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GNG1103 Report

Project Deliverable - E

Submitted by

Group B03-5

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Abstract

This report details the organization of the project scheduling to produce a functioning prototype that ultimately fulfills the previously identified needs and design criteria of the client, EllisDon Construction, represented by Patrick Lalonde. The plan firstly includes the identification of project tasks, to predict the time duration and assign owners to each respective task. To further illustrate the completion of these tasks and specific project milestones, a Gantt chart is used to show the gradual completion of the project. A list of project risks, and various contingencies were included to summarize the planned team responses to mitigate these possible risks during the prototyping phases. Further detailed in this report is the Bill of Materials which summarizes the costs associated with the successful completion of prototyping. The provided budget of the project is limited to $100, an amount which was then designated to the various required implementations.

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1 Introduction

The contents of this report detail the anticipated project schedule for successful completion of a functioning prototype for the client, EllisDon Construction on November 26th. The tasks required to complete the prototype which will fulfill all the previously determined design criteria are both listed and displayed in a Gantt chart with identified task dependencies, task durations and milestones. Involved with scheduling, contingency plans have also been developed based on identified project risks and issues that could impact the completion of the final prototype. Furthermore, an estimated project cost analysis is completed in the form of a bill of materials (BOM) which includes the prices of hardware, software and various programs and/or plug-ins, of which the project will be manifested.

2 Project Scheduling

Project scheduling is crucial to completing a functioning prototype which fulfills the needs of the client within the next 5 weeks. This section of the report thoroughly details and displays the schedule that will be followed as well as the responsibilities of each team member. Subsection 2.1 contains a sequential task list that begins following the submission of this deliverable and goes until the completion of the final prototype and the final presentation. These identified tasks are then organized and displayed in a Gantt chart in subsection 2.2.

2.1 Task Identification

Table 2.1.1 Task List

Task ID	Task Description	Estimated Duration (days)	Owner	Depends on task ID:
1	Client meeting 2	0	All	
2	Project Deliverable F	7	All	3,4,5
3	Analyze client feedback from meeting 2	2	LH	
4	Proof of concept	2	BV, VJ	
5	Prototype testing plan and results	2	EJ, MW	
6	Completion of prototype 1	0	All	1,2,3,4,5
7	Project Deliverable G	7	All	8,9,10,11
8	Analyze client feedback from meeting 3	1	LH	
9	Refine prototype testing plan	2	BV	
10	Test prototype 2	2	VJ, MW	
11	Consumer prototype feedback	3	EJ	
12	Completion of prototype 2	0	All	7,8,9,10,11
13	Client meet 3	0	All	
14	Project deliverable H	7	All	15,16,17,18
15	Outline final prototype testing plan	2	BV	
16	Identify prototype objectives	1	VJ	
17	Define stopping criteria	1	EJ	
18	Gather prototype feedback	1	MW	
19	Test prototype 3	2	BV, LH	13,14,15,16,17,18
20	Completion of prototype 3	0	All	14,15,16,17,18,19
21	Project deliverable I	7	All	22,23,24,25
22	Two minute pitch	2	BV, LH	
23	Design day presentation preparation	4	All	

24	Design day visuals	4	MW, VJ, EJ	
25	2 line summary	1	BV	
26	Design Day	0	All	21,22,23,24,25
27	Project deliverable J	7	All	28,29,30,31
28	Prepare project summary	2	LH	
29	Summarize solutions and chosen concept	1	MW	
30	Trials tribulations and lessons	1	EJ	
31	Prepare for presentation	3	All	
32	Final presentation	0	All	27
33	Project Deliverable K	7	All	34
34	Completely document project	7	All	

2.2 Gantt Chart

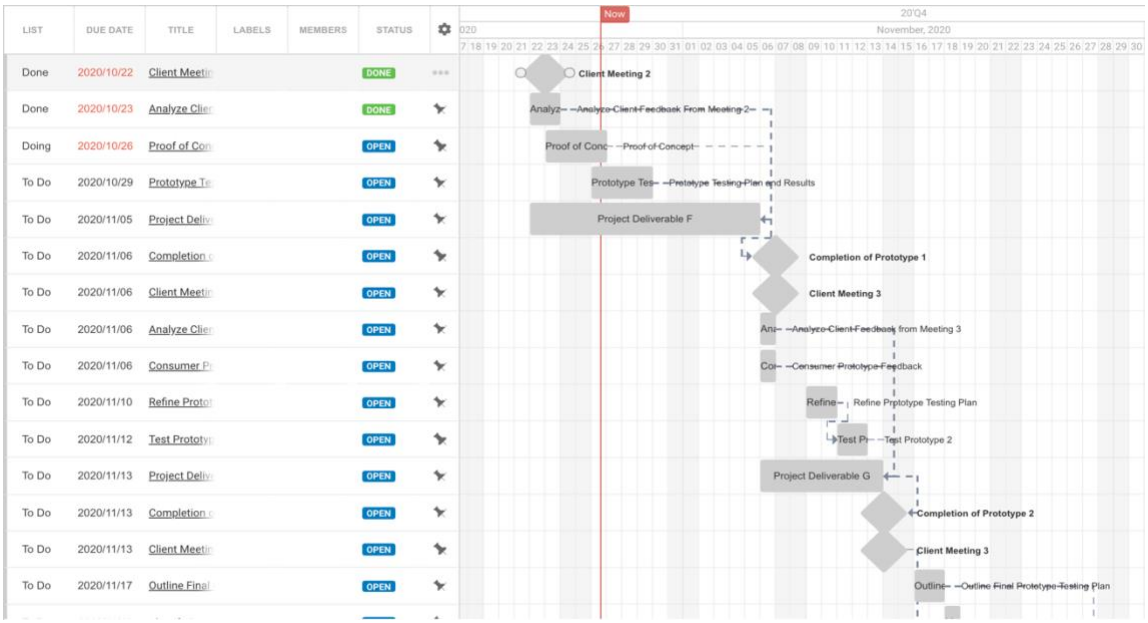

Figure 2.2.1 Gantt Chart 1/4

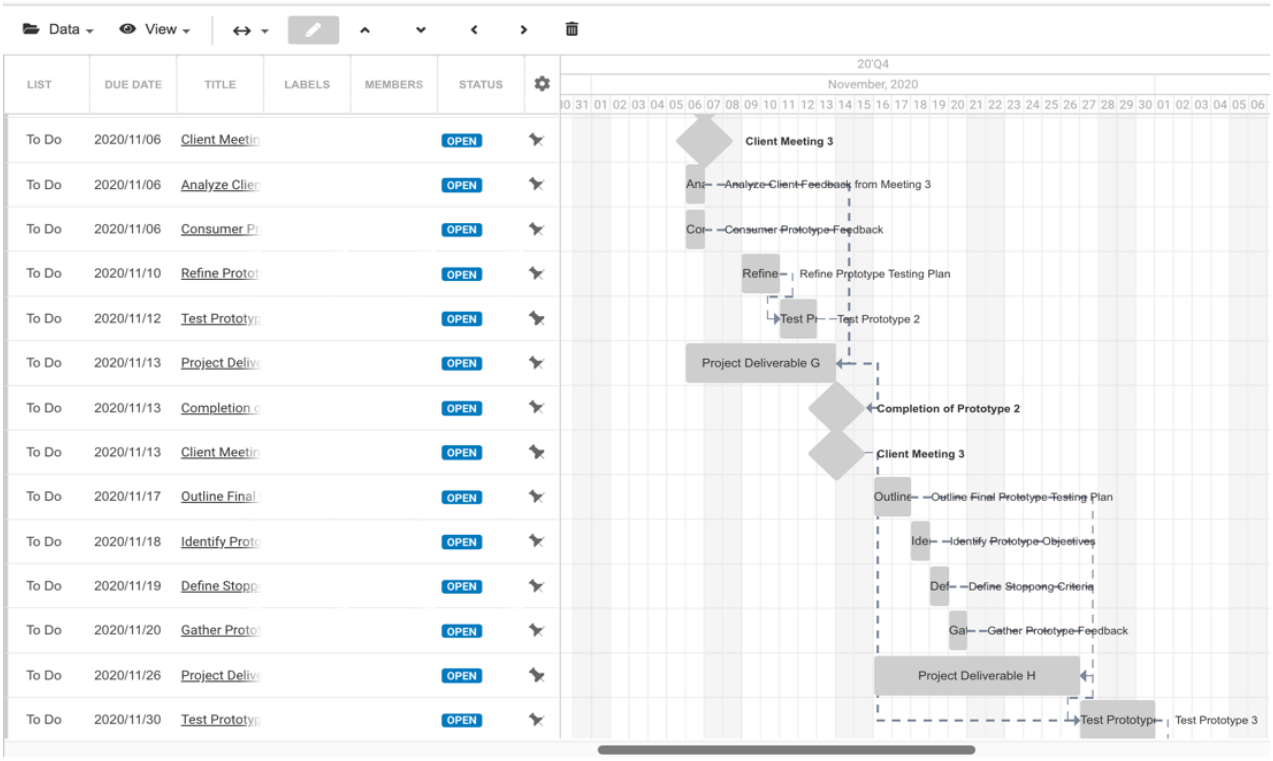

Figure 2.2.2 Gantt Chart part 2/4

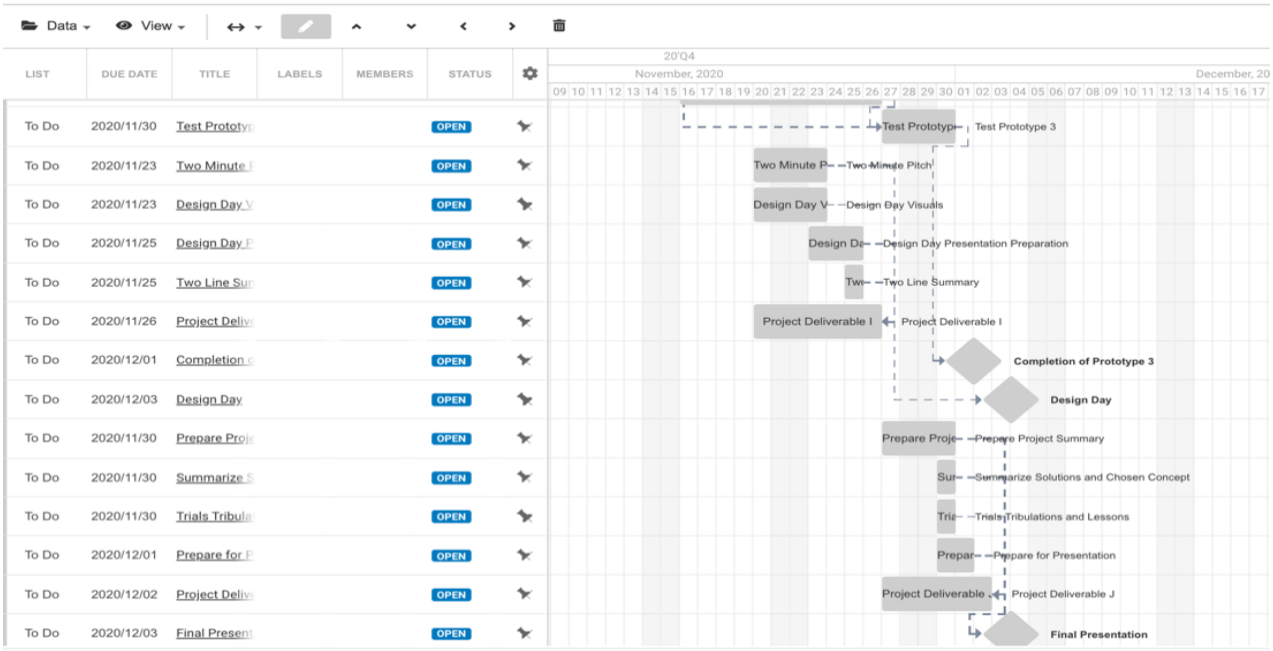

Figure 2.2.3 Gantt Chart part 3/4

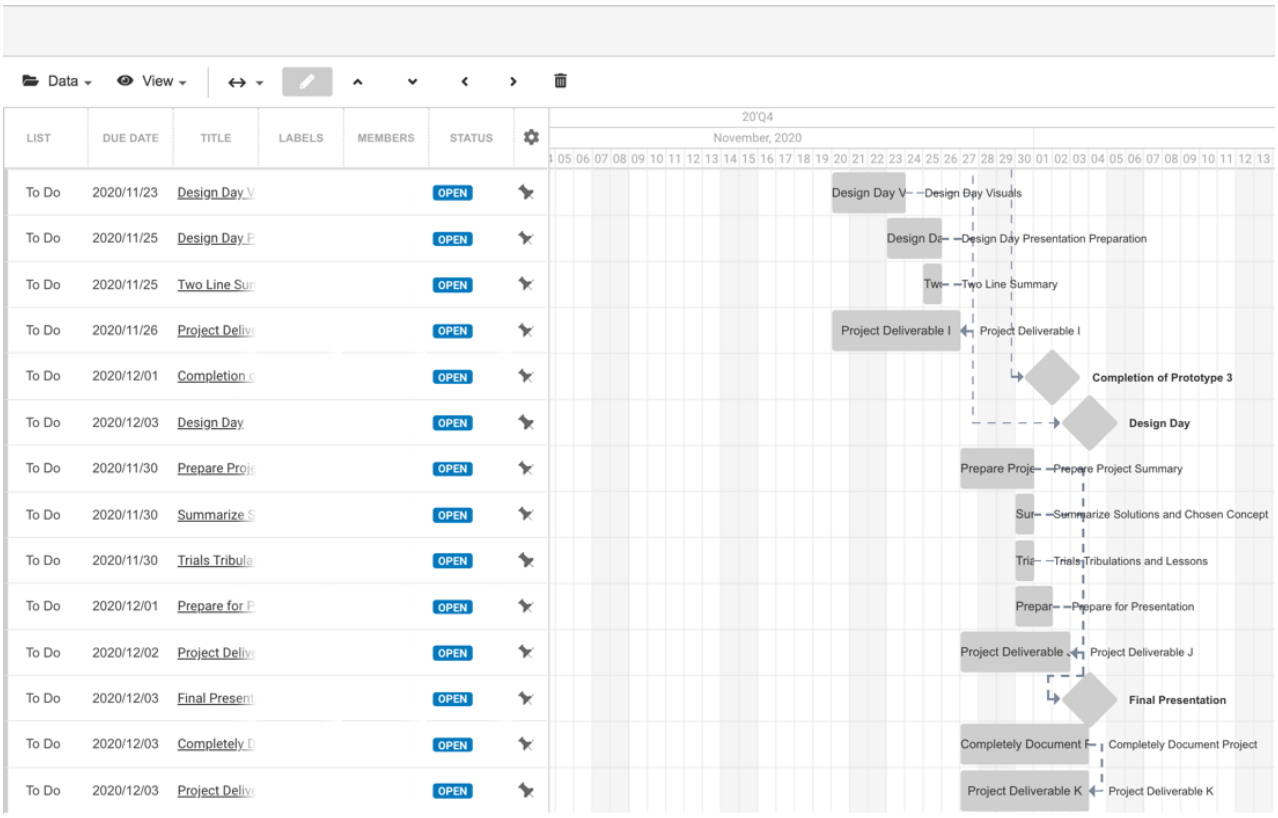

Figure 2.2.4 Gantt Chart part 4/4

2.3 Project Risks and Contingency Plans

There are a few potential issues we could encounter in the development of our prototype, which is why it is important to allow ourselves extra time in our project scheduling to account for dealing with these issues as well as develop contingency plans so efficient development can proceed and a functioning prototype will be complete for design day. One of the biggest risks of our project is using Unity on multiple different devices as we are all individually working on the

same file in Unity. To share file versions we have decided to use Github which will be a crucial tool to mitigate issues with lost files and conflicts between versions of the file. Another risk of the project is that most of the group members are new to using Unity. With limited familiarity in Unity and all its functions and capabilities we may encounter small problems, such as how to implement certain features of our conceptual design. Another issue that could occur is that certain features of our app may be incompatible with the requested devices resulting in the file becoming skewed and the designs do not upload properly. An error with our codes could be the cause of this problem. To ensure it does not happen we will go over each step to ensure it is all working smoothly, as well as perform multiple prototype tests staggered throughout development to spot errors early. As a group we plan to work effectively and efficiently to avoid any of these problems and risks from happening, however we are prepared for when they do.

3 Prototype Cost Estimation

The BOM in table 3.1 outlines all the components and materials required in the project prototyping and overall project plan. It further details the anticipated quantity and cost of each component. As outlined in the chart, two fundamental components for this project (laptop and unity software) did not cost the team, as they were previously owned and provided by the University of Ottawa respectively. The team anticipates using only free assets in the prototyping phases (found on the unity store and online databases), however if costless assets are unavailable, the following table accounts for all materials that could be used.

Table 3.1 Bill of Materials

Item #	Item Description	Quantity	Unit Price ($)	Amount ($)
1	Laptops	5	0	0
2	Unity Software	1	0	0
3	Unity Cross-Platform Plug-ins	0 - 2	0 - 25	0
4	Unity Assests	0 - 3	0 - 10	0 - 30
5	Unity Scenes	0 - 2	0 - 10	0 - 20
6	Unity UI Plug-ins	0 - 1	0 - 50	0 - 50
7	3D – Modelling Software	1	0	0
8	C# Programing IDE and GUI	1	0	0
Total				0 - 100

4 Conclusions and Recommendations for Future Work

This report details a complete and detailed schedule of the planned progression and prototyping that will proceed from the submission of this deliverable until Design Day on November 26th on which our final functioning prototype will be presented. Along with regular scheduling we have also proposed strategies to combat any issues that will arise from uncertainties and issues in the development process. Furthermore a BOM is detailed showing the costs of the materials needed for the prototype, the estimated and goal cost is $0 but unexpected costs have also been accounted for. This week now marks the official start of prototype development and moving forward the focus will be on creating a product for our client, based on the previously outlined concept and the schedule outlined in this document.