

GNG 1103: Deliverable E

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1.0 Objective

The main goal of this project deliverable is to determine a development plan for completing a preliminary and detailed prototype that the team will present to the client. Similarly, the team will provide an estimation of the costs and the components that will be required for this project.

2.0 Introduction

This deliverable shall discuss two main components: the project plan and an estimation of costs with the bill of materials (BOM). The project plan will outline detailed tasks to take place. The BOM will be presented under the project plan and be directed to PM's for parts order.

3.0 Project Plan

Task List:

Figure 1: Table of Tasks

Task	Estimated Duration	Assignment	Dependencies
Conceptual Design Model	1 Day	Team	-
Client Meeting Preparation	1 Day	Team	-
Build Prototype	21 Days	Team	Conceptual Design model
Analyze prototype with client	1 Day	Team	Built Prototype
Record client feedback and satisfaction level	1 Day	Team	Analyze prototype with the client
Update prototype Design as needed	1 Day	Team	Client feedback
Prepare Final Prototype	7 Days	Team	Final prototype design

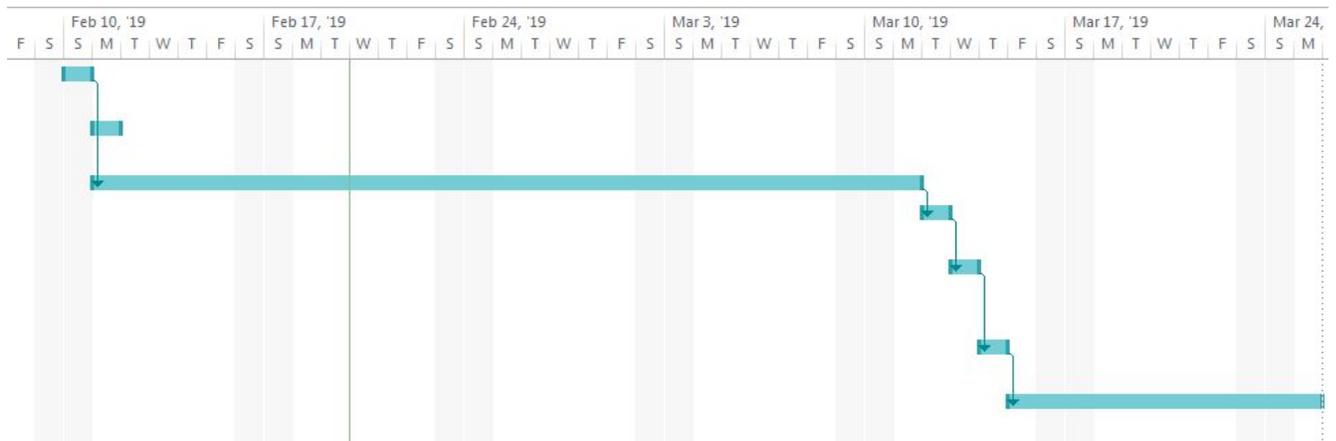
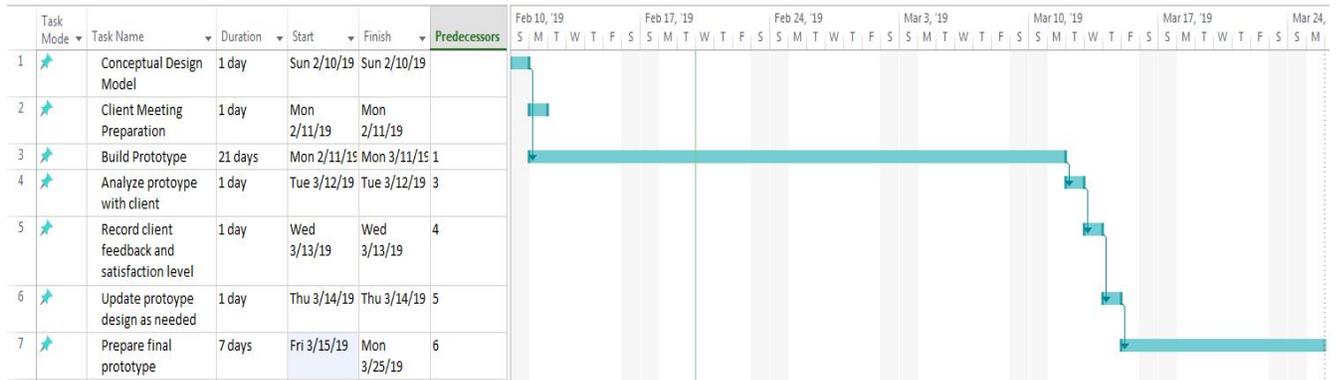
Milestones

1. Final design completed
2. First prototype completed
3. Prototype testing completed
4. Second Prototype completed
5. Third Prototype completed
6. Prototype vetted by client
7. Project Closing

Gantt Chart

A Gantt Chart is a tool used to break down each step from demonstrating the project proposal, feasibility, presentation dates and visualizing the schedule of the project. The chart represents the number of task that will be performed throughout the semester. An essential tool for time and project allocation (Gantt, 2017).

Figure 2: Gantt Chart



		Task Mode ▾	Task Name ▾	Duration ▾	Start ▾	Finish ▾	Predecessors ▾
1			Conceptual Design Model	1 day	Sun 2/10/19	Sun 2/10/19	
2			Client Meeting Preparation	1 day	Mon 2/11/19	Mon 2/11/19	
3			Build Prototype	21 days	Mon 2/11/19	Mon 3/11/19	1
4			Analyze prototype with client	1 day	Tue 3/12/19	Tue 3/12/19	3
5			Record client feedback and satisfaction level	1 day	Wed 3/13/19	Wed 3/13/19	4
6			Update prototype design as needed	1 day	Thu 3/14/19	Thu 3/14/19	5
7			Prepare final prototype	7 days	Fri 3/15/19	Mon 3/25/19	6

4.0 Bill of Materials (BOM)

BOM (components that will be required for this project and their estimated costs):

1. Double-wall corrugated cardboard
 → Approx. 56000 cm²
 → cost: \$26USD per 5x14400cm²
2. Single-wall corrugated cardboard
 → Approx. 37400 cm²
 → cost: \$38USD per 5x36000cm²
3. Waterproof spray coating, or wax coating
 → Approx. 312g per can
 → cost: \$14.99

Figure 3: Bill of Materials

Name	Quantity	Price	Product Link
Single-wall corrugated cardboard	~37400cm ²	\$38 USD per 5x36000cm ²	https://www.staples.com/Corrugated-Sheets-96-x-60-5-Bundle-SP6096/product_1499891
Double-wall corrugated cardboard	~56000cm ²	\$26 USD per 5x14400cm ²	https://www.staples.com/Partners-Brand-Double-Wall-Corrugated-Sheet-48-x-48-5-Bundle-SP4848DW/product_946736
Waterproof spray coating	1 can	\$14.99/can	https://www.canadiantire.ca/en/pdp/thompson-s-waterseal-clear-wood-aerosol-protector-0482262p.0482262.html?gclid=Cj0KCQiAtbnjBRDBARIsAO3zDI-16J4a6tTj_vz0KfdDRcFicYxDtgetOSwE7Y8Y2cHo2chKjz-5UWYaAtgdEALw_wcB&gclsrc=aw.ds#store=197
	Total:	\$ 99.70 CAD (ex. tax and shipping)	

Risks & Assumptions

Significant Project Risks:

1. The required materials will not be in stock (likeliness: probable)
2. The required materials will not be sold at the current price research is done at (likeliness: low)
3. The cardboard will not be strong enough to hold the minimum weight requirement (likeliness: low)

Contingency Plan to Mitigate/Prevent Risks (respectively to significant project risks):

1. Request the material to be put on hold before purchasing
2. Pre-order the material at the set price to prevent a price increase between now and buying the material
3. Switch to a stronger type of cardboard such as triple-walled corrugated cardboard

4.0 Conclusion

The project plan consists of the designing the conceptual model, preparation for the client meeting, the prototype for the design, analyzing the prototype with the client, recording the feedback from the client as well as the client's level of satisfaction, altering the design accordingly, and finally, preparing the final prototype. The design for this project consists of only three materials: single-walled corrugated cardboard, double-walled corrugated cardboard and waterproof spray coating. For the single-walled corrugated cardboard, roughly 37400 cm² of material will be needed. Approximately 56000 cm² of the double-walled corrugated cardboard will be needed, and we plan to use one can of the waterproof spray coating. The cost for these materials are \$38 USD per 5x36000cm², \$26 USD per 5x14400cm² and \$14.99/can, respectively. In conclusion, we don't seem to have any serious feasibility restrictions. Some of our risks are trivial and some we will need to keep a close eye on to stay on top of, but barring a large organizational implosion on our part this project should proceed smoothly as planned.