Gantt Chart:

https://docs.google.com/spreadsheets/d/1vRRnoBNdBnuqQBk04lO-bKSN9vFnQyqWR5eOd_PVwp8/edit?usp=sharing

Sprint Backlog

Name	Description	Effort
Day/Night	Day/Night cycle lighting implemented into game	4 - Not too hard to implement, a good introduction to Unity engine
Active Tower	An rotating tower controlled by the user is implemented, which can shoot at enemies	7 - Core component of game, functionality is not too hard to implement because it is controlled by user input
Embed in Webpage	Embed the game in a webpage so it can be played online, then keep track of stats and such online	7 - Could be easy to implement, but it is pretty different than everything else in the project and requires outside research
Rotate Game Camera	Give the user controls to rotate the camera to get different views of the game	4 - Hardest challenge is placing cameras and figuring out how to activate/deactivate them
Buy AI towers	The user should have the ability to buy and place towers on the board to shoot at enemies automatically	9 - Many mechanics are required here that all have to work together, including projectiles, finding enemies, money system, placement
Hover over tiles	When the user hovers over a tile, it should light up and pop up to make the game board more “alive”	3 - The main challenge is in writing the script to translate the tiles
Start Screen	When the user starts the game, they are presented with a start screen to begin the game	5 - This will require some separation from the rest of the project, and might require some research to accomplish
Money System	The user is rewarded for destroying enemies with money, this money can be used to buy power-ups and additional defenses.	6 - This could be hard to keep track of throughout the game.

Health System	The tower and the enemies need to have health, which when depleted kills either the enemy or the game if the tower is depleted	5 - Implementation might not be too bad, but integrating with the rest of the game could be more difficult.
Randomly Generated Map	When the game starts, the map should be randomly generated, so that each playthrough is a unique experience	8 - Hard to implement and crucial to the success of our overall design
Creation of Enemies	Enemies should be created at an appropriate frequency relative to the game level	6 - Balancing randomness and not making the game too tough could be a challenge with this.
Projectiles	One main projectile class will be used by the different types of towers to destroy enemies	8 - Figuring out the instantiation and detecting collision with enemies could be challenging.
Passive Towers	The user can buy passive towers that provide benefits to the user.	7 - This could be tough because it would have to edit the attributes of many different aspects of the game

Sprints

Sprint 1
10/20 - 10/23

Alex - Active tower mechanics
Matt - Cleanup the existing code base, wave spawner
Nick - Basics of a tower
David - Work on the enemies: health, speed, spawn rate, positioning.
Thomas - Lighting effects

Sprint Retroactive

Alex - Active tower moves, controls set up to shoot a projectile
Matt - Cleaned up a little bit, UI elements added
Nick - Started the active tower class
David - started projectiles
Thomas - Rotating light camera effect

We reached some of our goals, but we did not reach the overall progress that we had planned. Our game still looks about the same as last week with just a couple of extra things. For the next sprint we will have to improve our overall communication for our project and work on smaller projects if we are dependent on others' work. Progress on towers is currently held up by the lack of a projectile class, but once this is finished we should make some good progress.

Sprint 2
10/24 - 10/28

Alex - work on camera at multiple positions
Matt - enemy class, wavespawnerclass, and getting a basic user interface to work
Nick - adding and getting rid of targets
David - Finish up projectiles
Thomas - Placing towers

Sprint Retroactive

Alex - Set up camera at 4 positions, worked on projectile stuff
Matt - Made a few fixes, worked on AI tower
Nick - Worked on AI tower, including searching for enemies
David - Worked on projectiles
Thomas - Worked on placing towers

Summary - Overall most of our individual goals were met. We added some nice smaller features that will definitely be important in the long-run for our game. One area we missed on was projectiles, which is very important to our game, which we would like to get included in our project 3 submission. We did a better job of meeting our goals this sprint overall, but we could still improve on our group communication. In the last sprint we hope to mainly clean up what we have and take care of housekeeping items.

Sprint 3
10/29-11/1
Alex - cleanup shooting mechanic of player tower work on housekeeping items
Matt - Work on passive towers, tinker with UI
Nick - add different types of towers
David - integrating his projectile class
Thomas - Add support for stat modifiers

Sprint Retroactive

We met most of our goals for this sprint, since we were mainly cleaning things up for presentation, as well as adding in a couple of things behind the scenes that will help us in the future.Overall we worked well as a group here to knock out some of the documentation and diagrams.