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| **Date** | **Title** | **Description** |
| 14/10/2020 | Proposal started. | Basic outline of method and abstract. |
| 15/10/2020 | Proposal | added outline to background |
| 16/10/2020 | Proposal | General edits and reading. Moved into template |
| 16/10/2020 | Meeting With Supervisor | See first Meeting notes folder |
| 17/10/2020 | Proposal | General edits but mostly working on background. |
| 18/10/2020 | Proposal | Rewording of noted paragraphs |
| 19/10/2020 | Proposal | Final version written |
| 20/10/2020 | Proposal | Proof Read and submitted |
| 23/10/2020 | Feasibility Demo | Looked around for some open-source bullet hell games |
| 26/10/2020 | Feasibility Demo | Downloaded Vamp plugin examples that work with SDK. Began to try understand how to implement. |
| 30/10/2020 | Meeting With Supervisor | See second Meeting Notes Folder |
| 02/11/2020 | Feasibility Demo | Initial setup of gantt chart. Splitting up of tasks and initial timeline. |
| 06/11/2020 | Feasibility Demo | Managed to get the vamp plugin example to run but not output anything yet. |
| 09/11/2020 | Feasibility demo | Extracted important plugin-host code and managed to get a simple beat detector to output a .txt file |
| 13/11/2020 | Meeting with Supervisor | See third meeting folder |
| 16/11/2020 | Feasibility demo | Started working on the Literature Review and a little bit of the Experiment design |
| 17/11/2020 | Feasibility demo | Basic outline on literature review and Experiment design completed and started writing it out. |
| 22/11/2020 | Feasibility Demo | Looked at the code to further understand what it is doing and removed some parts that don’t affect expandability. |
| 25/11/2020 | Feasibility Demo | Formatted the Risks and edited Lit review and Experiment design |
| 27/11/2020 | Meeting with Supervisor | See 4th meeting folder |
| 27/11/2020 | Feasibility Demo | Applying the changes spoken about in meeting to all my documents. General reformatting and adding/editing other sections in all documents. |
| 29/11/2020 | Feasibility Demo | A lot of work on Lit Review. Sorted formatting and changed contents. |
| 30/11/2020 | Feasibility Demo | First proofreads of documents. Submitted Risk Assessment to Supervisor. And generally worked on all parts. |
| 04/12/2020 | Feasibility Demo | Presented my Demo and submitted my Ethics document |
| 23/01/2021 | Implementation (Plugins) | Refreshed myself with the code and added the QM-Segmenter plugin. Also seem to have gotten parameters working. |
| 26/01/2021 | Implementation (plugins) | Made the code separate each section up by outputting what the current segments is and creating a new line |
| 29/01/2021 | Meeting with supervisor | See fifth meeting |
| 02/02/2021 | Implementation (plugins) | Added an Intensity Plugin and made it calculate the average intensity over each segment. |
| 04/02/2021 | Dissertation | Added titles and created the document. Started thinking about what to go in each and what I need. |
| 09/02/2021 | Implementation (plugins) | Now also calculates the average intensity for each type of segments. added struct to track each segment such as high intensity and average. Now predicts the chorus using highest intensity. Did quick testing and works reasonably well |
| 10/02/2021 | Implementation (Game) | Searched around for a game and found one that might be workable. Started looking through its code. |
| 12/02/2021 | Meeting with supervisor |  |
| 14/02/2021 | Implementation (Game) | Further understanding of code. More specifically on collision detection and scoring |
| 15/02/2021 | Implementation (Game) | Added code to understand how to read txt files into Unity as a possible way of getting data from my C++ program |
| 17/02/2021 | Implementation (Game) | Further understanding the Spellcards and how they are coded and thinking of possible ways to implement them into the plugins |
| 17/02/2021 | Dissertation | Also added some extra comments to the Implementation section. Related to the plugins |
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| 22/02/2021 | Implementation(Game) | Game always runs 1 spell card for testing. Converted one spellcard to work based on a “beat” based system but needs to be scaled up. Started going through all the spellcards and figuring out how to implement them all |
| 23/02/2021 | Implementation(Game) | Converted each aprt of the Mirrors spellcard to work with a beat cooldown. Thinking of making a class to control beat timers for all objects as they are all quite separated |
| 25/02/2021 | Implementation(Game) | Made it so the fairies shoot in time with the beat. Next job should be to write a beat timer class. |
| 27/02/2021 | Implementation(Game) | Created a BeatManager class. Not written in the most optimal way but its functional, it should call other classes when it is time but it currently has a flag that everything else checks. Still need to look into a way to do ½ and maybe ¼ notes |
| 01/03/2021 | Implementation(Game) | Implemented a basic scoring system from picking up items and hitting the boss and added a multiplier that gets reset when you get it. |
| 02/03/2021 | Implementation(Game) | Capped the multiplier at 5x, found out that batching can be used to fire on ½ and ¼ beats. Went through spells and started to fix them and make them work correctly. |
| 04/03/2021 | Implementation(Game) | Fixed the abilities on some spellcards by adding an array of “InternalBeatCooldown” and tuned abilities to work for 120bpm and fixed a bunch of bugs. |
| 05/03/2021 | Supervisor Meeting | See Notes |
| 07/03/2021 | Implementation Game | Started getting the segments working. Worked out how spawning bosses and spells work |
| 08/03/2021 | Implementation(Game) | Managed to spawn specific bosses and get them in a boss spawn order array, still need to get seeding to work |
| 09/03/2021 | Implementation(Game) | Seeding implemented and bosses now spawn in an order based on what the seed was. Audio analysis plugion will need to be changed to generate the seed and the seed will need to be read in by unity` |
| 11/03/2021 | Implementation(Merge) | Initial merge completed. Quick swap to the beat fireing using setup code. batching sorted too for a basic setup. Also done with the MVP |
| 12/03/2021 | Supervisor Meeting 11 | See meeting |
| 15/03/2021 | Implementation(Merge) | Worked with unity::WWW for filesystems to find the song location. Then implemented the Analysis program to send the file location over in a settings file. Had to figure out the best way to load the songs. |
| 16/03/2021 | Implementation(Merge) | First test on another PC. Had to make .exes and sort file structures. Vamp plugins need to be installed on the other PC. Implemented a Main menu to allow loading of the song in the background to sync up the game start with audio and avoid dsync even by a little bit.Added streaming assets folder for txt files. Worked with stuff not getting destroyed between scenes |
| 17/03/2021 | Implementation(Merge) | Fixed some desync bugs. And generally tidied up some of the confusing code. |
| 22/03/2021 | Implementation(Merge) | Read in the times and sorted it so that the boss length was the segment length, had to fix some bugs that causing game to end/crash early |
| 23/03/2021 | Implementation(Merge) | Received the high intensity segments that are predicted to be the chorus and then spawned small enemies and doubled score during these segments |
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