Deliverable E- Project Plan and Cost Estimate
Group Members:
Jack Haycock
Enoch Cheng
Ally Alvarado
Jacob Fortin
Nathan Meraw
October 22nd, 2020

Abstract

This lab report focuses on the three prototypes. It contains the plans for each of the three prototypes, their due date and what they will contain. Additionally, critical components for each component are listed. Finally, significant project risks are listed, solutions to these problems are offered and a cost estimation is performed.

1.0 Introduction

In this report the initial design of the UI is included for reference, which is done on Adobe XD; three prototypes are laid out with their associated components and deadlines. This serves as a guide for the team to follow, so that the deliverables and prototypes are turned in on time with these tight schedules. Furthermore, the significant potential project risks and their associated contingency plans are discussed. Finally, the cost estimates for the project are laid out and listed in the bill of materials.

2.0 Current concept idea

Our current concept idea is made with Adobe XD; see Appendix for details.

3.0 Prototype I (November 5)

Prototype I is the simplest of all three prototypes, it contains the bare skeleton of our main idea. In this case, it should contain the very basic elements and a list of all the critical components.

3.1 Plan

For the first prototype, the basic structure of the mobile UI will be made, i.e. the visual component will be done. However, none of the components will be functional. The effort will be concentrated on having *every visual client demand* present on the site, correctly placed and looking like how it would look on the final prototype. For instance, one of the client demands is "embedded google maps". So, the page for the embedded map will be there, however it will not be functioning. Essentially, prototype I will be a representation of the final idea.

The critical components of this prototype is, essentially, every feature and spec required by the client to appear on the UI. They all need to be shown on the first prototype because all subsequent prototypes are only adding functionality to these features. However, priority and time must be spent on the features and specs that were of highest importance (see appendix II), these are the ones that must look the best (eg. signup is prioritized over language).

Item	Deadline
Discussion on objective; critical element; IDE (meeting)	Sunday, October 25, 2020
Initial design of the UI (meeting)	Tuesday, October 27, 2020
Initial design of the UI (meeting)	Thursday, October 29, 2020
Evaluation and feedback (meeting)	Sunday, November 1, 2020

Deliverable F: Prototype I and Customer Feedback	Thursday, November 5, 2020

Table 1.0: Prototype I schedule

4.0 Prototype II (November 12)

Prototype II contains the functionality of our project. In this case, it contains all the technical aspects of our project.

4.1 Plan

Prototype II will focus on the technical aspects of the UI, including an embedded Google Maps, a functional cart with items and total price, login page, restaurant locations and menus, drone location and ETA of food, etc. This prototype will aim to have all functions working properly, and will make use of Apache Cordova, which allows us to code a mobile app using HTML, CSS and JS on both Android and iOS.

Item	Deadline
Improvement on the initial UI; feedback (meeting)	Sunday, November 8, 2020
Feedback and touchup on UI (lab 9)	Thursday, November 12, 2020
Deliverable G: Prototype II and Customer Feedback	Thursday, November 12, 2020

Table 2.0: Prototype II schedule

5.0 Prototype III (November 26)

Prototype III is the combination of prototype I and II.

5.1 Plan

Prototype III will be a comprehensive combination of both Prototypes I and II, in other words, it has to be fully functional and user-friendly. It must include all of the critical subsystems, and ideally even more functionalities than what has been listed in Deliverable D; this includes an embedded Google Maps, a cart, a login/signup page, restaurant and menu pages, drone location, ETA of the food, etc. It must also consider feedback from customers and implement them if necessary or possible.

Item	Deadline
Improvement on the UI; feedback (meeting)	Sunday, November 15, 2020

UI day; feedback (lab 10)	Thursday, November 19, 2020
UI day (meeting)	Sunday, November 22, 2020
Feedback and final touchup on UI (lab 11)	Thursday, November 26, 2020
Deliverable H: Prototype III and Customer Feedback	Thursday, November 26, 2020

Table 3.0: Prototype III schedule

6.0 Significant project risks

Project Risk	Contingency plan
Corrupted File - All work loss	Create Backups at set intervals and after big milestones (i.e every week and after every deliverable)
Integrating back-end and front-end	Communicate with clients to confirm our UI software is compatible with their backend plan; additionally, begin early to resolve any technical issues that can arise
Loss of database information (logins, user profiles etc)	Backup the database info at set intervals
Trouble integrating work from different people	Go over the code as a team, simplify it until it works then try integrating again
Integrating far too advanced codes; it becomes non functional	To avoid this, we stick to things that aren't drastically above our skill set and nothing that is too time consuming to learn in our given time. If it it too complicated, we discuss with the client alternatives (eg. drop the feature completely or simplify it)
Security breach on the mobile UI (loss of privacy info; such as credit card or address)	Implement security features and fail-safes (site shutdowns if it senses a threat). Backups done regularly

Table 4.0: Table of significant project risks and contingency plans

Table 4 lists several project risks that the team can run into while creating the mobile UI. The majority of these risks revolve around the loss of information (through corrupted project files, accidental removal of all code, loss of files, security breaches etc.). Fortunately, many of these risks can be mitigated by performing backups at a regular interval or after big milestones (so a loss of information will only lightly affect the project). The other risks revolve around the complexity of integrating different sections of codes (code from other people, back end and front end etc.). This can be overcome by starting the integration of these segments of code early (i.e. not the day before) and if someone has a lot of trouble integrating the code, the team can go over it together. If it still is complicated, the code can be simplified to its bare essentials, integrated, then rewritten.

7.0 Cost Estimation

In this section of the report the estimated project costs are layed. Since the project this semester is completely digital there are no actual costs at the time that this deliverable is being written.

7.1 Bill of Materials

Bill of Materials				
Item No.	**Qty.**	**Product**	**Cost**	**Description**
1	1	Adobe XD	$0	Adobe XD is a user experience design tool for mobile apps that is used to visualize the aesthetic design of a UI.
2	1	Apache Cordova	$0	Cordova uses the HTML/Javascript coding languages to extend a mobile application across more than one platform (i.e. Android and IOS).
3	1	React JS	$0	Used to build user interfaces for web applications and uses existing pieces of code.
4	1	Anime.js	$0	Animation library that makes staggering follow through animations simple.
5	1	Math.js	$0	An extensive math library for JavaScript.
6	1	Bootleg	$0	Allows initialization phases to be registered for an application.
7	1	Bootstrap	$0	Includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins.
8	1	gmaps.js	$0	Allows you to use the potential of Google Maps in a simple way.
9	1	Google Play Store Fee	$25.00 (pre-tax)	One-time fee charged to release an app on the google play store.

Table 5.0: Bill Of Materials for Project

The bill of materials shown in table 5 lists the softwares being used and important javascript libraries that will be needed. Adobe XD will be used to generate conceptual designs of the UI as seen in appendix I. Also, the main software that will be used to write the code for the application will be Apache Cordova, since it

allows for cross-platform coding (Android and IOS). The seven libraries on the lists are important JS libraries that will be needed. Finally, the one-time google play store-fee is included as the last item on the list.

8.0 Conclusion

In this lab report, three prototype plans were developed. They included the due dates, what will be performed in each, how they will be attained. The critical path was also outlined. Following this, the risks for the project were outlined and contingency plans were found for each of the aforementioned risks. A bill of materials was created that included several libraries that could be useful for our project.
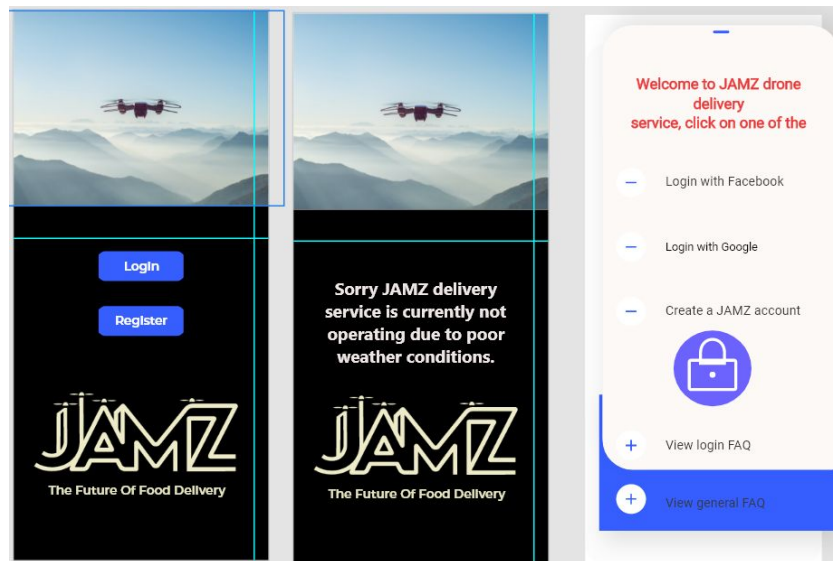
9.0 Appendix I

Figure 1: Initial JAMZ page (Left), UI if weather is too bad for delivery (middle), Registration page (right)

Figure 2: Language preferences (left), Choose your address (middle), Different address pop-ups (right)
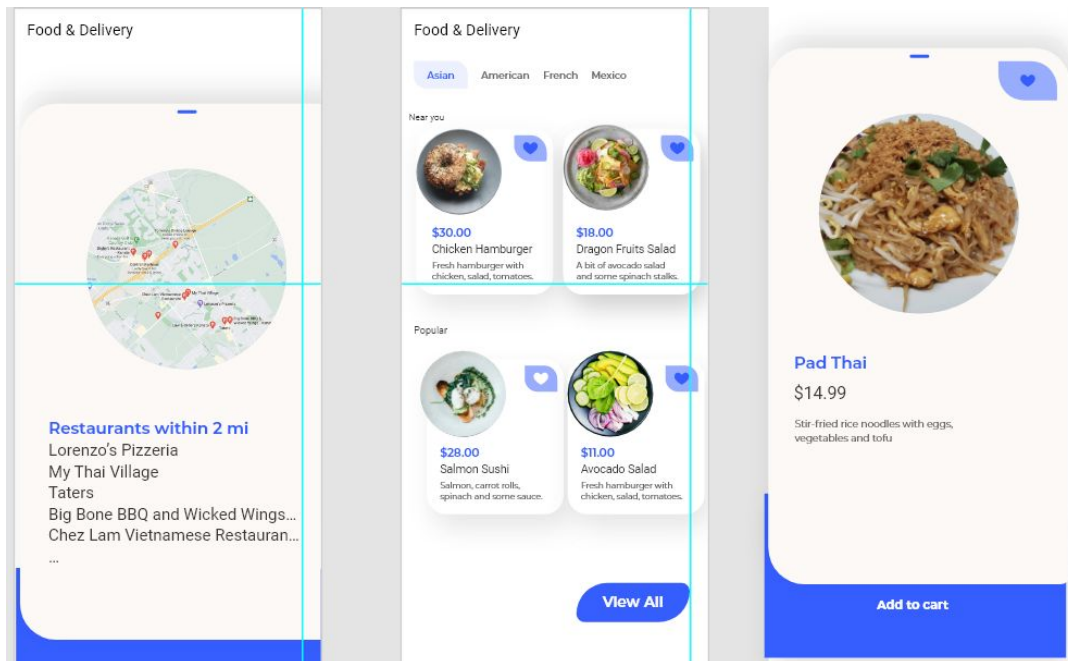

Figure 3: Map tracking (left), Menu choices (middle), Food description and price (right)
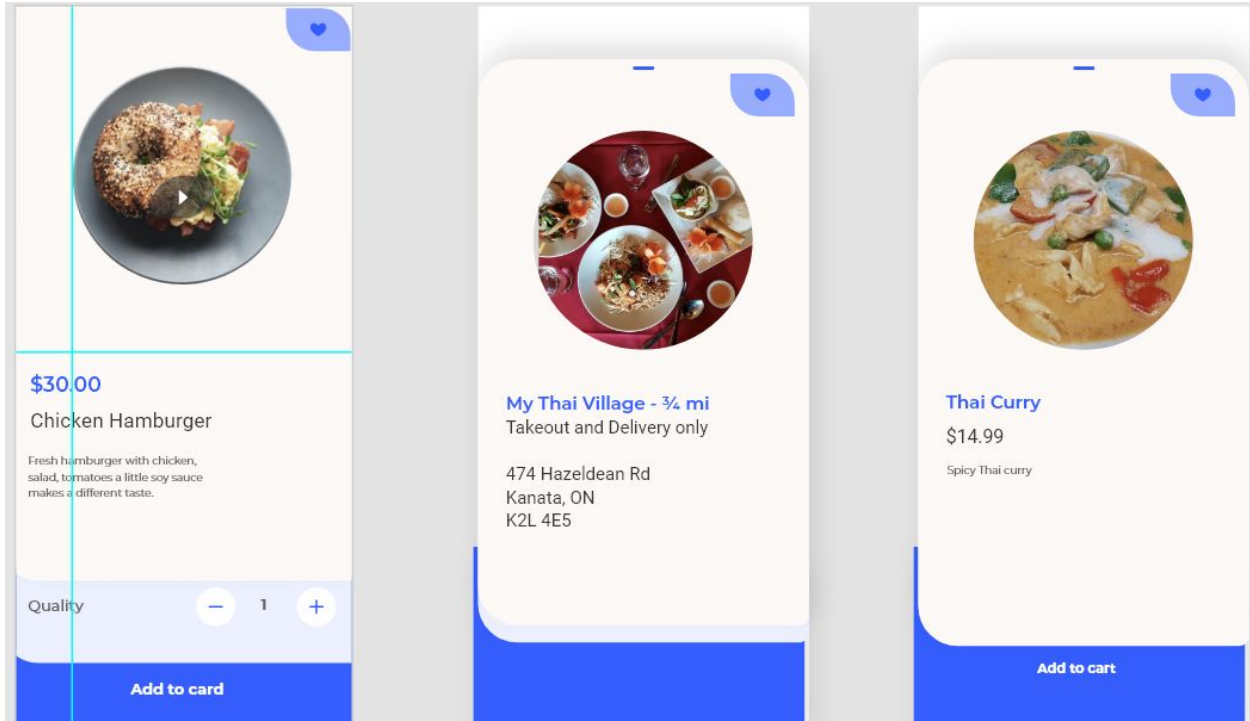
$30.00

Chicken Hamburger

Fresh hamburger with chicken, salad, tomatoes a little soy sauce makes a different taste.

Quality — 1 +

Add to card

My Thai Village - ¾ mi
Takeout and Delivery only

474 Hazeldean Rd
Kanata, ON
K2L 4E5

Thai Curry
$14.99

Spicy Thai curry

Add to cart

Figure 4: Food description and prices (left, right, middle)

Items in your Cart

Jack's bagel and salad shop- ETA 23 minutes.

$30.00
Chicken Hamburger
Fresh hamburger with chicken, salad, tomatoes.

Jack's bagel and salad shop- ETA 23 minutes.

$18.00
Dragon Fruits Salad
A bit of avocado salad and some spinach stalks.

Total: $48.00

Proceed to checkout

XXXX XXXX XXXX XXXX

CURRENT ORDER

Jack's Bagel and Salad shop

0:00
MINUTES UNTIL
ARRIVAL

CLICK ON THE BOTTON BELOW TO
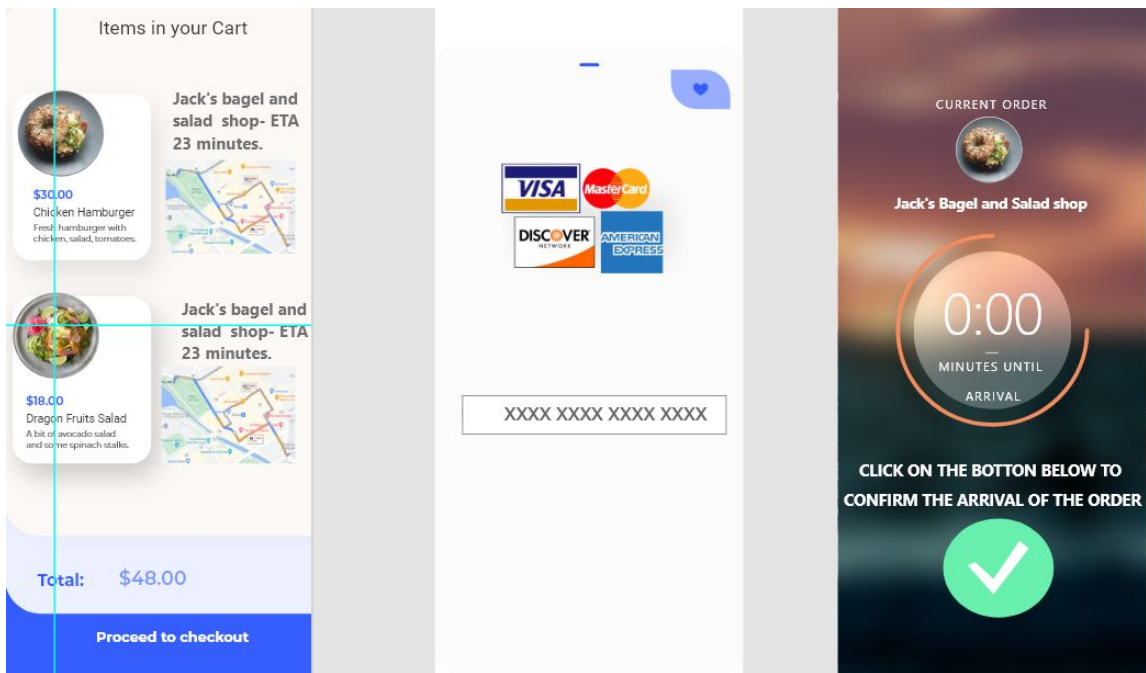CONFIRM THE ARRIVAL OF THE ORDER

Figure 5: Google tracking (left), Payment methods (middle), Confirmation of drone arrival (right)
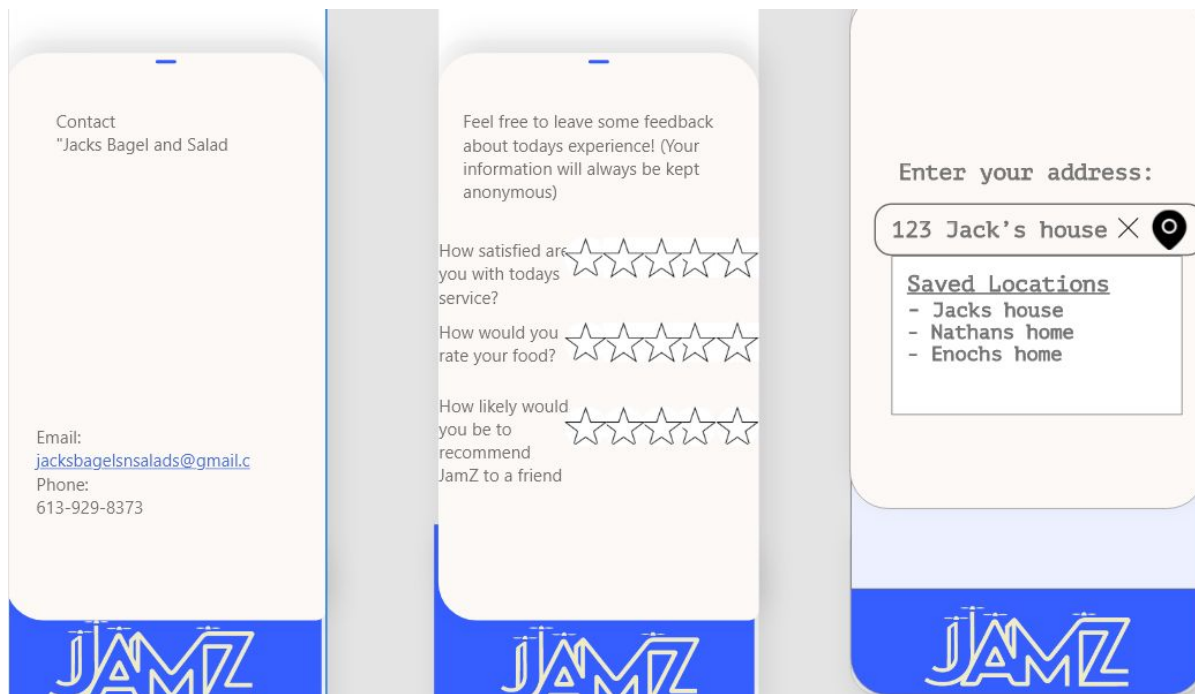

Figure 6: Contact with restaurant owner (left), Review to friends (middle), Saved locations (right)

10.0 Appendix II

Feature and Specs	Importance (/4)	Concept A (/3)	Concept B (/3)	Concept C (/3)
Login, signup	4	3	1	3
Cart	4	1	2	3
Restaurant	3	1	3	3
Food items	4	1	3	3
Language	1	1	1	3
Location	3	1	2	2
Delivery status	2	1	2	3
Mapping, route, ETA	3	1	2	3
Payment	1	0	0	3
Total		~~32~~	~~50~~	**72**

Table 6.0: Importance of Features

11.0 Bibliography

"Get Started Fast." *Apache Cordova,* https://cordova.apache.org/. Accessed 18 Oct. 2020.