



Engineering Design
GNG1103[A]

Deliverable F: Prototype I and Customer Feedback

Team A15

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Abstract

A prototype is a way engineers can develop a test design of their project. There are many different types of prototypes that can be created including but not limited to analytical, mathematical, experimental and numerical. Prototypes are used to analyse and visualize the ideas created by the design team. It is used to evaluate different aspects of the project and is a way to weed out flaws and technical issues for the next prototype. Prototypes are created repeatedly until a refined final product is produced.

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1.0 Introduction

In this report, the rationale for the change from an app UI to a web UI is discussed. Following this, an analysis of the critical components is performed (such as embedded maps, login feature and clean and simple aesthetics). Then, a table that summarizes the testing process; testing of different objectives, how the testing is performed, the results obtained and how long the testing process will last was created. Finally, the feedback was listed for incorporation into future prototypes.

1.1 Change of Concept

The design team recently made the difficult choice of switching from using a coding approach utilising apache cordova, android studio, and JDK to the website building software SquareSpace.

This decision was made in light of the design requirements that our team discussed. In the requirements it is discussed that the aesthetics of our project will outweigh some of the more in depth features. To code a mobile application using android studio would have taken longer than the time our team had allocated and planned for. Being able to run our application on both android and IOS would have required additional steps and programs for us to download and learn in our limited time period.

In light of this, we decided that switching to a website builder would allow us to focus on some of the more aesthetic pieces while still being to add our own codes for features such as the integrated maps and drone tracking element. Put differently, using a site building would be less code-intensive (not eliminating all code, but a good proportion) while allowing us to build a cleaner website.

We also considered the user as one of the reasons we switched. In our team's feedback, we determined that it would flow a lot smoother for us to develop a website UI in relation to an app UI. Recently one of our group members was discussing with a grandparent on how they ordered "Skip the Dishes" on their computer as they did not have a phone. Our team thought this was interesting as this was an age demographic we had not thought about. With this in mind, we thought the website would be more useful and versatile as it would people without phones to order. Yet, people who want to order from their phones would still be able to as the website runs very well from a phone browser.

For these reasons, our team has made the decision to switch from an app UI to a web UI so we can produce a more in depth and refined final prototype that responds to a greater amount of criteria listed by the client.

2.0 Stopping criteria

The website at this point only includes the appearance; there is little functionality to it now. In the next few weeks (see Table 1.0), more features will be added: specifically, some team members will continue to work on improving the appearance of the website, while others will focus more on scripting the website, adding features such as a functional search bar on Google Maps, the drone location and ETC, a functional user account database and login page, permission to provide drone delivery service according to the weather, etc. Most, if not all, of these technical features will either be “functional” or “nonfunctional,” so, the stopping criteria will simply be that, when the features are functional, the test stops.

3.0 Analysis of critical components or systems

Our project consists of many critical components that are essential to the functionality of our website, one of which is an interactive map. Though most of the functionality of the system is not working, the layout includes a search bar connected to google maps where the user enters their address and an interactive map that has the ability to zoom in and out and displays the user's address and restaurant. Another critical component of our project is the login / sign up feature, and the users cannot order food without a JAMZ account. Currently there is no database that stores the date of users accounts, but the functionality of that aspect is planned to be working for the next prototype. On the home page the website prompts the user to make or create an account, while creating the account it requests an address, which will be a saved address for the user. The prototype restaurants, also is a critical part of the project, gives examples of restaurants that will be available to the users, with this feature there are many customizable features, such as prices with on sale option, out of stock or hidden features that can be easily toggled on or off, add to cart button that is functional. Additionally, the ordering food experience has customized drop down menus that a user can pick from, these menus can display different sizes, flavours, added toppings and more, as the user selects different options there is a price display that changes depending on their selection. Last critical system added is a contact feature, this has a dual functionality, firstly it receives feedback: positive and negative from users with a survey that will be emailed to the developers. It also includes immediate contact with the Jamz developers if any issues were to occur with the drones, software issues or any concerns involving the quality of food that will be directed to the respective restaurants.

4.0 Prototype Test Plan, Analysis and Results

Table 1.0 Prototype test plan and results description

ID	Test Objective (Why)	Description of Prototype Used and of Basic Test Method (What)	Description of Results to be Recorded and how these Results will be Used (How)	Estimated Test Duration and Planned Start Date (When)
1	To ensure that all buttons works and the links lead to the correct page	Page linkages	Record that all links lead to the desired page and there aren't any broken links	(1 Day duration)- Starting Nov 20th
2	To determine if registration/ login system functions correctly	Entering a sample user's info	Record if the data entered be the user is stored into the google sheet document,	(1 week duration)- Starting November 5th
3	Test functionalities of the cart and all of its features	Cart	Record if items can be added to the cart, the correct sum is displayed, and the user can proceed to payment/ checkout	(2 week duration)- Starting November 5th
4	To ensure that each cuisine type has at least one restaurant page, and that each restaurant page has the basic elements, including menu items, name and photo	Restaurant pages and menus	Record correct meals being shown under the correct restaurants	(3 week duration)- Starting November 5th
5	To test that, when an address is entered, restaurants within the radius of service are shown on the map and that live tracking is available	Google Maps	Record if the maps are displayed correctly with the correct data	(3 week duration)- Starting November 1st
6	To ensure the aesthetics of the website are visually appealing to sample clients	Aesthetics	Receive feedback from different volunteers on their opinions of how	(2 week duration) - Starting

			the website actually looks (color palette, image size, image choice)	October 29th
7	To ensure that the website only allows delivery service when the weather permits	Operating Weather Conditions	Ensure that the user is not able to order anything from the UI in the event that it is unsafe for the drones to operate due to weather conditions.	(3 week duration)- Starting November 5th
8	To ensure that all linkages to different cuisines concert to their specific restaurant lists and that all connections are valid	Order by cuisine	Make sure when you click on a cuisine there are no displayed errors and you can navigate cuisine options forwards and backwards	(1 week duration) - Starting November 5th

For the project test plan the main testing comes from the actual functionality of the website. The current state of the prototype mainly utilises links from different areas to other pages. The actual functionality of some of the more in depth features is something that was not done in prototype one. To test the functionality of our prototype we are exploring if all of the pages can be navigated both in a forwards and backwards direction. Some of the actual features will also be tested such as the login information save by testing out what can happen when people do not enter their information fully. We can also make sure the cart function can not be overloaded. Our team will also be looking to see if it is possible for us to crash our website to see if it has any flaws. Lastly the transformation from website to mobile can be examined. All of the tests above in the table will be examined while using a web browser.

4.1 Assumptions

Assumptions made in the test plan include presuming that the color scheme to be readable by all users, that the font and its size is comfortable for all, that the website is easily found by customers, that the website is easy to navigate, etc.

4.2 Additional components to add

Table 2.0 Future criteria needed

Criteria that still needs to be added in Prototypes II and III						
Criteria	Embedded Maps (order by distance)	Weather Location	Confirmation of Order	Login page	Log in tab (top-right)	Sample restaurants*
Criteria Appears	Y	N	N	Y	N	Y
Criteria Functions	N	N	N	N	N	Y
* Items that exist but need more of						

Table 2 summarizes a list of criteria that need more work on. Some, such as weather location and confirmation of order, are non-functional and don't appear on the website. Others, such as the login-page and the embedded maps, appear on the map but are yet to work. Finally, sample restaurants are an example of things that work, that are also incorporated but that the website needs more of.

4.3 Prototype

Instead of including images; here is a link to view the website:

<https://sparrow-rabbit-bfmf.squarespace.com/>

Password is: Design1103

A suggested path to test our website would be:

- 1) Home Page
- 2) Scroll down to order now or sign up
 - Create an account (for the moment we are able to store the info inside the database, however we have not yet created code to verify the info)
- 3) Order by Cuisine -> Italian -> Enoch's restaurant

Further things you can check: Checkout, order by location (not functioning but showing what it will look like), Ally's Avocados (found in american restaurants), the review and the contact us pages.

5.0 Feedback and Comments

The feedback group that our group chose to target includes other UO engineering students, relatives, and the JAMZ team.

5.1 Feedback and comments from UO engineering students

Overall the five engineering students that provided feedback, were really impressed by the first website prototype. The students thought that the website looked visually appealing, and they found that the website ran smoothly. Also, the students were impressed by the functionality of the login page and the functionality in the mobile browser. Some of the constructive criticism included changing the colour scheme on the front page. One student indicated “The white text on the white background makes it hard to read. Potentially, adding a block behind the text in front of the image or implementing a drop shadow will solve the issue”.

5.2 Feedback and comments from relatives

One of the team members asked a grandparent for feedback on the website in order to ensure that we surveyed a varying age demographic. The grandparent was very impressed that we chose to implement a website instead of a mobile application as they don't use a mobile device on a daily basis. The individual thought that the website looked very modern and futuristic. However, this individual thought the website was a little bit difficult to navigate and they struggled when trying to place an order.

5.3 Feedback and comments from JAMZ

to mabus036, zbada051, aahme157, lrodi045, malja051, jstee105, nmera043, ychen680, aalva071, jhayc024, dknox

Hello JAMZ team!

My team and I have finished our first prototype for the JAMZ web UI. The skeleton of the site has been created (i.e. the layout is done, sample restaurants are created and a "search by location" model created).

Feedback is incredibly important for our team, so we were wondering if any feedback concerning the layout and the look of the website could be given (other aspects such as a functioning embedded map and confirmation of order will be created in later prototypes).

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Thank you in advance for the feedback!

Unfortunately, a week passed with no answer. Therefore, the feedback will be sought during the client presentations.

6.0 Conclusion

To sum up, this document outlines the reason the team switched from a mobile to web UI, explores the ways in which the team can test the current prototype and make future improvements, details the feedback the team received from a variety of users, including the client, and explains how the team may implement the feedback in future prototypes. This document concerns the first prototype, and the feedback that the team receives will be of significant help to develop the next prototypes.