



uOttawa

University of Ottawa

GNG 1103: Engineering Design

Deliverable E: Project Schedule and Cost

Project Group C12

Group members:

Names:

Cole Schieman

Melissa Helm

Scott Whittington

Student ID:

300163294

300115543

8915926

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Introduction

In this deliverable for the design project, three tables are presented on the distinct subjects of deadlines, risks, and costs. The tables strengthen the plan for the project in its resolution. A plan adhered to a schedule promotes improved organization, demonstrated in compiling each major task, its owner assigned, and the duration of time, in days, required for its completion. Most significantly, the milestone of the design showcase, when the presentation of the final product is held in audience, acts as a fixed marker for navigating the progress of the project. Overall, the important steps in finishing the project are highlighted in the first table. A plan also benefits in the blunt realization that, along its path to completion, obstacles can happen—foreseeable and manageable, if prepared. Thus, risks—and the solutions thereof—are outlined in the second table. Furthermore, a plan requires structure in the financial sense, owing to the limitations of a budget (here, \$100). Thus, the costs of production—namely, the materials to potentially purchase—are represented in the third table. This deliverable will ascertain a stricter guideline for the activities of the group.

Project Plan

Table 1 - Tasks and their corresponding owner, time frame and due date.

Task	Owner	Duration	Due Date
Deliverable E: Project Schedule and Cost	Everyone	7 days	February 28, 2021
Deliverable F; Prototype I and Customer Feedback	Everyone	12 days	March 7, 2021
Deliverable G: Prototype II and Customer Feedback	Everyone	7 days	March 14, 2021
Deliverable H: Prototype III and Customer Feedback	Everyone	14 days	March 28, 2021
Deliverable I: Design Day	Everyone	9 days	April 8, 2021
Deliverable J: Final Project Presentation	Everyone	6 days	April 13, 2021
Deliverable K: Archive/ User Manual	Everyone	14 days	April 11, 2021

Schedule: Reasoning

A group size of merely three members does not lend itself to much viable division for assigning tasks. The only options stand as three parties of one member each or as a party of two, with another party of one member alone. Such options place unnecessary and burdensome demands on individuals and greatly diminish collaboration—the centerpiece in teamwork. In contrast, a typical group of five members would have been more generous in possible divisions: Parties of two and three members still provide many opportunities for collaboration. Thus, for this group, all three members will be responsible for each and all deliverables.

Gantt Charts

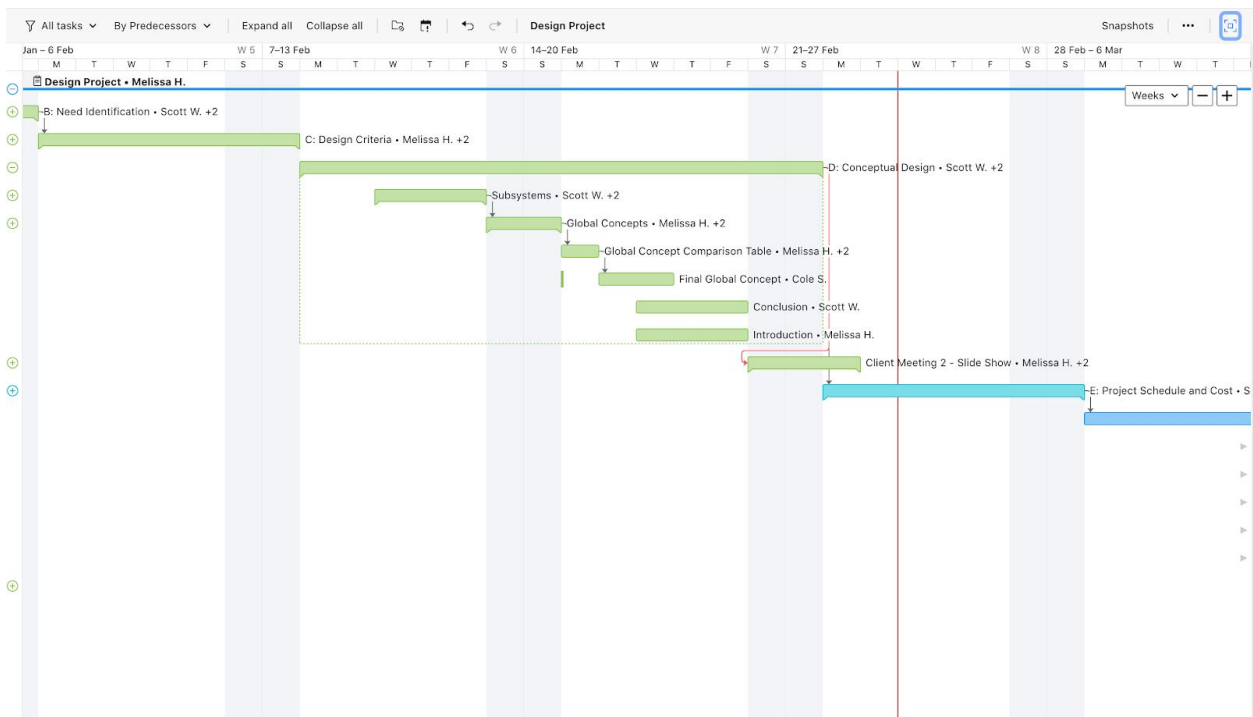


Figure 1 - Gantt Chart showing Deliverable D and the project dependencies

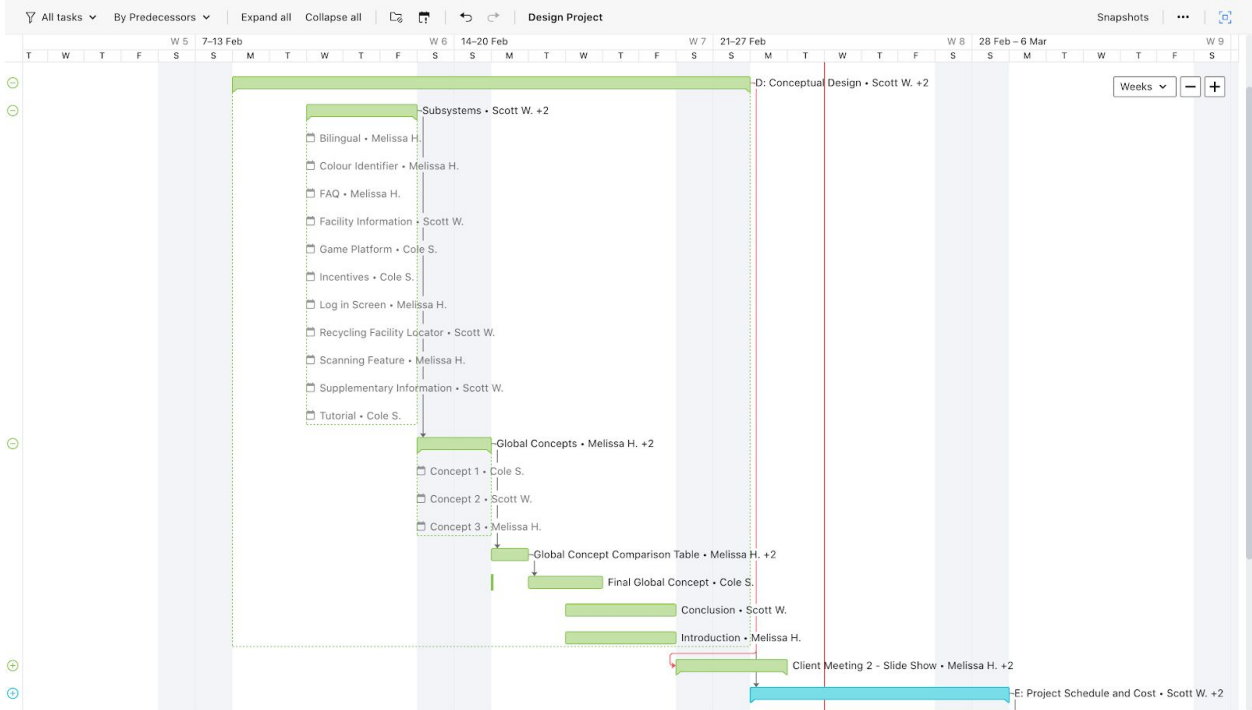


Figure 2 - Gantt Chart showing Deliverable D's subtasks and assignees

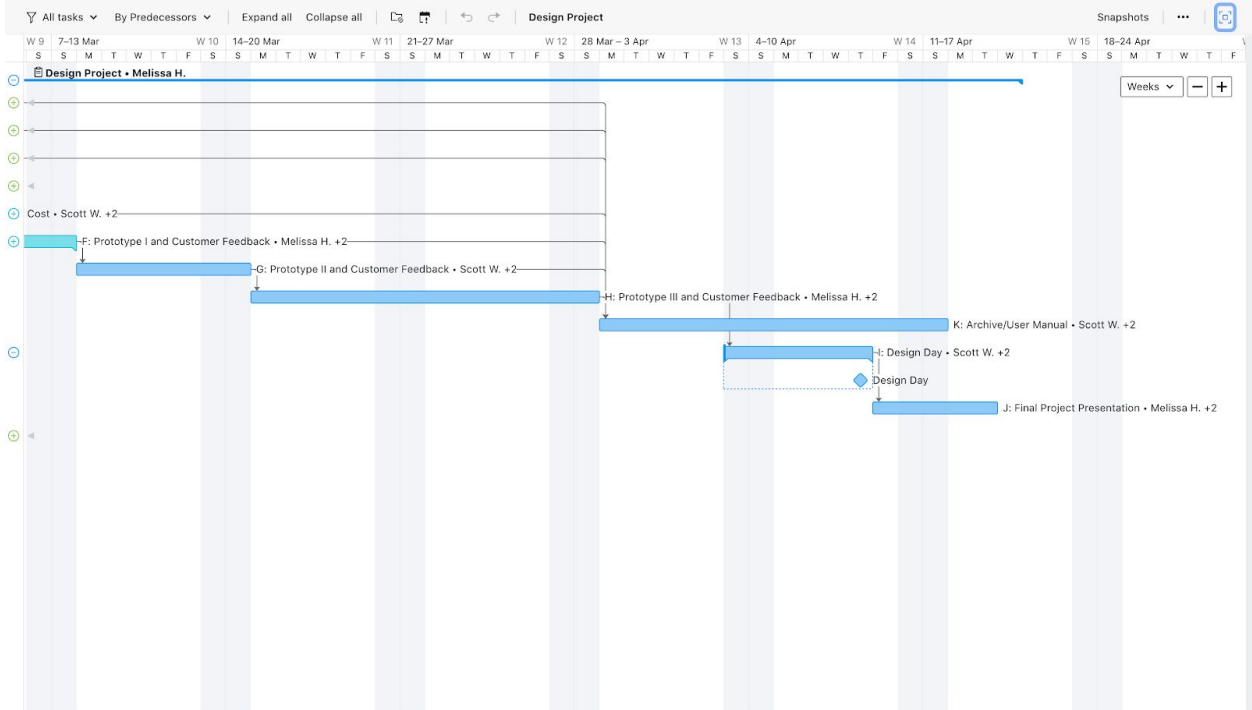


Figure 3 - Gantt Chart showing Design Day as a milestone

Risk and Contingency Plan

Table 2 - List of possible risks that may affect the remaining deliverables, their severity, likelihood and contingency plans.

Risk	Likelihood	Severity	Contingency Plan
Infeasible app feature	MODERATE	MODERATE	Collectively decide whether the app will satisfy all design criterias without it or come up with an alternative feature
Inaccurate or unrealistic timelines for deliverables	LOW	MODERATE	As a team, reevaluate the deliverable timelines and modify the schedule
A team member cannot complete their assigned task	LOW	HIGH	Divide the task among the other members in order to minimize delays
Poor functionality of the chosen development platform (Unity)	LOW	MODERATE	If only one member is affected, encourage use of a different computer. Otherwise, rely on the other members to code, while the affected member will instead focus solely on the writing of deliverables (and other non-coding tasks). If all members are affected, utilize a different platform.

Infeasible App Feature:

- Since we are not familiar with Unity, our expectations of the programs capabilities may not be accurate. This could render certain features unfeasible or impose limitations on the functionality of the feature.
- Depending on the feature, the efficacy of the app may be unharmed. If the feature significantly enhances one of the design criteria, we will have to find a different means of including that feature or develop the app differently.

Inaccurate or Unrealistic Timelines for Deliverables:

- Once a task is dissected, we get a better appreciation for the time it will require to complete. This means that timelines are often being adjusted.
- In order to meet realistic timelines, the deliverables are sorted based on which subsections will require more time and attention.

A Team Member cannot Complete their Assigned Task

- If unforeseen circumstances prevent a team member from following through with their portion of the deliverable, the team will have to reconvene and divide the task into feasible sections.

Poor Functionality of the Chosen Development Platform (Unity):

- Since some of us are using IOS products and some are using Window products, there could be complications if the program is transferred between systems.
- Work loads amongst members will have to be modified in order to compensate for efforts.

Bill of Materials

Table 3 - Items intended for purchase, their corresponding prices and the total amount of money requires

Item #	Item	Quantity	Unit Price	Amount
1	Unity 2019.4.19f1	1	\$0	\$0
2	Vuforia AR	1	\$0	\$0
Total				\$0

Unity 2019.4.19f1:

- Game development software used for the majority of the project.

Vuforia AR

- Augmented reality software used throughout the project

Conclusion

In this deliverable we were able to properly plan out our development process. By laying out exactly when each deliverable needs to be completed, we were able to figure out what needs to be done soon and what we can take our time with. Doing this is incredibly helpful for our team and also takes away some of the stress of the project. During this deliverable we were also able to figure out any possible setbacks we may face as well as how far it would set us back. Just writing that down alone gives our team a sense of security as we are more so prepared for it to happen if it were to. Finally, We created a cost plan to determine how much our project would cost. So far we think it shouldn't cost us anything but time. However it is possible that unforeseen expenses could arise, but with a budget of 100\$, anything that comes up should be handled easily. This deliverable layed out our plan and budget and doing so is crucial to the success of our team.