Project Deliverable E: **Project Schedule and Cost**

GNG 1103 – Engineering Design

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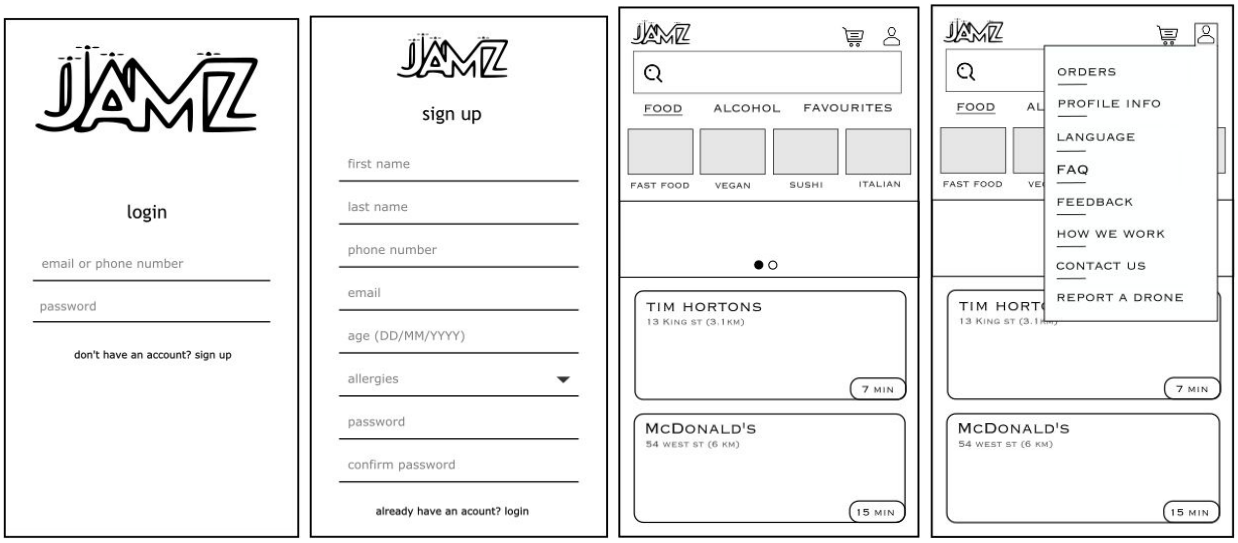
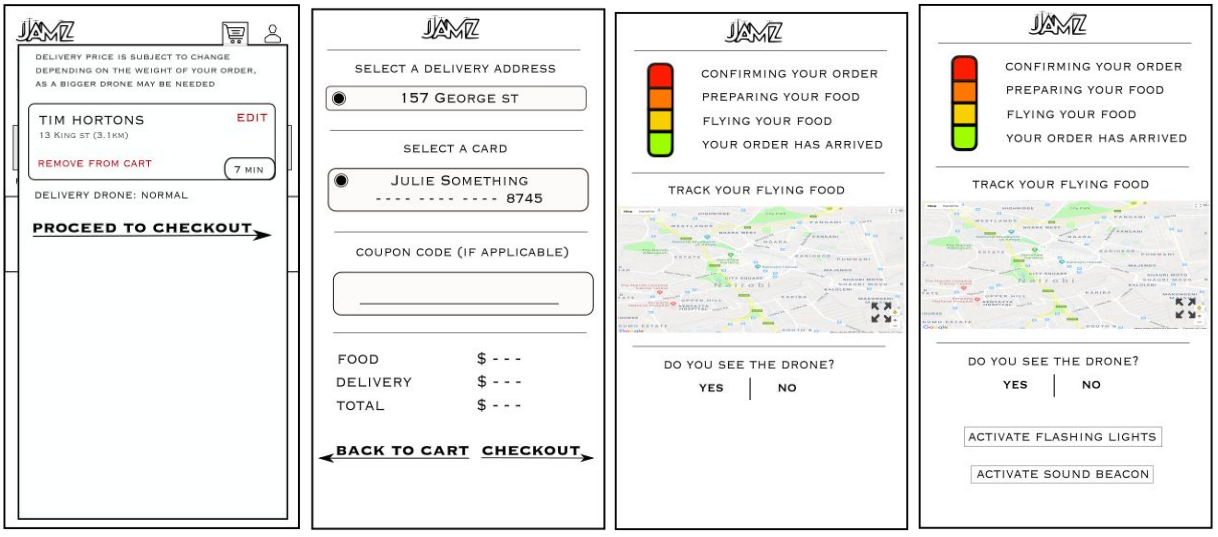
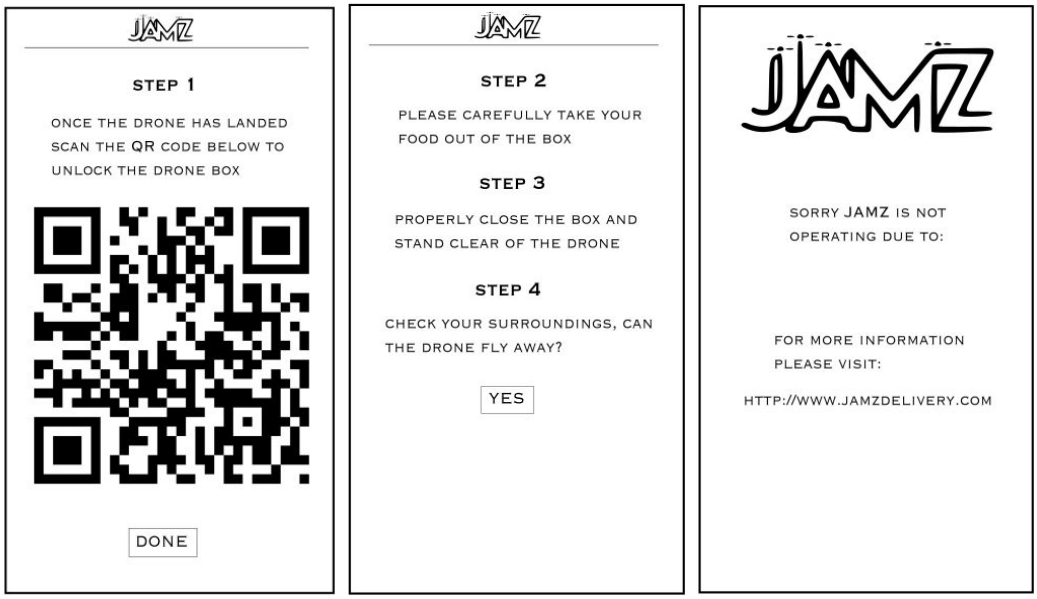




If no, the app will give you two options (shown above) to locate the drone.

If yes, the app will direct you to the steps (shown below)



Project Plan and Timeline

- Prototype 1 Completed: Due October 29th
    a) Individually learn how to proficiently operate within HTML, Javascript, and CCS coding: (2 Weeks)

    Risk: some of us might find this harder than others, that is why we will all try our best to learn as much as we possibly can

    b) Schedule more time to work together over reading week and beyond.

    c) Split up who is responsible for each individual page, starting with the login and error warning page

Risk: everyone's level of code knowledge is different; each member may not be able to produce the most effective page. Some members may produce better than another member. This can be fixed with each member spending more time on learning how to use HTML

    d) Create each individual page for the app and its basic layout without any data input. (include any colours, logo or imagery needed)(2 weeks)

Risk: have to figure out how to corporate imagery and colours tour app through code

    e) Focus on the entire aesthetic of the app (for example: focus on making a button in a specific place not on where the button goes) and brand

marketing through the app (ex. Using logo consistently throughout apps helps users familiarize themselves with the JAMZ logo)(3 days)

Risk: we get too focused on making everything link together and don't finish the base structure, that is why we made the base structure of the app the priority for this prototype

- Prototype 2 Completed: Due November 12th
    a) Learn and improve how to convert code from coding software into an app (generally learn more about coding for an app)

    b) Add more details to the original prototype (1 week)

    Risk: we might not want to modify our code once we get it to work properly, but we need to always improve over our previous design

    c) Work on drop down menus for app and connecting them to their individual pages

    Risk: This will probably be the one of the hardest parts of the app to make and to help us we might look up existing code that we can base our code off of

    d) Work on incorporating all pages together and using button features to have tabs lead to another page or links lead to its required page. (ex. Checkout button actually leads to checkout page)

    Risk: we need to understand how to merge code for each individual page together into one large piece of code

    e) Have the link for website in error page actually lead to JAMZ web browser

    Risk: That the app pages don't flow to the correct pages and properly (our knowledge/level of coding will also potentially be a constraint)

- Prototype 3 Completed: November 26th
    a) Incorporate a database for user data and other important information. We would have to talk with JAMZ
    b) Assign interactions between our UI and the back-end, e.g., functionalize drone tracking and confirmation of delivery pages.

    Risk: this might be too complex to perfect for our level

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Estimated Cost of Prototype Materials

- We may need to purchase a coding software that supports HTML (unlikely since many free ones are available).
- May need to buy a subscription to websites that teach HTML code in depth. However, due to the many sources through youtube, linkedin learning (provided by the university), etc. this seems unlikely.

In summary, this project will likely be completed without many monetary costs.

Objective:

Develop a project plan and a schedule to ensure that your team is able to complete all three project prototypes from now until the end of the semester and provide an estimation of the costs and the components that will be required for your project.

Instructions:

First, you need to include a clear and detailed design drawing that summarizes your chosen concept, having refined your ideas into a single idea based on your work in deliverable D. Teams must then outline a plan and a schedule for prototyping and testing their solution to the client's needs, by the end of the semester. Three prototyping deliverables will be due from now until the end of the semester (see due dates in BrightSpace). The first prototype will be a basic proof of concept and should be made using materials and components that cost very little (e.g. things found around the house, scraps, etc.). A simple analysis of critical components or systems should also be included, based on your current knowledge of engineering science or other material.

The second prototype should be of a (or maybe *the* most) critical subsystem, to ensure that your design will work. An analytical, numerical or experimental model should also be included. Finally, the third prototype should be a fully functional version of your solution (i.e. a comprehensive prototype). Many successful groups do *more* than three prototypes, based on their specific project risks, but at least three are required.

For each iterative step, your effort to improve your solution should be obvious. Your plan should include:

1. A list of all the tasks which need to be completed, an estimated duration for each task, as well as who is responsible for each task
2. A Gantt diagram (preferably made using Trello with BigPicture or with MS Project), which includes all significant project milestones and all dependencies.
3. A list of the significant project risks and your associated contingency plans to mitigate the critical risks that are *reasonably* likely
4. An estimate of the cost for all components and materials which you will need for the different prototyping deliverables described above

For the project, each team will be allocated $100. To spend this money, you must have the cost of your materials and components approved by your TA. A product/project cost spreadsheet greatly simplifies this approval and you need to include links to specific products in this spreadsheet or Bill of Materials (BOM). You will purchase materials and components yourselves and you will bring your TA the original receipts for a reimbursement. It is easier if only one person on your team makes all the purchases, but you must provide the receipts. See https://wiki.makerepo.com/wiki/Purchasing_Guide.

Project Plan Update:

1. Update your Trello task boards and your project plan to include any missing tasks, task responsibilities, milestones, or dependencies, based on feedback that you have received from your PM/TA and based on your better understanding of the project.
2. Include more detailed sub-tasks for the tasks that will need to be completed over the next two weeks. *Important note*:It should be possible for ONE person to complete each identified task or sub-task in the allotted time. The allotted time should also be *reasonable*, based on the task owner's availability.

3. Verify and update task start dates and end dates for each task, based on your project progress.
4. Ensure that you have taken into account each team member's *actual* availability over the next two weeks, as well as significant events, such as particularly high course loads, exams or travel, which might be going to limit actual project work progress.
5. Include an updated version of your project forecast/plan as part of this submission, in Gantt chart format. You can include the Trello task breakdowns too, but any such information should be consistent with the Gantt chart. From the updated forecast that you present, it should be possible to determine what task or pair of tasks *each* person in your group:
    - Completed last week (i.e. "**Done**" tasks),
    - is "**Doing**" ("*Green*" '5 things' Trello tasks) and
    - "**Will do**" ("*Orange*" '5 things' Trello tasks) after completing their current tasks, just described above.

    "Red" '5 things' Trello tasks might appear as "Issues" in your plan or they might not. Regardless, all such tasks should be reviewed in your groups, ideally with your Project Manager (PM), during each of your lab sessions. As already explained, one person will likely only be doing one or two 'significant' tasks each week to avoid work overloading issues.

Submission:

Each team (***only one person from each team***) must submit a PDF copy of this deliverable by uploading the file as an attachment into BrightSpace.