uOttawa

University of Ottawa

GNG 1103: Engineering Design

Project Deliverable E: Project Schedule and Cost

Group members:

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Introduction

In the previous deliverables, we looked at how we may design a product that will adhere to our clients needs by moulding different individual concepts of each team member into one. In this deliverable, we will organise our tasks by creating a plan that will assure we obtain a final product that follows our chosen design concept. To do so, this deliverable will present a completed table detailing each task, their owner, and the time necessary to complete them as well as a table showing potential risks the project may present. This deliverable will also include a bill of materials, detailing costs of production we may encounter throughout our work. This deliverable will summarise and detail the team goals for the rest of the semester as well as how we may achieve them.

Project Plan

Task	Owner	Duration	Due date
Project schedule and Cost (deliverable E)	Everyone	7 days	October 22, 2020
General idea for game is complete (packages and assets considered, research is done)	Everyone	7 days	Reading week
Prepare procurement documents	Everyone	4 days	October 27, 2020
Prototype I and customer feedback (deliverable F)	Everyone	7 days	November 5, 2020
Prototype II and Customer Feedback (Deliverable G)	Everyone	7 days	November 12, 2020
Revise Risk Assessment	Everyone	5 days	November 26, 2020
Prototype III and Customer Feedback (Deliverable H)	Everyone	14 days	November 26, 2020

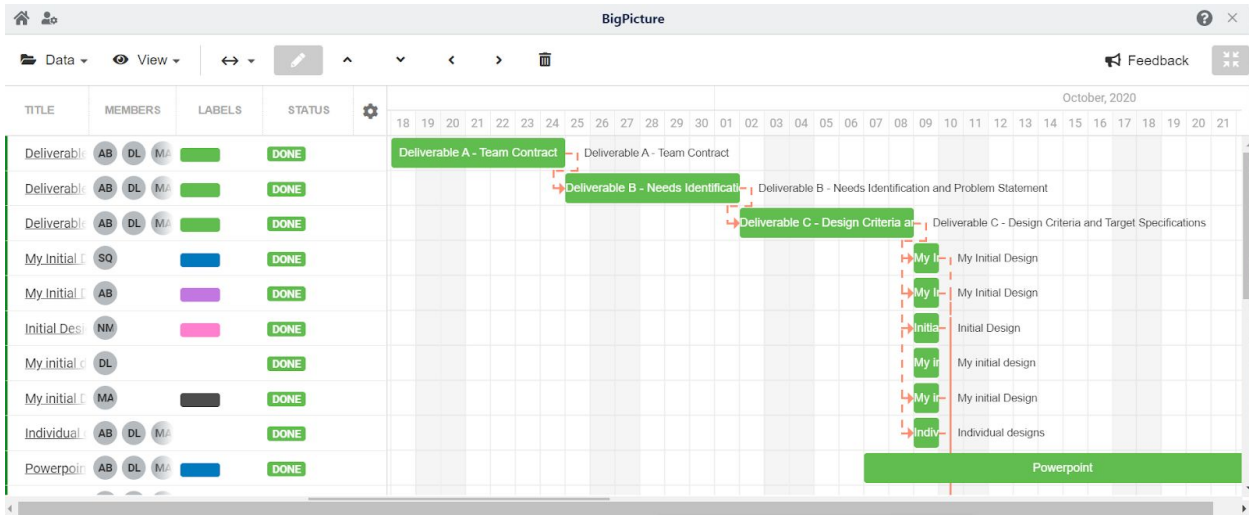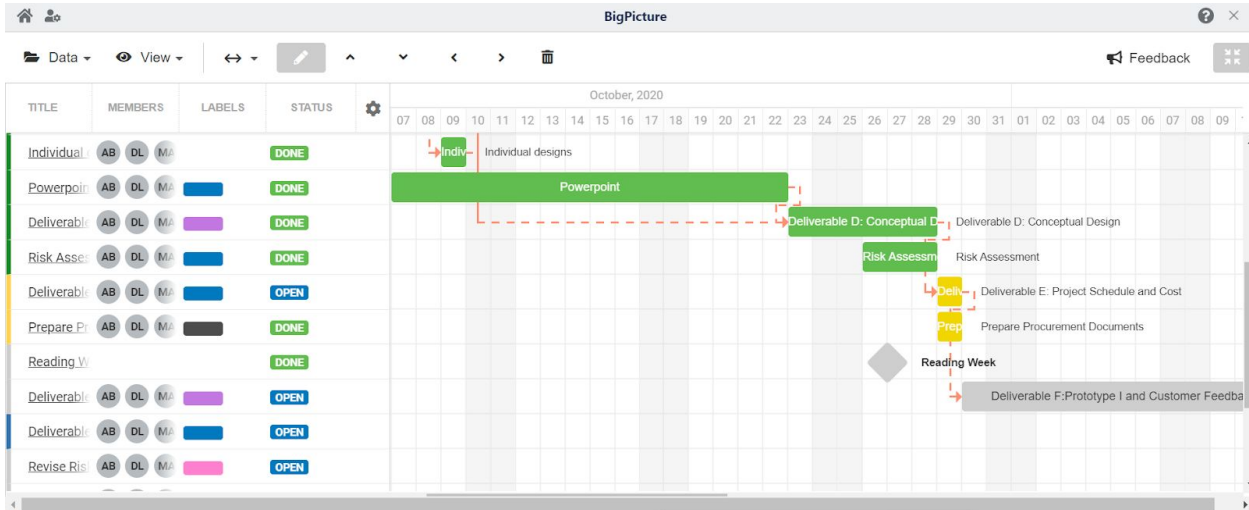|			
Design Showcase Presentation(Deliverable I)	Everyone	14 days	November 26, 2020
Communication Plans	Everyone	4 days	December 1, 2020
Final Presentation (Deliverable J)	Everyone	4 days	December 1-3, 2020
User Guide (Deliverable K)	Everyone	7 days	December 3, 2020

Figure 1: Gantt Chart 1
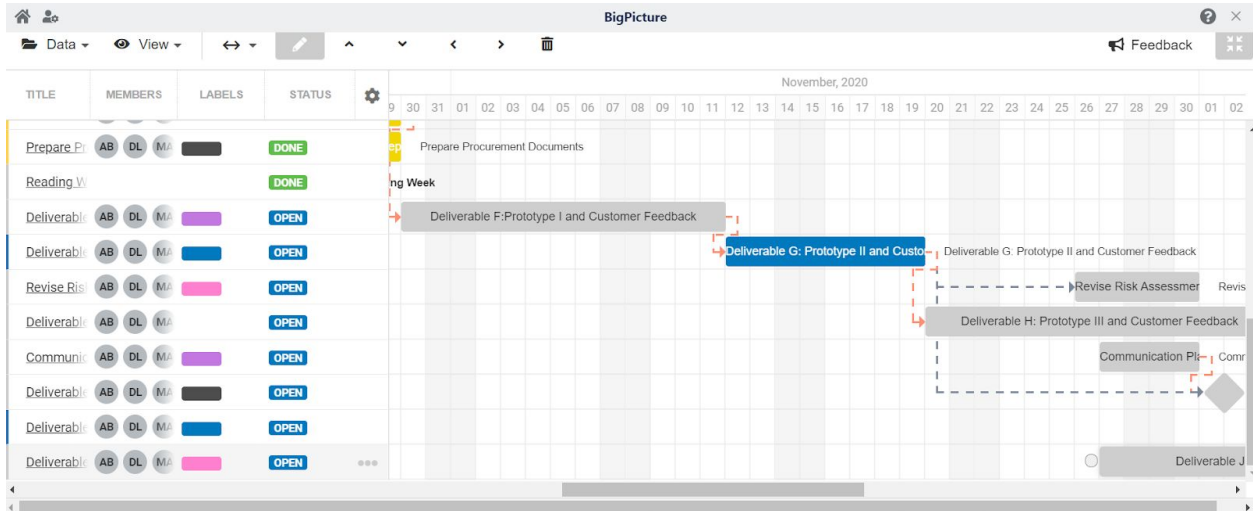

Figure 2: Gantt Chart 2
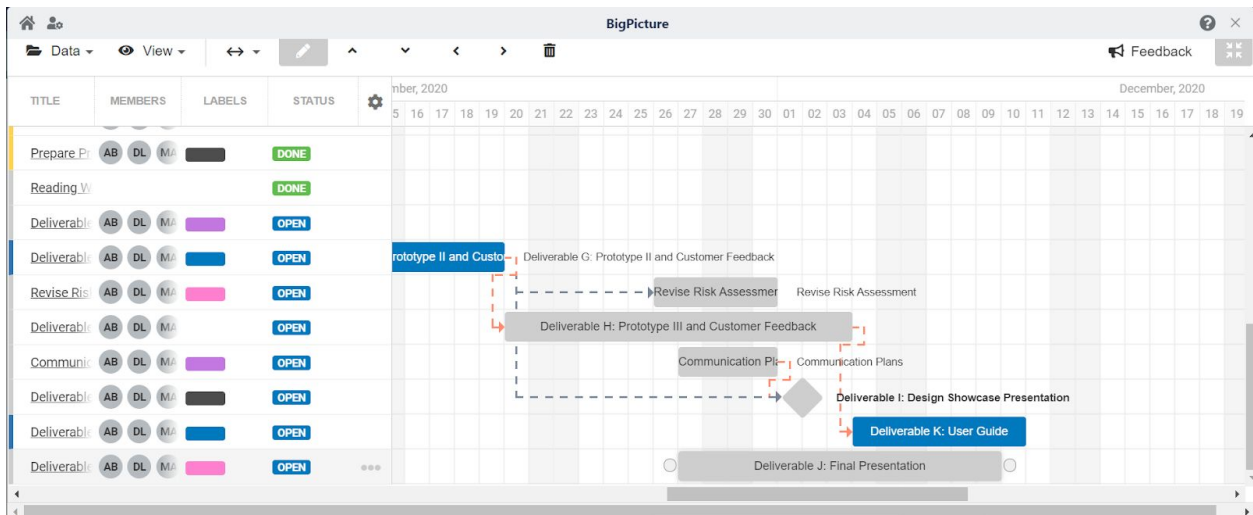
Figure 3: Gantt Chart 3

Figure 4: Gantt Chart 4

Risks and Contingency Plans

   Potential risks are important to include in our planning. In fact, these may lead to not only slowing down the project progress, but the team dynamics as well which then directly affects the way the group works and advances together. Creating contingency plans to help have a sort of safety net around certain issues helps us be prepared for any possible situation and outcome our work as a team may encounter. Many things can go wrong, from a team issue to a technical malfunction from the system we are working with, facing, and solving the issue at hand are of utmost priority. According to our team contract, we have set certain rules and protocols to follow in certain cases such as a member of the team failing to deliver their work on time. In this case, the work would be completed as soon as possible to avoid getting sanctions and the team member would get a single warning. If the events reoccur, the TAs would be informed. We may also very probably face issues with the systems we are using. Sometimes, these systems do not

function well on everyone's computers, or they do not cooperate with us, or different versions of the system are offered and not all of them work the same... In this very likely case, it is therefore important to have set guidelines amongst the team members to know how to handle the situation properly and advance without getting off track set by our project plan. Therefore, it is essential to plan for potential risks because some of them are more than likely to occur.

Risks	Chance	Impact	Contingency
Issues with Unity	HIGH	HIGH	Try to debug as soon as possible, look up in forums for people with similar issues
One team member can't complete a task	LOW	HIGH	The rest of the team comes up with a plan to split the task and minimize delays
A planned feature of the app is not feasible	Moderate	Moderate	Have a meeting and choose a more feasible option
More than planned time is needed	Low	High	Estimate the appropriate extra amount of hours needed and add it

Issues with Unity:
- It is possible that using different unity versions might create problems for the group since each version has different features. Unity itself might have issues in terms of specific features not properly working or not performing the way we wanted it to. One of the biggest issues we might face using Unity is the possibility that the application itself crashes and gives us a hard time to use.

Our team member can't complete a task:
- It is likely that a team member is sick or overwhelmed with work or personal issues which may cause them not to be able to complete tasks on time.

A planned feature of the app is not feasible:
- Using unity and multiple plugins, it is very likely that either one of them have features that end up not being what we need for our project. This means that what we had planned to use needs to be modified and we would need to search for an alternative.
- It is difficult to figure out the right code for a specific feature we want.

More than planned time is needed:
- In case of potential delay in our project advancement, it is possible that we need more time to complete the project since the tasks did not take the same amount of time to complete as we had initially planned.

Bill of Materials

With a 50$ budget, it is important to detail potential costs for systems and subsystems we may need. With an amount precisely small, we need to make sure that it is spent in an efficient and cost effective manner. Therefore, the following table presents potential costs.

Table 1: Bill of Possible Materials

Part #	Part name	Description	Cost($)
1	AR Foundations	Unity Plugin to help aid in	0$
2	Unity 2019.3.15	Game Development Software used as a base for the entire project	0$
3	SRDebugger [1]	Plugin that lets users fix potential bugs in the game itself	30$
4	uIntelliSense — Unity API Assistant [2]	Plugin that translates code into words to explain their meaning	12.95$
Total			**42.95$**

Conclusion

In this deliverable, we were able to get a clearer image of how we can complete our tasks. In fact, panning out every single future deliverable as well as future milestones, we are able to better envision what we need to do to successfully complete the work. This also gives us the chance to plan for potential delays in our progress in terms of issues with unity or amongst team members and how we may fix those issues. Finally, we were able to summarise everything to get a specific total of the money we would need to spend, which ended up being 42.95$ out of our 50$ budget. This step was essential to make sure that we chose the best options for our work without overspending. This deliverable gives us plan our ideal project goals and details essential to its completion.

Works Cited

[1] "SRDebugger - Console & Tools On-Device: GUI Tools: Unity Asset Store," *GUI Tools | Unity Asset Store*. [Online]. Available: https://assetstore.unity.com/packages/tools/gui/srdebugger-console-tools-on-device-27688. [Accessed: 26-Oct-2020].

[2] "uIntelliSense - Unity API Assistant: Utilities Tools: Unity Asset Store," *Utilities Tools | Unity Asset Store*. [Online]. Available: https://assetstore.unity.com/packages/tools/utilities/uintellisense-unity-api-assistant-22906. [Accessed: 26-Oct-2020].