Project Deliverable E: Project Schedule and Cost
GNG 1103 – Engineering Design
Faculty of Engineering – University of Ottawa

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:

Teams must 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 Blackboard). 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, in order 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).

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 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

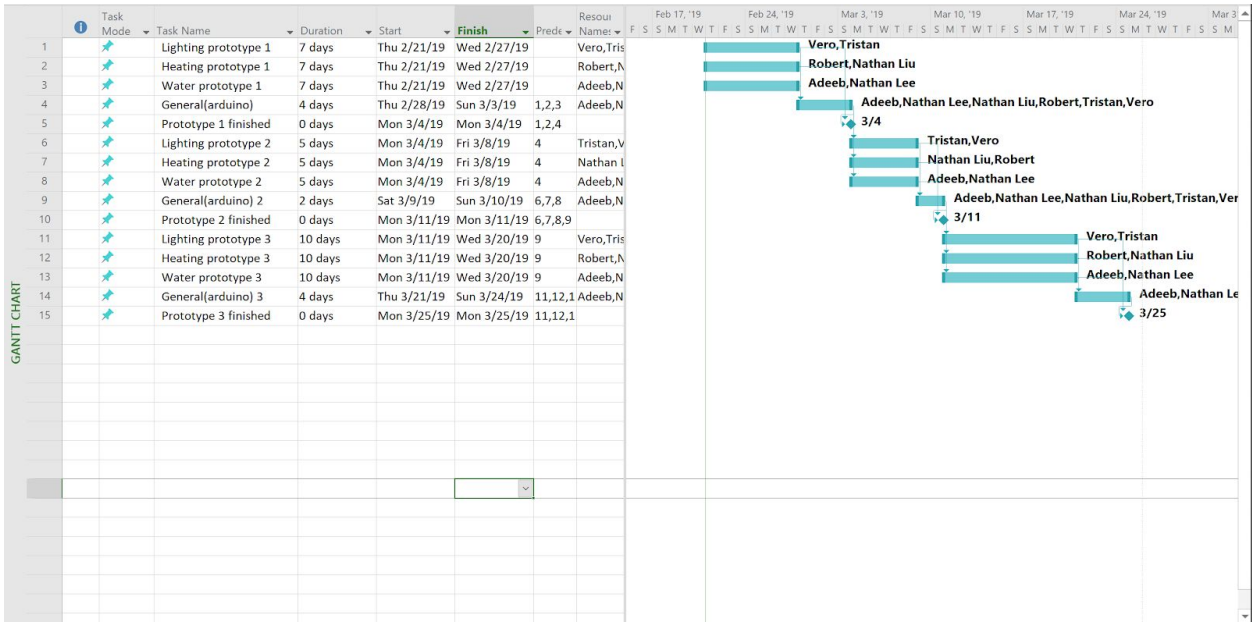
For the project, each team will be allocated $100. To spend this money, you must have the cost of your materials and components approved by your TA. You will purchase materials and components yourselves and you will bring your TA the original receipts for a reimbursement. It is easier if only one person on your team makes all the purchases, but you must provide receipts.

Introduction:

For Deliverable E the main objectives for the group were to outline a plan/ schedule for our prototypes, provide an estimation of the costs, and list the components that will be required for each sub-group. By the end of this deliverable we will have a solid idea as to what we have to do for the remaining days of the project, and we will have a clear idea as to how much we will have to spend and what components we will have to get. The list of components which our group will need, will be on the excel file attached with this report.

Prototyping Schedule + Outline

Prototype	Task	Estimated duration	Person responsible
I	Lighting	7 days	Vero, Tristan
I	Heating	7 days	Robert, Nathan Liu
I	Water	7 days	Adeeb, Nathan Lee
I	General (arduino)	7 days	Everyone
II	Lighting	7 days	Vero, Tristan
II	Heating	7 days	Robert, Nathan Liu
II	Water	7 days	Adeeb, Nathan Lee
II	General (arduino)	7 days	Everyone
III	Lighting	14 days	Vero, Tristan
III	Heating	14 days	Robert, Nathan Liu
III	Water	14 days	Adeeb, Nathan Lee
III	General (arduino)	14 days	Everyone



Estimation for cost

Water	**Lighting**	**Heating**	**General**
Motion Sensor ($4)	Motion Sensors ($4.46)	Temperature Sensor($1.6)	Arduino(No cost)
Sink ($11.50)	Switches ($2.68)	1 LCD Display($9)	Wires (No cost)
Faucet ($10)	Light bulbs ($3.35)	2 buttons($0.69)	
Hose ($12)	Inside light fixture ($2.23)	Relay($5.59)	
Wood (Unknown)	Outdoor light fixture ($6.18)		
	Switch plate ($2.80)		
	Switch box		

	($4.50)		
	Light fixture box ($3.36)		
	Merets ($3.17)		
Total: $37.50	Total: $32.73	Total: $11.29	Complete Total: $87.09

Based of the table, our group will be needing around $90.

Conclusion:

In conclusion, the objective was to ultimately get a final schedule for every member of the team to follow in order to stay on track and submit the deliverables on time. The schedule determined was to split up the tasks of the entire automation team into smaller parts. The smaller parts where determined in a group meetings where Tristan and Veronique were to only work on the lighting portion, Robert and Nathan Liu were to do the heating part, and finally Adeeb and Nathan Lee were to work only on the water part. After this was done each smaller team then did research on their portion of the project to find solutions and cost for everything needed to construct the solution which was shown in the table above. This deliverable shows all the tasks that every team member needs to do as well as the cost to get everything done, which in turn helps immensely in the future as team members can easily stay on track with the project by simply glancing at this deliverable.