**Project Plan and Cost Estimate**

Project Deliverable E

GNG1103[A03]

Team A10

October 22nd, 2020

### **1.** **Introduction**

This document covers the different roles the team members will have, the schedule associated with each role, and the projected amount that this team will spend on this project.

Some acronyms used throughout the document:

UI = User Interface

IDE = Integrated Development Environment

API = Application Programing Interface

JS = Java Script

CSS = Cascading Style Sheets

### **2.** **Project Schedule and Roles**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task Name** | **Task Owner** | **Start Date** | **End Date** | **Duration** |
| Deliverable E | All | Oct. 15 | Oct. 22 | ~ 7 days |
| Find appropriate programming software | All |  |  | ~ 1 day |
| Prototype test plan | All | Oct. 16 | Nov. 5 | ~ 7 days |
| Split application into webpages: | All |  |  |  |
| - Startup | Larry, Clinton | Oct. 22 | Nov. 5 | ~ 5 days |
| - Account creation/guest user feature | Larry, Clinton | Oct. 22 | Nov. 5 | ~ 5 days |
| - Drone tracking and takeoff clearance UI | Larry, Clinton | Oct. 22 | Nov. 5 | ~ 5 days |
| - Customer feedback & reviews | Clinton, Trinity | Oct. 22 | Nov. 5 | ~ 5 days |
| - Shopping cart | Shambhavi, Clinton | Oct. 22 | Nov. 5 | ~ 5 days |
| - Checkout process | Shambhavi, Clinton | Oct. 22 | Nov. 5 | ~ 5 days |
| - Homescreen | Mathias, Clinton, Trinity | Oct. 22 | Nov. 5 | ~ 5 days |
| - Multiple language feature | Mathias, Shambhavi, Trinity | Oct. 22 | Nov. 5 | ~ 5 days |
| Deliverable F: Prototype I | All | Oct. 22 | Nov. 5 | ~ 7 days |
| Client meeting | All | Nov. 5 | N/A | N/A |
| Remodels with client suggestions | All | Nov. 5 | Nov. 12 | ~ 5 days |
| Remodelling layout and features | All | Nov. 5 | Nov. 12 | ~ 5 days |
| Fix bugs | All | Nov. 5 | Nov. 12 | ~ 5 days |
| Finalize aesthetics | All | Nov. 5 | Nov. 12 | ~ 5 days |
| Deliverable G: Prototype II | All | Nov. 5 | Nov. 12 | ~ 7 days |
| Client meeting | All | Nov. 12 | N/A | N/A |
| Remodels with client suggestions | All | Nov. 12 | Nov. 19 | ~ 5 days |
| Link the front-end with the back-end | All | Nov. 12 | Nov. 19 | ~ 5 days |
| Fix bugs (minimum possible) | All | Nov. 12 | Nov. 19 | ~ 5 days |
| Deliverable H: Prototype III | All | Nov. 19 | Nov. 26 | ~ 7 days |
| Final client meeting | All | Nov. 26 | N/A | N/A |
| Prepare for Design Day | All | Nov. 26 | Dec. 3 | ~ 7 days |
| Design Day | All | Dec. 3 | N/A | N/A |

**2.1 Prototype Planning I**

This prototype model will focus on laying out the user interface and the overall layout of the application to ensure efficient and simple use for any users. This includes (in order):

1. Application Flow-chart for user navigation
2. Layout of features, and main indices for application (home screen, cart, account management, explore screen,etc.)
3. Prototype I application development using React JS and React Native for the front end. Note: this step will contain bugs, and the aesthetics of the application will not be finalized at this stage.

Completed by: November 5th, 2020

**2.2 Prototype Planning II**

This prototype model will focus on fixing prior bugs and tweaking the aesthetics and layout based on product feedback for the best possible layout to ensure fluid navigation and use of the application. This stage will finalize the overall design of the application, with some exceptions to minor features within the application (color scheme, icons, logos, pictures)

The planning and execution of this phase will proceed as follows:

1. Discussion and evaluation of changes needed and features to remain for remodelling of prototype
2. Bug fixing from prior phase
3. Remodelling/redefine of application aesthetics, layout, and features
4. Final tweaks and bug fixes

Completed by: November 12th, 2020

**2.3 Prototype Planning III**

At this stage of the process, the application should be finalized with minimal errors and ready for display. The application should contain specific items stated in the interpreted needs of our clients (as well as feedback from prior prototypes) and our proposed design criteria. The only step to further finish this prototype should be to place it in the App store. This final prototype should:

* Link the front-end with the back-end UI
* No/Minimal Bugs
* Fluid navigation throughout the application (no stutters, screen tearing, etc.)
* Have final colour schemes and icons

Completed by: November 23rd, 2020

Design-Day Presentation Ready By: November 26th, 2020

User Guide: December 3rd, 2020

### **3.** **Materials and Costs**

List of Tools for Development:

* React Native JS IDE → Main IDE used for coding the backend and linkage with the front end. Free to use and very versatile.
* Brackets CSS Editor → CSS Editor to edit styles of front-end, this is to make the application look much more professional and cleaner.
* NoxPlayer Android Emulator → used for testing out code from React Native using a virtual emulator
* Google Maps API → Used for importing Google maps to the app, which is inputted for the user to track the package and drones trajectory.

***Note: The software listed above are all free to download and use***

* Possible license for stock images (Shutterstock License = $49 USD/Month for 10 pictures)

### **4.** **Risks and Contingencies**

|  |  |
| --- | --- |
| **Risks & Contingencies** | **App Performance** |
| The drone crashes. | The app will display an error notification telling the customer there was an issue with the drone and their food will not be arriving. They will receive a full refund and a 25% off coupon for their next purchase. |
| The food is cold upon arrival. | The customer will be able to send in a complaint through the customer feedback and they will receive a 25% off coupon. |
| The drone loses connection while on route. | An error message will be displayed saying the food may arrive at a delayed time. They will also receive a 25% off coupon if there is more than a 20-minute delay in the arrival of their food. |
| An incorrect order is brought to a customer. | The customer will be able to give a complaint and receive a full refund with a 25% off coupon for their next purchase. |
| The order never arrives. | If the time to confirm the order (scan QR code) takes longer than the designated arrival time, the customer will be prompted to confirm they have not gotten the order and to file a report. They will then get a refund once the report has been approved. |

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### **5. Conclusion**

In conclusion, the different phases of prototyping are: laying out the user interface for easy and efficient use, optimizing the UI and fixing bugs, and polishing the final product to get it ready for consumer use. The application will run through React Native JS and will incorporate the Google Maps API.

### **6.** **Citations**