#### **Project Description:**

- Walmart Bloons Tower Defense
- In each wave, a group of balloons spawn on a path and they try to get to the end of the path. If they do, you lose some health. In order to stop them from getting there, you place some turrets down to destroy the balloons and prevent them from reaching the end point. Each time the game is run, a new randomly generated map is created.

### **Competitive Analysis:**

The most similar game is Bloons Tower Defense, as I took the idea from this game. This game has hard coded paths for different maps and a great variety of different turrets and balloons, in addition to being able to upgrade each turret multiple times. My game will be similar in the fact that I have turrets and balloons that follow a path. However, my game will randomly generate a new path every single time, and my game will only have a few turrets and balloons with no upgrade availability.

Another example of a tower defense game is Kingdom Rush. This game is similar in concept to BTD but just with different graphics. The key difference is that this game has multiple spawn points for paths that all connect at some point and join together. I do not plan on having this as a feature, at least not for MVP, but might add it after reaching MVP.

### **Algorithmic Plan:**

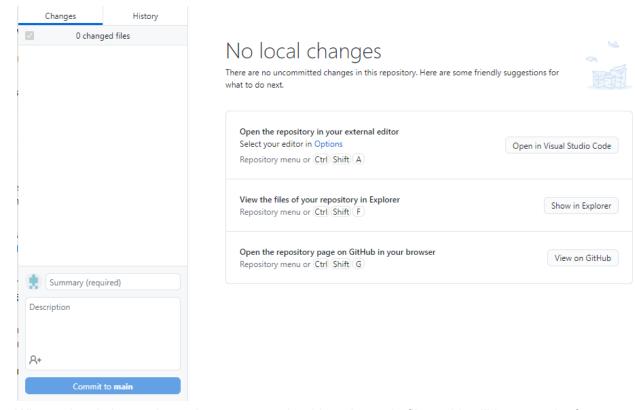
The most complex part of my project will be the randomly generated path for every single new game. I plan on using some sort of maze generation to create a new path and using backtracking to check if it is a legal path. If it isn't, I will just create a new path and redo these steps until it is a viable path.

#### **Timeline Plan:**

- By TP0, I want to have the basic balloon spawning and turret shooting down.
- By TP1, I want to have the pathfinding done using a hardcoded path to test it, the wave system, and the shop with ability to purchase and place turrets.
- By TP2, I want to have the starting screen done in addition to being able to randomly generate paths. At this point, the game should be working and should be at MVP.
- By TP3, the game should be complete. I want to add some sort of leaderboard, maybe a few more turrets and balloons, maybe some music, and maybe some updated graphics.

### **Version Control Plan:**

• I am using Github to keep backup my code and keep track of the version history.



 When a local change is made, you can upload it to the main file and it will keep track of the history and upload the code to the cloud.

## **Module List:**

No additional modules

## **TP2 Updates:**

None

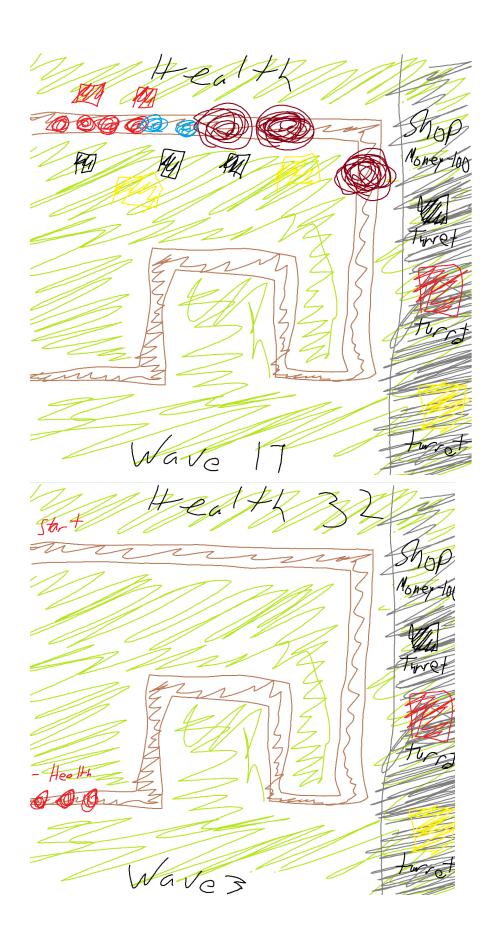
## TP 3 Updates:

Home screen, help screen, pause screen, and updated wave complexity, turret costs, and balloon health.

# Storyboard:









Leader Doar d -Justin - Z8 waves 2-Milp - I waves 3-