In order to create the map editor, I used helper functions to break down the problem. I created buildmap, which created a map from a list of tuples with the start, path, and end. This created the necessary framework to build the map editor, which creates a list of tuples based on where you click. It stores all of the legal moves into this list of tuples.

From the game Bloons Tower Defense, there was a tower that could pierce enemies and hit 2 in a row. I decided that I wanted to implement that into my game. So in order to do that, I added a bullet heath variable that lost 1 health each time it hit an enemy. The normal bullets that were shot had 1 health while the pierce bullets had 3 health, so it could hit 3 enemies.

In Bloons Tower Defense, I noticed that there was no grid to place the towers, which I personally did not like since it had a lot of guesswork as to how you could place the towers closest to each other. I decided to implement a grid-based system in my game based off of that.

In some tower defense games, you cannot tell which enemies are slowed, so in my game I decided to change the health bar into a blue one if it were slowed. This way you can tell in other ways than by just looking at how fat it moves.

At first in my storyboard I wanted to put the towers on the right to select, but I added too many upgrades to do that so I put them on the bottom. I wanted users to be able to customize their towers to their own liking, adding more than just one type of upgrade. Users can opt to upgrade the damage, attack speed, or range, depending on what they believed would be the best option.