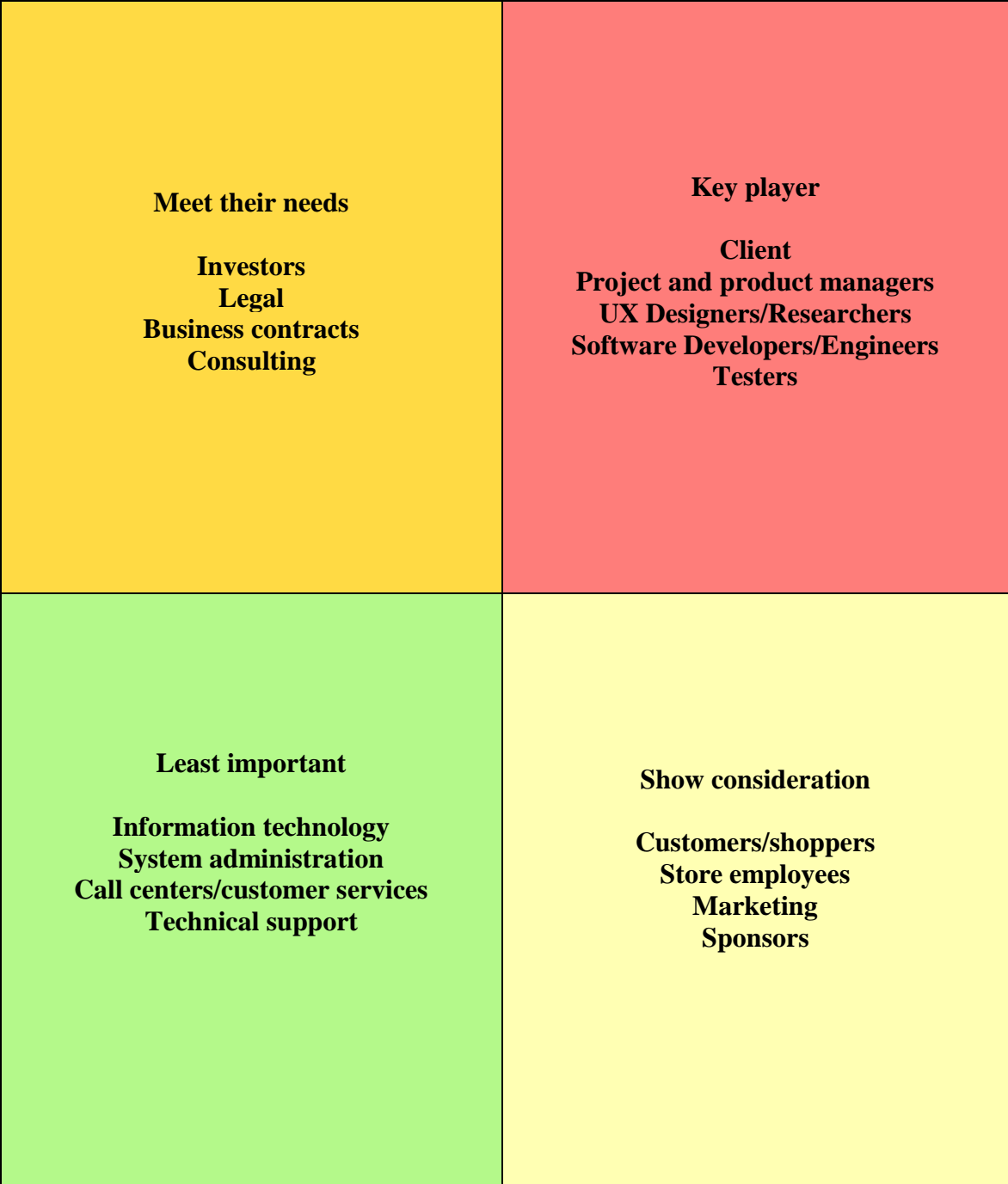
Timeline

Tasks	Start Date	Last Date	Status
Project proposal	10/15/2022		Updating
Project planning	10/15/2022		Updating

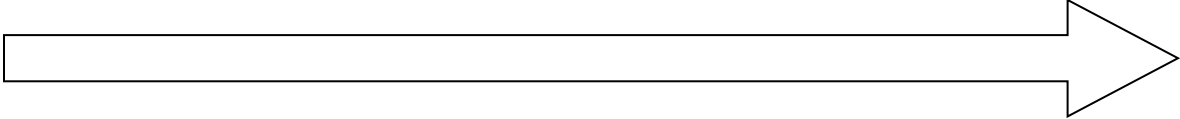
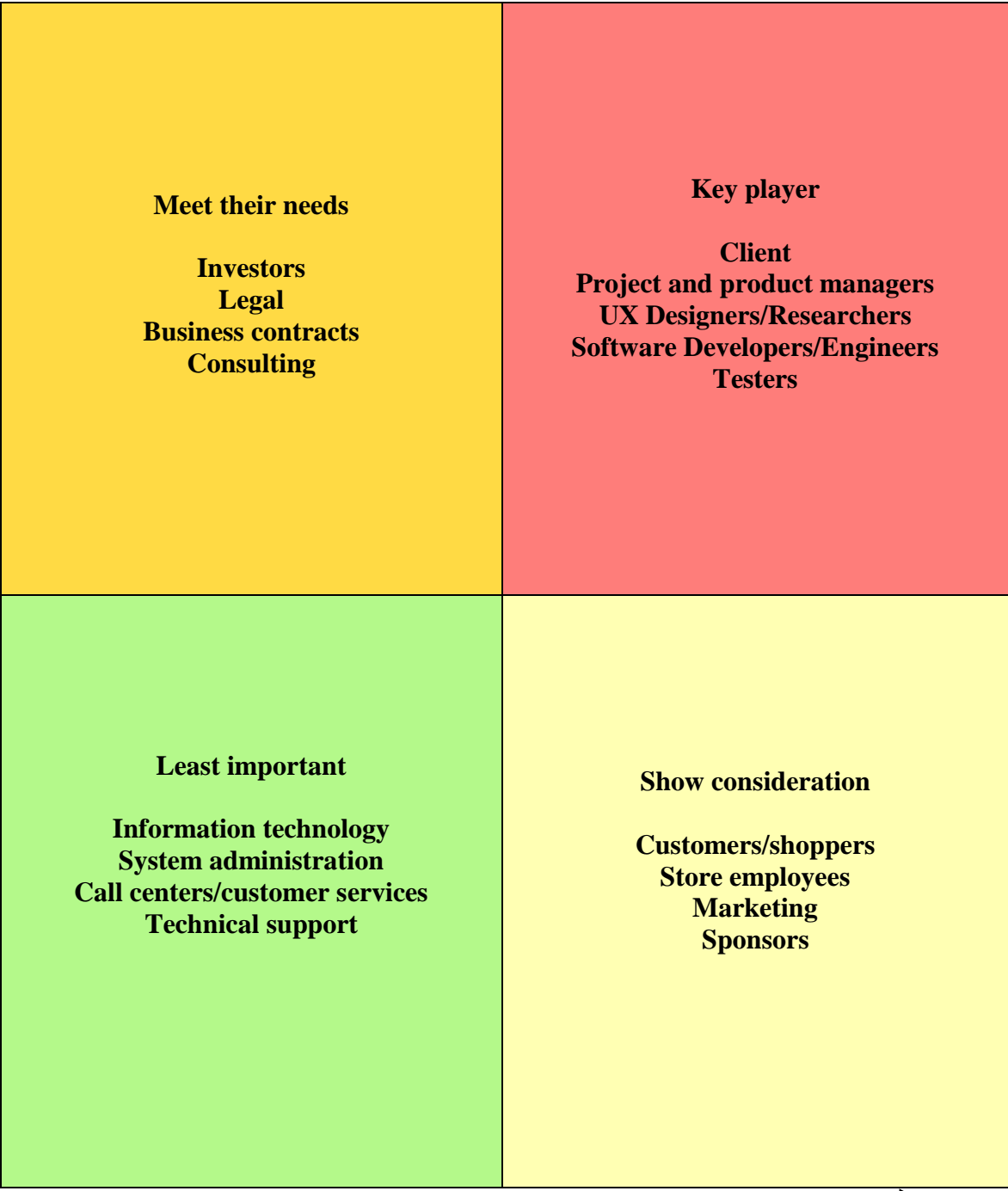
Personas	10/27/2022	11/7/2022	Completed
Scenarios	10/28/2022	11/7/2022	Completed
Storyboard	10/7/2022	11/8/2022	Completed
Task list	11/5/2022	11/27/2022	Completed

Site structure	9/30/2022	11/3/2022	Completed
Database design	10/7/2022	11/7/2022	Completed
Tea prototype 1.0	10/5/2022	10/28/2022	Completed
Tea prototype 2.0	10/28/2022	11/22/2022	Completed
System specification			
Programming languages	11/27/2022	11/27/2022	Completed
Functional development	11/27/2022	11/27/2022	Completed
Database development	11/28/2022		Completed
Client and Server development	11/28/2022		Completed
Function testing and debugging	11/12/2022		Completed
Tea Application release	11/12/2022		Completed
Usability Testing			
Report and reflection			
User help documents	11/3/2022	11/7/22	Completed
Capstone report	11/30/2020	12/15/2022	

Stakeholder's map



Stakeholder Interest



Scope

Xiang herbs tea Project Scope

11/28/2022

OVERVIEW

1. Project Background and Description

i This project first began as a tea app. Then, it became a responsive, full-stack website. I wanted to continue to work on the tea project for the Capstone, because it was the first project that I have worked on at Mercer University and it will give me to opportunity to build a website that would understand the customer's needs in user experience. The Capstone Tea project is to understand the usability and success of a website and how human reactions are instrumental in the improvement and designing process.

2. Project Scope

i The scope of the project involved the functionality of the website, such as creating an account, signing in and out, leaving a customer review and star review, selecting a size, adding a product to the cart, as well as checking out. Then, there is subscribing to the website and sharing teas on Twitter. Other aspects that were not included in the project were, promo codes and updating user profiles. These functions required more time; therefore, I was not able to complete these aspects

3. High-Level Requirements

The new system must include the following:

- Functional development.
- Database development/Client-server development.
- Working components and proper functionality.
- Provides a successful experience to the target audiences and client.
- Results based on the usability testing and user input.
- Proper project design and planning occurred before the new system design.

4. Deliverables

i Deliverables include a full-stack, responsive website. Database will be used for some of the functionalities of the website, which includes: Signing up, signing in/out, shopping cart, and customer reviews.

5. Implementation Plan

i The written proposal included the purpose, timeline, stakeholder's map, and success measurements that will assist in obtaining the goals, which includes in building a website that will allow a customer to have a pleasant shopping experience. Gathering testers for the prototype testing and distribute surveys.

6. High-Level Timeline/Schedule

i Project planning involves a timeline of each tasks that must be accomplished on the time amount given. The researcher is using the phases of software development (Planning, design, developing, testing, and release) to ensure the project is properly done, organized, and released on time. Testing involves the use of a prototype to allow users to provide their input, that will be used for the final website. Development includes the functionality, database, and client-side development that will be the outcome of the project. The project concludes in December.

Project deliverables

The Capstone project will be a responsive tea website design, with a full-stack, front-end and back-end development. Database connection will also be used for the functional aspects, such as shopping cart, customer reviews, and user profile. Languages for the project will include HTML, CSS, SQL, JavaScript, and PHP, along with the following programs: PhpMyAdmin, Notepad++, and Bootstrap.

The functional portion of the website will let the customer pick their choice of teas, place it in the cart, and then modify their order. The customer will use the imaginary payment process, and place order. Once the customer is pleased with their product, they can leave a review, subscribe, and share on Twitter.

Success measurement

For the measurement in usability testing, there will be 18 tasks that each participant will perform for at least 30 seconds. The amount of time will measure the speed of each user performing a task. After successfully completing the test, the user completed an online survey with 10 questions. The outcome of the customers' participation assisted in developing new ideas and improving the re-design of the website.

System design

This section includes the designs of the prototypes, database, function, and the live application. Color codes: #28AC3E – Green , #765f37 - Dark brown , #FFFFFF - White, #000000 - Black, #847355 – Brown, and #5EDA73 – Apple Green

Storyboard

XIANG
HERB
TEAS

WELCOME!
LOGIN HERE

NAME

PASSWORD

LOGIN

REMEMBER ME

LOGGED IN
Don't have an account?
SIGNUP HERE

XIANG
HERB
TEAS

SIGN UP

FIRST NAME

LAST NAME

EMAIL

PASSWORD

SIGN UP

OR SIGN IN WITH PROFILE

GOOGLE
FACEBOOK

ACCOUNT CREATED

Already have an account?
LOGIN

XIANG
HERB
TEAS

WELCOME!
LOGIN HERE

NAME * *Fields Required*

PASSWORD *

LOGIN

REMEMBER ME

LOGGED IN

Don't have an account?
Sign here.

XIANG
HERB
TEAS

SIGN UP

Fields required.

FIRST NAME *

LAST NAME *

EMAIL *

PASSWORD *

SIGN UP

GOOGLE
FACEBOOK

ACCOUNT CREATED

Already have an account?
LOGIN

HOME TABS

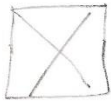
ACCOUNT
Profile



my Account

~~Account~~
Account
updated.

Fields
Required.



First NAME *

LAST NAME *

ADDRESS *

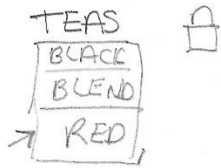
CITY * STATE * ZIPCODE *

Phone Number *

EMAIL *

→ SAVE

Footer



RED TEAS

Red Tea \$5.00 - \$10.00

Red Tea \$5.00 \$10.00

Red Tea \$5.00 \$10.00

FOOTER

TEAS

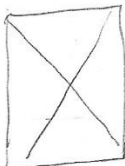
CART
CONTINUE TO SHOP

PRODUCT	QTY	Total
RED TEA BAG, 5lbs	<input type="text" value="1"/>	\$10.00
	+ customer clicked 3 times	
	update cart	<input type="button" value="update"/> <input type="button" value="checkout"/>
RED TEA BAG, 5lbs	<input type="text" value="4"/>	\$40.00
	customer ordered 4 teas	
	update	<input type="button" value="update"/> <input type="button" value="checkout"/>

cart updated.

SUBTOTAL \$40.00

FOOTER



100% ORGANIC

RED IS FULL OF ANTI OXIDANTS AND OTHER BENEFITS.
Ingredients - TEA

Reviews

TEAS

Item added to the cart

RED TEA NAME
***** (58 photos)
SHARE

pop down

BAG, 3/lbs \$5.00

BAG, 5/lbs \$10.00

Natural Organic Tea

Write a Review

sign in to leave a review

FOOTER

Navigation

CART > SHIPPING > SHIPPING > PAYMENT

EXPRESS PAYMENT

customer information
Michelle Flowers
1234 Riverwater Dr.
CITY, STATE 06234

CREDIT CARD

NAME ON CARD

CARD NUMBER

CITY

STATE

ZIP CODE

EXP

OR

SUBTOTAL \$40.00

FOOTER

XIANG
HERB
TEA

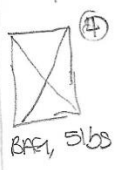
shipping INFO → SHIPPING →

MICHELLE FLOWERS
1234 RIVERWATER DR.
CITY, STATE 00234

SHIPPING METHODS
STANDARD - FREE
2nd DAY AIR - \$30.00
NEXT DAY AIR - \$50.00

- o BILLING SAME AS SHIPPING ADDRESS
- o ADD ANOTHER ADDRESS

MY ORDERS



coupon code

subtotal \$32.00
shipping FREE
TOTAL \$32.00

continue to payment

FOOTER

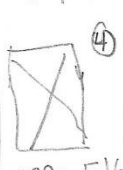
XIANG
HERB
TEA

SHIPPING → PAYMENT

MICHELLE FLOWERS
1234 RIVERWATER DR
CITY, STATE 00234
SHIPPING METHOD - FREE

- o CREDIT CARD
- o PAYPAL
- o CIPAY

MY ORDERS



coupon code
 ERROR CODE NOT VALID
code applied 20% off

subtotal \$32.00
shipping FREE
TOTAL \$32.00

PLACE ORDER

ORDER PLACED
THANKS

FOOTER

Error
Fill out the form.

HOME TEAS SPECIAL TEAS CONTACT TEAS

CONTACT US

NAME * **ERROR Required**

EMAIL * **Required**

MESSAGE * **Required**

SUBMIT

EMAIL SUBMITTED!

FOOTER

HOME TEAS SPECIAL TEAS CONTACT TEAS

XIANG
HERB
TEAS

WELCOME TO
XIANG HERB
TEA!



FREE SHIPPING \$25+

TRY OUR LIMITED EDITION TEAS!

subscribe - **ERROR Entry valid Email** - **Phone for subscribing**

FOOTER

Personas



Background

Candice is an avid tea lover. She works as a Developer and loves to come home and make a cup of tea. She is running low and wants to order online. Candice is hoping for a successful user experience.

Goals

- Wants a quick, professional experience in ordering tea online.
- Mobile user friendly.
- Wants to find a menu that provides either Blended or Green tea.
- Wants to use a tablet to place the order.

Demographic

Female 28 years

United States

Single

Software Developer

Motivations

- Order online with a mobile device.
- Understand the teas' qualities and its benefits.
- Quiet tea time after work.

Frustrations

- Order delays/slow services.
- Noisy locations.
- Spoiled tea leaves.

Technology



Needs

- A quick, professional website that sells natural, blend and green teas.
- Provides a successful user experience.
- Avoid long lines and crowded stores.



Background

Ryan has been taking care of his wife, who has a cold. He wanted to fix her some honey tea for her throat. Ryan wants to order more tea from an online site with quick delivery, and usability.

Demographic

♂ Male 42 years

📍 United States

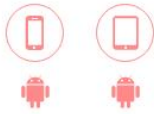
Married

Professor

Goals

- Ryan wants to order high quality, natural black tea online.
- Wants to find a tea website that provides quick service and is also mobile friendly.
- Wants to find a menu with a wide selection of teas.
- Wants to use either a tablet or smartphone to place the order.

Technology



Motivations

- Order online with a mobile device.
- Read more information about the quality of teas available.
- Wants a quick, user experience.
- Navigation with a wide selection of teas available.

Frustrations

- Non authentic tea
- Sites not functioning properly or not usable.
- Teas that are sold out.

Needs

- A quick, professional website that sells natural, black and herbal teas.
- Provides a successful user experience.
- Prevents the need to purchase tea in person.

UXPRESSIA

This persona was built in uxpressia.com

- Customers can create an account and sign in. Information will be retrieved from the database table, so the customer can input credentials for both registration and sign in forms.
- Customers can subscribe to the website by using the form.
- Customers can add items to the cart and checkout. The products and orders table will be used for the cart and checkout pages. Each product is assigned a product id.
- Customers can use the select drop-down form to choose the size of tea. Data will be retrieved from the database.
- Customers can update the cart, by adding or removing an item.
- Customers can choose the Cash delivery method to purchase their tea.
- Customers will be able to place their order by clicking the 'Place Order' button. The database will update the QTY after the order is completed.
- Customers are allowed to share teas on Twitter.
- Customer can leave a review by choosing a star rating number and then comment afterwards.
- Customer can sign out of the website.

Scenario

Candice works at a call center at Geico Insurance Co. She spends her time at work assisting with multiple irritated customers, who had issues with their policies. Once she's done, she drives home for the day. Exhausted from customer service, Candice decided to fix her usual hot cup of herbal fruit tea, but realized that she's running out of the tea. Despite of buying her tea from her usual shop, she wanted to try another tea store. Candice did not want to drive, but rather shop online with her phone or tablet to look for the tea that she wanted to buy. She was also hoping that the website included a responsive navigation menu that shows all of the teas, including her favorite Apricot Apple tea, available for purchase. Therefore, Candice wanted a simple, quick user experience without any difficulties.

Candice discovered an online tea store called, 'Xiang Herbs Tea', through Google search. Then, she clicked on the link to view the website and loved the colors, theme, and tea images used for the design. To have a better understanding of the company, Candice clicked 'About' from the drop-down menu to learn more about the company and she was interested. Then, she clicked 'Our Farm' to see where the natural teas were grown.

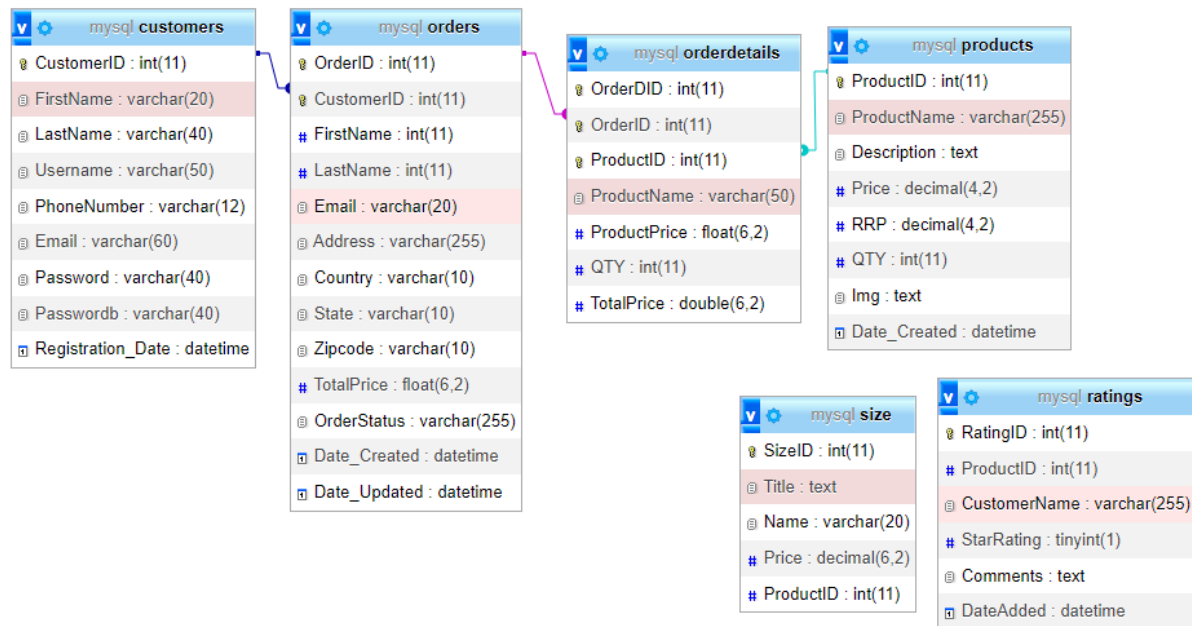
After gaining more information about the company, Candice decided to create an account. She clicked on the 'My Account' link on the navigation menu, which included 'Sign Up' and 'Log In', she has chosen 'Sign Up' to land on the Sign-up page. After her credentials were successful, Candice was able to login using her newly created information. She used the navigation menu to view the selection of teas. On the menu there were a choice of 6 teas, Black, Blended, Green, Red, White, Yellow, and Special Teas. She clicked on 'Blended' and saw different flavors of tea, including Apple Apricot.

Candice clicked on her favorite tea and landed on the details page, where she can read its descriptions, benefits, reviews, and then choose the size (2oz and 4oz.), and quantity of the tea. She ordered a 4oz of Apple Apricot for \$10.00. After choosing her tea, she added her order to the cart. Next, she viewed the 'Cart' to make sure her order is correct and decided to add two more 4oz. of Apple Apricot tea. Her Subtotal is \$30.00. Candice clicked the 'Checkout' button to complete her order.

Here, they have the express checkout option, where Candice could use either PayPal and Cash delivery. She has chosen Cash delivery as her choice of payment, then she entered her shipping address. Afterwards, she placed her order. Finally, she signed out of 'Xiang Herbs Tea'.

Candice have found her experience with the 'Xiang Herbs Tea' website to be satisfactory. After her tea was delivered, she left a review and also shared a tea product for her Twitter followers. Later, she subscribed to the website for sales, coupons, and updates.

Database design



Tables

Customer table is related to the orders table in one to many. This table is used for registration and login.

Orders table is related to order details in many to many. The tables will be used for the checkout page.

Products table Is related to order details in many to many. This table will be used for the teas.

Size will be used for tea size selection and ratings will be used to rate the products.

Normalization for Products Name table

pnID	productID	nameID
1	1	1

2	2	1
3	3	1
4	4	2
5	5	2

Normalization for Orders Customer table

ocID	orderID	customerID
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5

Normalization for Size Product table

spID	sizeID	productID
1	1	1
2	2	2

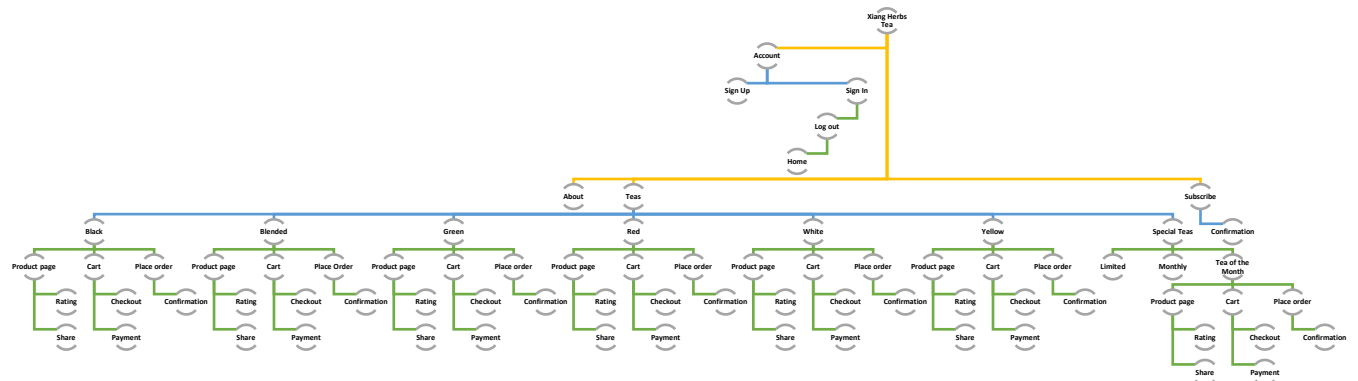
Normalization for Ratings Customer table

rcID	ratingID	customerID
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5

Normalization for Order Details Name table

odnID	orderID	nameID
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5

Site structure



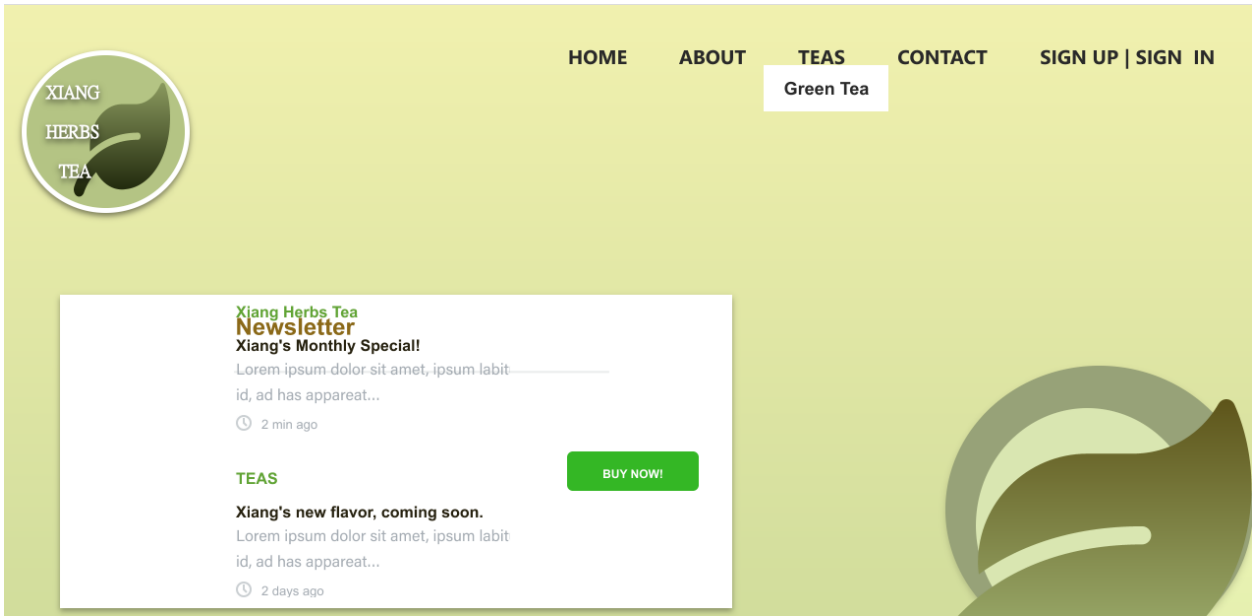
The **Xiang Herbs Tea** hierarchy provides the structure/architecture of the website. **Account** will contain sign in and sign up pages. Once the customer is logged in, they will land on the **Home** page, where they will be able to browse the website. The **About** section contains the Our Story section, where the customer can briefly learn more about the company and farm. After the About section, there is the **Tea** section and it contains a menu of 6 flavors of teas.

The teas are, Black, Blended, Green, Red, White, and Yellow. There are other teas, which are under the **Special Teas** section, where it includes: Tea of the Month, Limited Edition, and Monthly Assortment. Each of the teas will have a page containing the names of the teas, ratings and can leave reviews, sharing a link of the tea to friends and family, and an add to cart page.

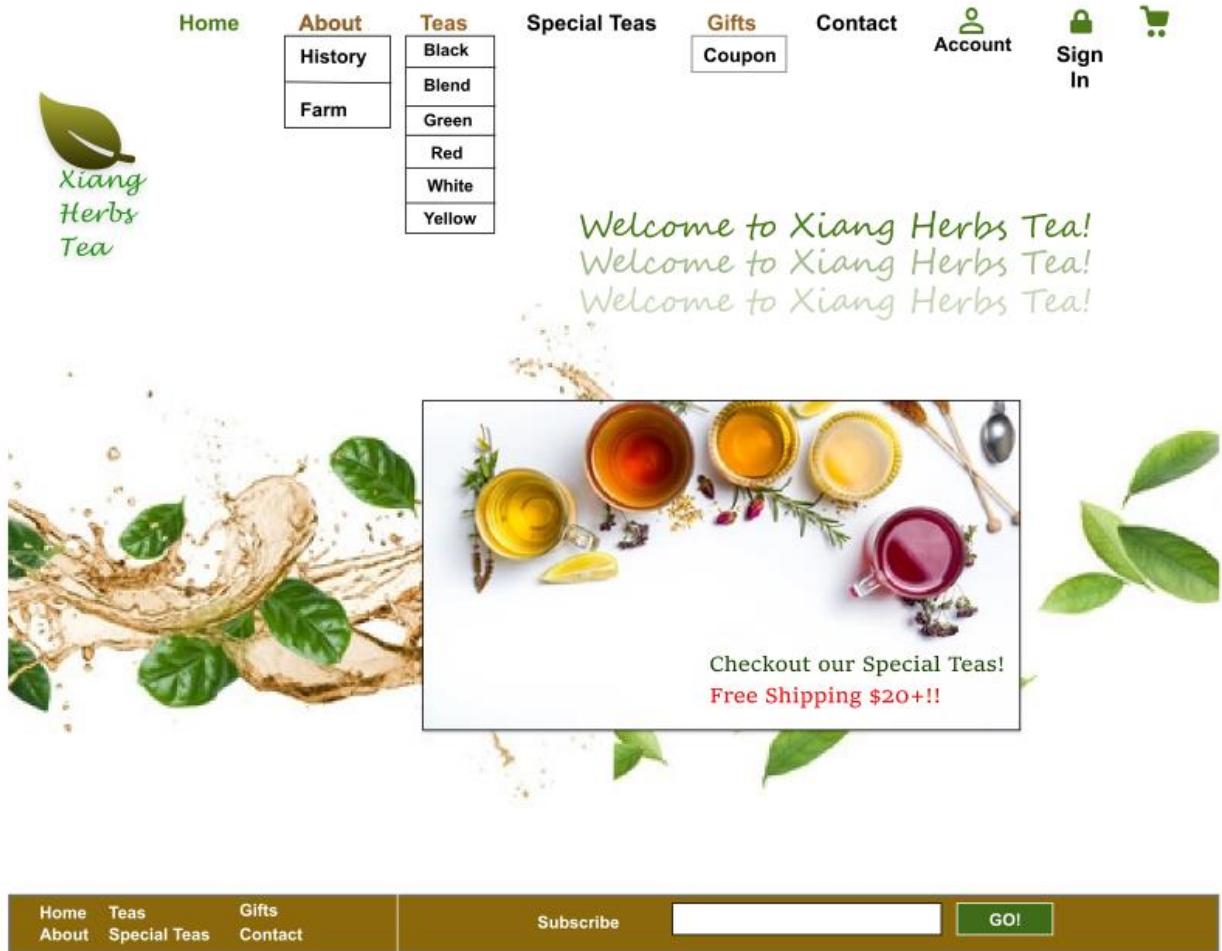
The **Shopping Cart** includes the summary of the cart. Once the customer is done with their cart, they move on to shipping and billing. Thereafter, the customer can checkout and land on the confirmation page. The customer can subscribe, before signing out.

Prototype

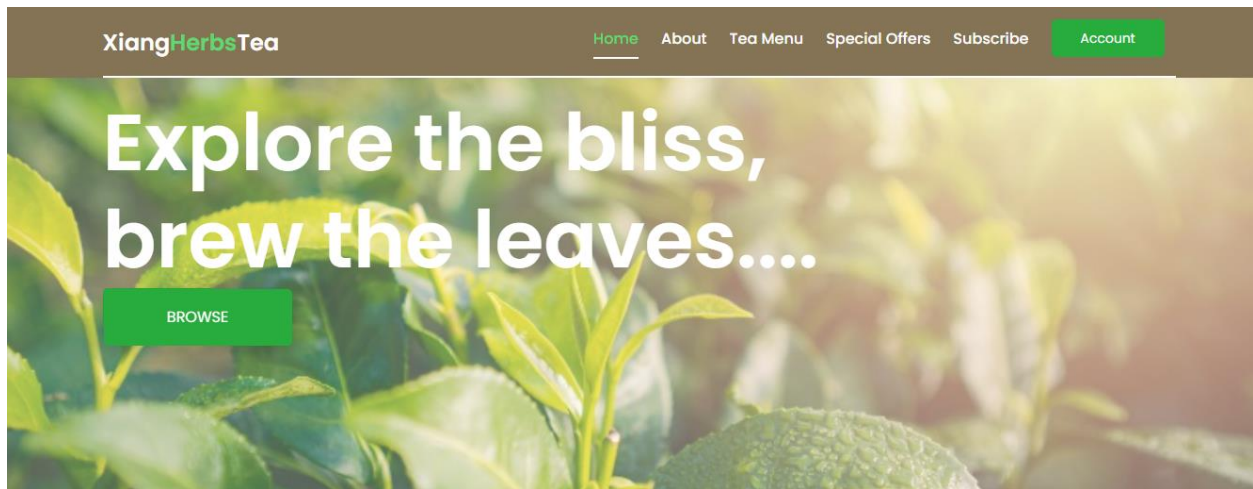
Version 1.0



Version 2.0



Xiang Herbs Tea



Usability study methodology

Usability testing and surveys are the two research methodologies that will be used for the Capstone project. The monitored (or unmonitored) tests will include – tasks that each participant are asked to perform within 30 seconds. Here, the participant will serve as a new customer named Candice for Xiang Herbs Tea. The customer will have the option to sign up, sign in, update their account, shop and pay for tea, leave a review, share on Twitter, and subscribe. The data collection would begin after the participants have submitted their responses from the surveys . Pilot testing and data collection was done prior to this report.

This Capstone report would allow the reader to understand how users are instrumental to UX Researchers in satisfying a user experience UX design. The survey responses from the participants will help the researcher discover any issues that would hinder the enhancement of the design.

Research question

Question – How can users help the researcher improve the usability and quality of a website?

Hypothesis – By using the research methodologies of Usability testing and surveys. Testing uses a human tester, in this case a customer, to perform a number of tasks on a design application within 30 seconds. The researcher can observe the tester’s actions, by watching for possible confusions, frustrations, and other possible behaviors occurred during testing. Other methods like surveys would be used to gather data from the participants that could help provide improvement for the product.

Proposed research methodology

The methodologies that will be used for the Capstone project are usability testing and surveys. Testing would involve the researcher to collect different findings from each participant, whom have performed the tasks on the application. Each participant would have 30 seconds to complete each tasks. Their behavior would also be monitored based on their performance on each task.

Survey questions will contain a majority of multiple-choice questions and few open-ended questions that will ask the participant about the design and functionality of the website.

Research data collection instruments

Usability testing will contain 18 tasks for each participant to perform with the 30 second time limit. Testing will be monitored by the researcher, who will also collect data from

the amount of time spent on each tasks. After a successful completion of the test, surveys will be issued with a total of 10 questions to be answered by the participants. participants will help the researcher discover any issues that would hinder the enhancement of the design.

For the front-end portion of the live Tea site, which includes the user interface, navigation, sign up and login. There is also the shopping cart, menu, and checkout page. The customers will be able to interact with these functions and input user-data into the forms, in order for the data to insert into the database. The select menu will allow the user to pick the size of teas to purchase, while radio buttons will be used for shipping and Cash on Delivery options.

The backend contains sql/database connection. It will be used for the functioning of the website. The user interface is supported by SQL PDO, which is a PHP Data Object. The data from the sign up and login forms will be inserted into the customers table, while the teas, price and their sizes will be retrieved from the orders table. The customer could also leave a comment and the data is inserted into the ratings table.

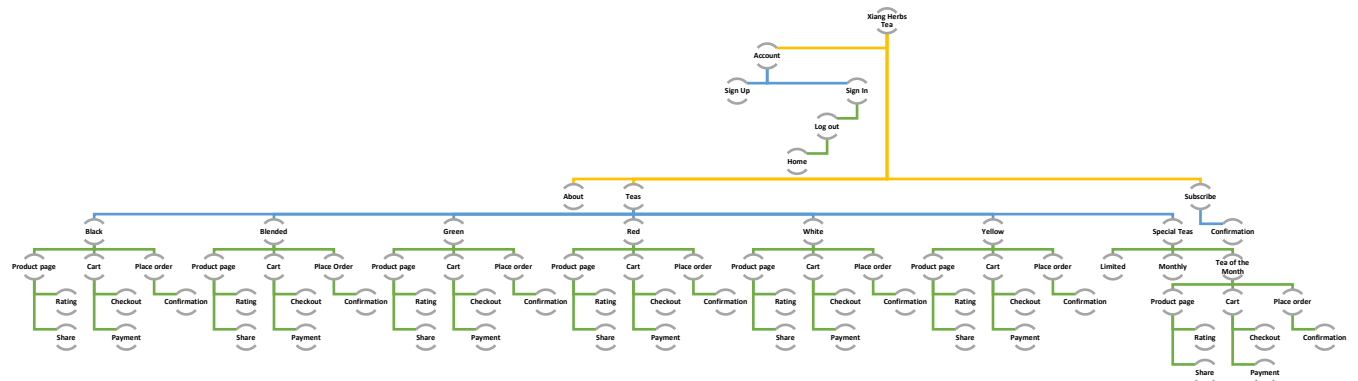
RatingID	ProductID	CustomerName	StarRating	Comments	DateAdded
1	1	Michelle	5	The tea is delicious and helped me get through the...	2022-11-30 04:27:50

Michelle

★★★★★ 2 weeks ago

The tea is delicious and helped me get through the busy day. The amount is perfect and leaves more space in the kitchen cabinets. I highly recommend this company.

Site map



The **Xiang Herbs Tea** hierarchy provides the structure/architecture of the website. **Account** will contain sign in and sign up pages. Once the customer is logged in, they will land on the **Home** page, where they will be able to browse the website. The **About** section contains the Our Story section, where the customer can briefly learn more about the company and farm. After the About section, there is the **Tea** section and it contains a menu of 6 flavors of teas.

The teas are, Black, Blended, Green, Red, White, and Yellow. There are other teas, which are under the **Special Teas** section, where it includes: Tea of the Month, Limited Edition, and Monthly Assortment. Each of the teas will have a page containing the names of the teas, ratings and can leave reviews, sharing a link of the tea to friends and family, and an add to cart page.

The **Shopping Cart** includes the summary of the cart. Once the customer is done with their cart, they move on to shipping and billing. Thereafter, the customer can checkout and land on the confirmation page. The customer can subscribe, before signing out.

Usability study analysis

The target audience the project are customers, who are tea and hot beverage drinkers. There were two personas, Candice and Jacob, but Candice became the representative for Xiang Herbs Tea. Her scenario involved her long days at work. To unwind, she would drink a hot cup of tea during lunch. Candice also enjoy drinking tea at home as well, especially when it's quiet. She eventually ran out of Red and Green Tea, and she did not want to stand in line, so she ordered online. For a successful user experience, she wanted her online shopping to be quick and straightforward. Plus, she wanted to use a mobile device, such as her tablet. Since the site is responsive, she was able to complete her purchase in minutes. She has endured unsuccessful online experience in the past, but here, she was able to make a quick purchase, and did not have to stand in line and face noisy environments, which was one of the things that she did not like.

System version 2.0 – Xiang Herbs Tea

For tests, I have gathered four applicants, who were similar to Candice. Each, loved tea and online shopping. Majority of the testing occurred in person and two online via video. I have sent a link to the prototype to each customer in preparation for the test. I wanted them to pretend their names were Candice and they wanted to shop at a new tea store, called Xiang Herbs Tea. The testers had 30 seconds per task and some were able to successfully complete the tasks, while some encountered difficulties. The survey was done on Google Forms and there were 10 questions, whereas most were multiple choice and a few fill-in-the blanks. I have noticed that most of the issues were the buttons not clicking, which was done on purpose, because those components weren't apart of the test. But, I should have made all of the button's clickable for the convenience of the testers. Another suggestion, involved adding an order history to the site, but with the little time that I had, it was deemed impossible. The other ideas will be further discussed in the conclusion.

Conclusion

Working on this Capstone was a pleasant experience. I'm a software developer major, therefore, I had more to do than the Informatic students. I spent weeks, debugging front and backend elements, before realizing that I did not have the time to get the 'logical' standpoint of the functionalities.

Coupon codes and the select menu for the sizes, were the elements that I could not accomplish on the Capstone, due to spending lots of time on the Prototypes and debugging majority of the front end. There were originally six testers, but two have become unavailable when it was time for testing. There was another tester, who successfully completed the prototype, but the time needed for data for not available. The version of phpMyAdmin might have been a bit outdated, so it was a bit challenging to get use the newer versions of PDO for the SQL statements needed for functionality, which left me a bit concerned if the school's server would support the database that I have used for the shopping cart/menu.

The final design of the Tea site is a lot more different than what was displayed on the prototype. The menu that is used to 'purchase' the tea is set up a bit different, as the some of the flavors are in groups, while the others are not.

References

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- Anderson, R. (2022). *Rynisha's Portfolio*. Welcome: Home: Rynisha's Portfolio. Retrieved December 1, 2022, from <https://merceru.instructure.com/eportfolios/675?verifier=W8O4h3kYYS5tNj1Y2Ny3c7is9BxkkgRrsBJoU3nR>

Appendices

Appendix A

Purpose

The purpose of the Capstone Tea Project is to assess the usability of a website by using a human reaction, that includes providing a number of tasks and using their responses to improve user experiences on the web.

Outline and Contents

- **Cover page**
Includes the title of the project, student ID, researchers name, school, professor, semester and year, and client details.
- **Executive Summary**
A synopsis of the Capstone Tea Project proposal, which includes the purpose of the project and a scenario that supports the reasonings of the project.
- **Acknowledge**
Involves the appreciation of those who were involved in the project and others who have provided a lot of input and preparation into the project.
- **Background**
Includes an introduction to the Xiang Herbs Tea project. It also explains the purpose and goals of the project.
- **Project Planning**
Includes six tasks used for the design cycle and organization, SMART method to achieve the project's goal, success measurements, and data collection tools.
- **System Design**
- **Usability study methodology**
Explains why the chosen methods, Usability testing and surveys were appropriate for the Capstone project
- **System Development and system version 1.0**
Explains human centered principles that are combined into the development phase of design. Also, this is where it was to start gathering users for usability testing and survey preparation.
- **Usability Study Analysis**
Discusses the testing and surveys conducted in research. It also states the performances from the testers and how the study was designed.
- **System version 2.0**
Involves in the discussion and development of Xiang Herbs Tea, which is a live site, with database connection.
- **Conclusion**
Mentions the experience in developing the live application and obstacles that occurred in the process.
- **References**
Contains a list of sources used in the report.

A. User manual / help document

Task 1 – Browsing

- From the Tea **homepage**, go to **main navigation menu**.
- From the menu, go to **About** and then **History** from the **drop-down menu**.
- Repeat steps and go to **Our Farm**.

Task 2 – Signing up and Signing in

- From the navigation menu, go to **Account** and then **Sign Up**.
- From the **Sign-Up** page, navigate to the **Sign-Up button**.
- Go to the **Sign In button**.

Task 3 – Purchase Black Tea

- Go to **Teas** from the navigation menu
- Go to **Black** from the drop-down menu.
- Then, go to the **Add to Cart button** and choose **View Cart**.
- Navigate to the **QTY** column and go to the '+' button.
- Go to the **Update button** and then **Continue to Shop**.

Task 4 – Purchase White Tea

- On the **Tea** menu, go to **Blend Tea**, then **White Tea**.
- Go to the **Add to Cart** button and then **View Cart**.
- Go to **Continue to Shop**.

Task 5 – Add and Delete Green Tea

- On the **Tea** menu, go to **Green Tea**, then **Green Tea**.
- Go to the **Add to Cart** button and then **View Cart**.
- Navigate to **QTY** section and go the '-' button to remove the **Soothing Green Tea**.
- Go to **Continue to Shop**.

Task 6 – Purchase Red Tea

- On the **Tea** menu, go to **Red Tea**.
- Go to the **Add to Cart button** and then **View Cart**.
- Navigate to **QTY** section and go the '-' button to remove the **White Tea**.
- Go to the '+' button under **QTY** to add another **Red Tea** and direct to the **Update button** to update the cart.

- Go to **Continue to Shop**.

Task 7 – Add and delete White Tea

- On the **Tea** menu, navigate to **White Tea**.
- Go to the **Add to Cart button** and then **View Cart**.
- Navigate to **QTY** section and go the ‘- ‘button to remove the **White Tea**.
- Go to **Continue to Shop**.

Task 8 – Purchase Yellow Tea

- On the **Tea** menu, navigate to **Yellow Tea**.
- Go to the **Add to Cart button** and then **View Cart**.
- Navigate to the **QTY** section and go the ‘+ ‘button to add more **Amber Mountain Tea**.
- Go to the **Update button** to update the cart.

Task 9 – Purchase Special Tea

- On the **navigation** menu, go to **Special Teas** and **Limited Edition**.
- Go to the **Add to Cart button** and then **View Cart**.
- Navigate to the **QTY** section and go the ‘+ ‘button to add another **Limited-Edition Tea**.
- Go to the **QTY** section and go the ‘- ‘button to remove an **Amber Mountain Tea**.
- Go to the **Update button**.

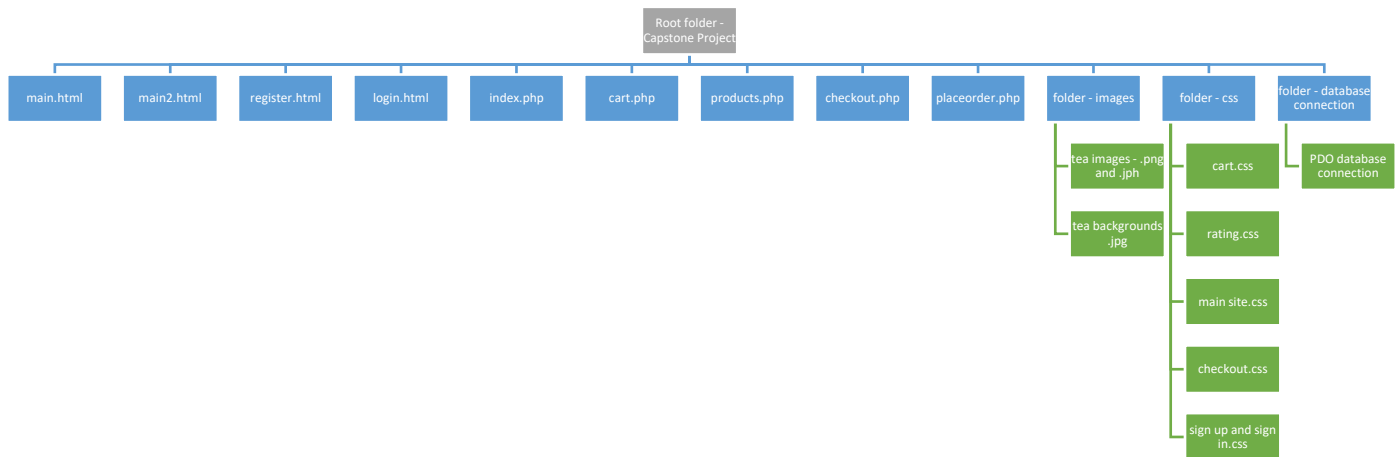
Task 10 – Purchase Order

- On the navigation menu, go to the **Tea Coupon** from the drop-down menu
- Go to **Cart** on the right and then **Checkout**.
- Navigate to the **Continue to Shipping** button.
- Go to the **Continue to Payment** button.
- Go to the **Place Order button** and navigate to the **Home** link on the dialog.

Task 11 – Concluding the site

- On the **Footer** from the **Home page**, go to the **Subscribe** section and then the **Subscribe** button.
- Go the main navigation bar and then **Tea** and direct to **Red**.
- Navigate to **Red Ginseng Tea** and go to **Share on Twitter**.
- Leave a **customer review**.
- Subscribe to the Tea site.
- Go back to the navigation bar and go to ‘**Sign Out**’.

System File structure



Usability study questionnaires

1. I would use this system frequently – Multiple choice
2. Did you encounter any issues while using the system? – Fill in the blank
3. The fonts and/or wording were easier to understand. – Multiple choice
4. The design and color pallet were easier on the eyes. – Multiple choice
5. The design itself would allow me to support the company. – Multiple choice

6. I have found this system cumbersome to use. – Multiple choice
7. I would imagine that most users would learn how to use the system very quickly. – Multiple choice
8. What is your most favorite (and least) favorite feature? Fill in the blank
9. Are there any improvements or suggests that could be applied to the design? Fill in the blank
10. Rate your experience. – Rating system.

Data collected

Time measured in seconds or minutes, if applicable

Task #	Customer #1	Customer #2	Customer #3	Average	Success?
1	30	25.28	1	19	No
2	30	10	0	13	Yes
3	6	3	1	3	Yes
4	19	12	7	13	Yes
5	20	1	7	9	Yes
6	14	22	20	19	Yes
7	10	20	7	12	Yes
8	10	1 min 51 sec	11	44	No
9	7	19	11	12	Yes
10	0	43	3	15	No
11	0	10	39	16	No
12	10	18	39	22	Yes
13	10	18	0	9	No
14	20	2 min 7 sec	39	62	No
15	5	15	39	20	No
16	18	34	3	18	No
17	5	6	0	4	No
18	3	3	1	2	Yes

*Some were able to complete the task, while some stopped or skipped a task.

* Lost data with one additional tester

* Time limit = 30 seconds