Project Management

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GNG 2101

Presented to:
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By:
Group Z11

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Objective:

Conduct a feasibility study, provide a bill of materials and parts (BOM) and develop and track a project plan. Portions of this workbook can be used as a
draft for Project Deliverable C

Introduction:

This deliverable will extend deliverable c1, with a feasibility study, bill of materials (BOM) and a project plan. The feasibility study displays problems we may experience or have already experienced and our solutions to them. The bill of materials lists the resources we are using to create our product. Finally the project plan shows our tasks, who is responsible for each and when they deadline to complete them is.

Initiation:

The MakerLab requires an online interactive soldering tutorial that is easily accessible to students and contains the content of the in-person tutorial at a max price of 20$ (requires minimal equipment and no previous experiences).

Description:

An online course that provides a detailed tutorial on soldering and hazard protection, a video that introduces all the tools and steps for soldering, and a lab with the real physical property as a playground for the students. We also provide the option of a soldering kit for those who need more hands-on skills, along with more tutorial videos for those with the kit.

Solution Benefits and drawbacks:

Benefits:

Our soldering tutorial is completely online (besides the optional soldering kit) that can provide beginner soldering lessons anywhere, and is open to everyone in dire need of some soldering knowledge. Having the optional soldering kit also means that those who are willing to spend the money and are interested enough have the option to experience a more authentic soldering lesson. This means that our project will be accessible to essentially anyone looking to learn to solder. We are also planning on providing students with the option to skip/repeat the tutorial so that those who are confident with their skills can go straight to the lab section and try out soldering for themselves, and those that still need to work on it can continue to do so. This means that you are able to dedicate as much time as you'd like to learning it, putting no time constraint on the users. At the end of the tutorial/game, we have a test at the end to make sure everyone finishes this online course and has enough knowledge of soldering, meaning users can gauge their skill level, how much they learned/retained from the course, and decide if they have sufficient knowledge in soldering.

Drawbacks:

One major drawback is the accuracy of our product. Unfortunately, with an online learning platform, there is a considerable amount of effectiveness and accuracy that is lost in the translation from real workshop to online workshop, that can't be recreated easily with videos and games. Although this is somewhat remedied by the option of a soldering kit, it does cost money and not everyone may be able to afford it, so we need to make our online soldering tutorials and game as engaging and realistic as possible, to minimize the lost aspects between our product and an in person workshop, and to make our product more viable. Also, because the tutorial is online, some people won't be able to access it because they don't have access to the internet, however, this is a fairly small issue, because the online platform does allow it to be accessed by more people than an in person workshop does. Another potential issue is for the people who choose the kit, if the soldering iron is not handled properly, it could be hazardous, so it's imperative that we have a properly made and mandatory safety aspect in our project. Finally, there is a missing interaction element, students may have questions and we still need to develop a method to be able to reliably help students more efficiently.

Feasibility Study

Technical: Does your team have enough expertise and technical resources?

Our solution is entirely software related which bodes well for us because most of our team members have a background in programming (C, C++, Java, Python, etc...). We also have members who have used unity in the past. Any experience we don't already have can be found online since unity has a big community with a lot of documentation available to the public.

The software we will mainly use, Weebly/Github and Unity, is free and available. Assets from the unity store will be the only resource that will cost money.

Economic: Can the cost of your project be reasonable?

The cost of our project will be reasonable, especially considering that our solution is software and online based, so we don't have the need to spend money on any extra material, as we have access to essentially all of the resources required. Also, because our client requested that the project cost no more than $100 (and $20 or under for the users), the price must be reasonable in order to respect the project criteria.

Legal: Are there any legal issues with releasing your solution to the public

As long as Weebly and Unity's terms of services are respected, which shouldn't be an issue, we have no legal issues with releasing our solution to the public.

Operational: Are there any organizational constraints that will prevent your success

Time constraints, as we all have other classes so some days not all of us will be able to meet at the same time.

Scheduling: What are the deadlines and are they reasonable for your solution

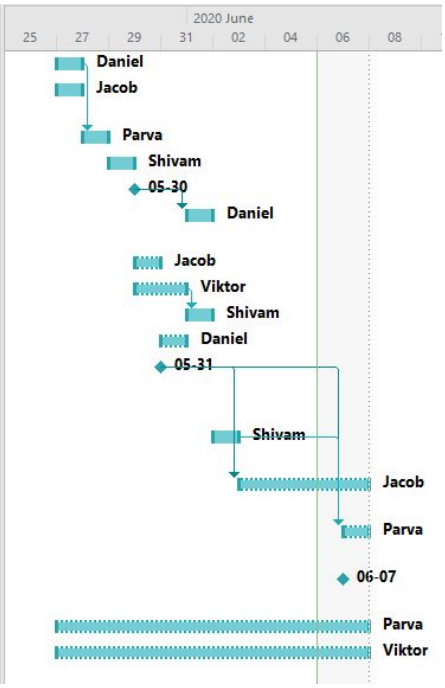
On July 17th the final project will be presented to the client, so a working solution should be completed at least a week before. Other major dates are outlined in the tasks list below along-side when they should be completed.

Planning:

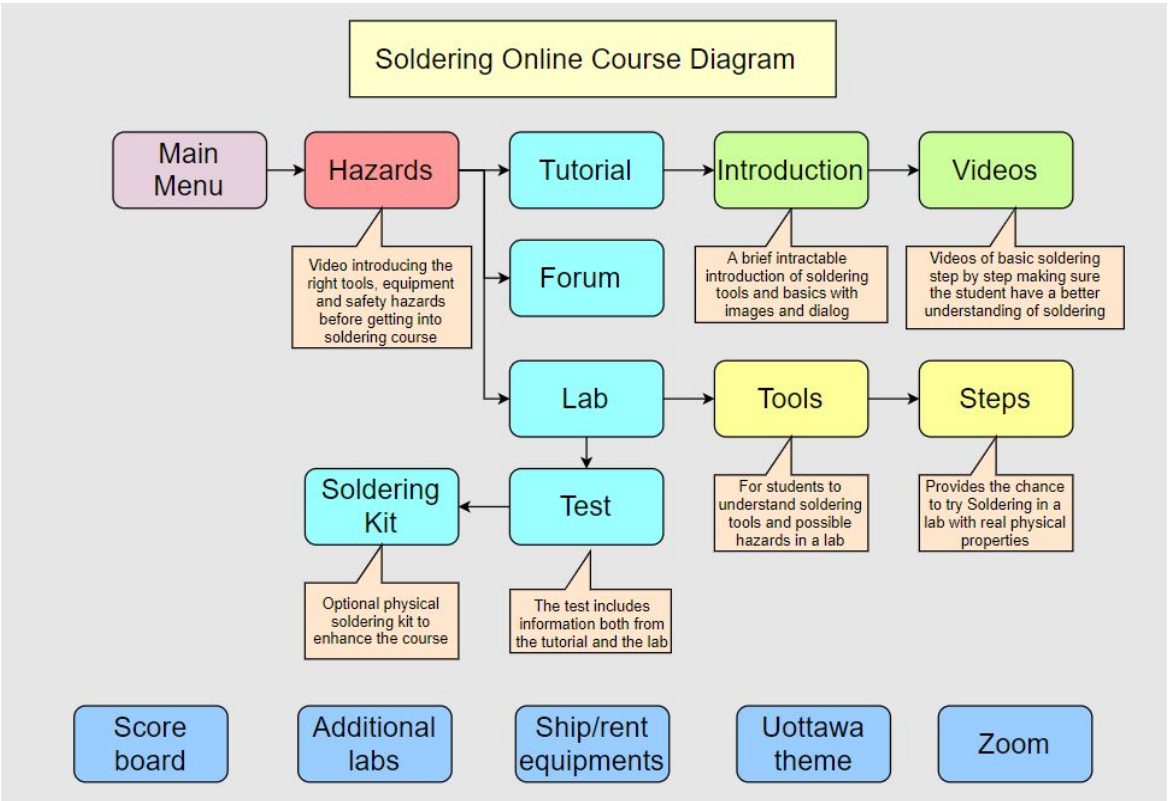
Task	Owner	Date
Client meet 1 preparation	Everyone	May 10
Client meet 1	Viktor	During Lab in week2
Needs identification and product specification	Jacob	May 17
Conceptual design, project plan and client meet 2 preparation	Daniel	May 24 (peer assessed)
Client meet 2	Shivam	During Lab in week 4
Detailed design and prototype 1	Shivam	May 31
Project progress presentation and client meet 3 preparation	Parva Pathak	June 7 (peer assessed)
Client meet 3	Jacob	During Lab in week 7
Prototype 2 and customer feedback	Daniel	June 21
Design day and final prototype	Viktor	July 17
User manual	Parva	July 19

Microsoft Project

	Ta M	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1		Indentify Tasks	1 day	Wed 20-05-27	Wed 20-05-27		Daniel
2		Identify Risks & Create Solutions	1 day	Wed 20-05-27	Wed 20-05-27		Jacob
3		Gantt Chart	1 day	Thu 20-05-28	Thu 20-05-28	1	Parva
4		Talk to Client	1 day	Fri 20-05-29	Fri 20-05-29		Shivam
5		Client Meet 2	0 days	Sat 20-05-30	Sat 20-05-30		
6		Summerize Client Feedback	1 day	Mon 20-06-01	Mon 20-06-01	5	Daniel
7		Plan Website	1 day	Sat 20-05-30	Sat 20-05-30		Jacob
8		Create Prototype	2 days	Sat 20-05-30	Sun 20-05-31		Viktor
9		Documentation/Test	1 day	Mon 20-06-01	Mon 20-06-01	8	Shivam
10		BOM	1 day	Sun 20-05-31	Sun 20-05-31		Daniel
11		Design and Prototype of Website	0 days	Sun 20-05-31	Sun 20-05-31		
12		Summerize Deliverables	1 day	Tue 20-06-02	Tue 20-06-02		Shivam
13		Create Plan for Moving Forward	4 days	Wed 20-06-03	Sun 20-06-07	11	Jacob
14		Present Project Progress	1 day	Sun 20-06-07	Sun 20-06-07	11,12	Parva
15		Project Progress Presentation	0 days	Sun 20-06-07	Sun 20-06-07		
16		Research Unity	9 days	Wed 20-05-27	Sun 20-06-07		Parva
17		Research Soldering	9 days	Wed 20-05-27	Sun 20-06-07		Viktor
18							



Sketch Solution



Legend:

#	Task Name		Task Owner	Required Resources	Completion Deadline
1	Soldering videos		Makerslab	Camera, soldering kit	
2	Soldering lab		Daniel, Jacob	Unity	June 28
3	Webpage	Forum	Parva	Weebly	June 21
4		Hazard	Shivam	Weebly	June 21
5		Intro	Viktor	Weebly	June 21
6		Videos	Shivam	Weebly	June 21
7		Style	Jacob	Weebly	June 21
8		Lab	Parva	Weebly	June 21

Bill of Material (BOM)

#	Name	Description	Quantity	Unit Cost (CAD$)	Extended Cost (CAD$)
1	Soldering set	A set of items related to soldering https://assetstore.	1	4.99	4.99
2	Unity	Software for creating games	4	0	0
3	Github Pages	Website hosting software	1	0	0
4	Weebly	Website hosting software	1	0	0
5	Zoom	Chat room application	1	0	0

Conclusion:

In conclusion, as an extension to everything discussed in project deliverable C1, we've conducted a feasibility study of our project, along with having developed a project plan and a bill of materials. In order to complete this product for our client, in deliverable C, we generated some global concepts, set target specifications, selected our most compelling solution, conducted a feasibility study and planned out some of our more important project work, along with having sketched out the basic idea of what we're planning. On the other hand, although there are many positive aspects of it, there are still important implications brought up by an online soldering platform that we have yet to solve, such as the lost interaction and communication with in person teaching, that could push users away from the project. We hope to continue to refine our project in order to solve all of our clients' needs and develop a well built platform, so students can learn to the best of their capabilities.