**Culmination project proposal**

**Project description** – In my time at city tech I have gain an understanding of a few programming languages, one in particular that I would like to focus on is C-sharp. I would like to focus my time into designing a game in unity while bettering my skills using C-sharp. Most of my project will be developed within unity, I understand the basics of how unity operate so this can also be an opportunity to better my unity skills as well. My goal will be to create a 2D shooter game that allows the user to put their survival skills to the test.

 The name of the game would be “Save The World” it is based on a world where covid-19 has developed into a disease that mutates humans into half dead beings. These infected people will walk the streets trying to infect others, it is up to you (the player) to kill all people that are infected to stop the spread of this newly mutated disease. In this survival game the player will see how many infected people populate the earth, the only way to win is to kill off all infected players. This will be no easy task being that the player will constantly be exposed there is nowhere to hide where the infected cannot find you.

**Methods -** In developing this project I will use the most up to date unity engine that unity hub offers. For programming in the C-sharp language, I will use visual studios to code anything that needs to be functioning so this came can operate and at least be prototype ready. If needed I can pull different assets from the unity asset store or any website that allows free asset downloads. Also, I want to add audio to this game to add more of a connection between the game and player, I can pull audio clips from freesound.org or on YouTube. Speaking of YouTube if anything confuses me during the process, I will look for YouTube videos to provide clarification.

**Project Deliverables –**

* E-portfolio
* Paper prototype
* bulk schedule
* Total cost
* Poster
* Compiled code
* Completed product/ Beta

**Schedule –** My plan is to work on this game on a weekly basis, I will be working around my class and work schedule. Therefore, every Tuesday and Thursday I plan to dedicate time to further progress from whichever state in the project I’m up to. Within the next 3 weeks I would like to complete my storyboard, wireframes, and flowchart so my focus for October & November can be on developing the game. I would like to stop integrating new elements into the game two weeks before the deadline just to debug and make sure the game is functioning.

**Required Resources –**

* Cloud space
* Alienware computer
* Unity Hub
* Target Audience

**Milestones –**

Week 1 - Begin the level design start to integrate assets and sprites Create GitHub repository for project.

Week 2 – Finish designing the level, begin working on player movements.

Week 3 - Working on programming the enemy spawn/population, movements, scaling, following player.

Week 4 – Debug and complete programming in the enemy script (infected AI). Start designing how the enemies will appear in gameplay.

Week 5 -Integrating players weapon, how often it can be used before cooling down time, distance it can reach.

Week 6 – Program how users weapon interacts with enemy AI. (Cure/kill) enemy population should decrease with each attach

Week 7 – Debug syntax anything that is showing errors. By this point I would like to have the main functions of this game working

Week 8 - Integrate UI elements to better help the user understand gameplay. Program the UI elements to function within gameplay.

Week 9 – Program audio files and sound effects that will trigger in specific moments.

Week 10 – Integrate any extra assets and sound files to better polish this game

Week 11 – Final iteration playtest game and check for any bugs to fix. Then Create PC build to allow others to play.



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