Backlog

# Game field:

* Needs to have a path from beginning to end
  + Randomly generated by generating points and then connecting them
* Needs to have spaces for the towers
  + Randomly generated by having one close to each generated path point and then a few more randomly generated
* Spaces can be clicked to choose/upgrade tower

# Towers:

* They need to be built/upgraded with gold
* They need to be able to shoot at a specific enemy
* They need to be able to choose and enemy to shoot at (the enemy most to the front)
* They need to have a range

# Gold:

* You get gold from killing monsters
* You spend gold to build/upgrade towers

# Enemies:

* They need to have health points
* They need to give gold when killed
* They need to move along a path
* They need to have a speed

# Game rules:

* Enemies need to be regularly spawned
* Spawn speed needs to increase gradually
* When a certain number of enemies get to the end, you lose
* When you kill enough enemies, you win

# Priority:

1. Make game field, but not randomly generated
   1. Make a path
   2. Make spots for the towers
2. Make one enemy
   1. Give it HP and a speed
   2. Make it move along the path
3. Make one tower
   1. Make sure it can be built on a space
   2. Give it a range
   3. Make sure it can see the enemies in its range
   4. Make sure it can choose the enemy in its range that is furthest along the path
   5. Give it damage and a cooldown and make it shoot at the enemy
      1. Let the enemy receive the damage
      2. Let the enemy check if it is dead
4. Let the enemies be spawned regularly
5. Implement lose condition
   1. Count the number of enemies that made it to the end
   2. Choose the amount of enemies it takes to lose
   3. Check after each enemy that reached the end if you lost
   4. Make a lose screen
6. Implement win condition
   1. Count the kills
   2. Choose the amount of enemies you need to kill to win
   3. Check after each kill if you won
   4. Make a win screen
7. Implement gold system
   1. Give each enemy an amount of gold
   2. Add this gold to the total amount if the enemy dies
   3. Let the towers cost gold and they can only be built if you have enough gold
   4. Give the player an amount of gold to start with
   5. Show the amount of gold on the screen
8. Create a start button that starts the game
9. Make sure the game works now, because this is the minimal viable product. Save this version as it is and don’t change it or lose it.
10. Increase the spawn speed gradually
11. Make a few other towers
    1. Same steps as with previous tower
12. Make sure the player can choose which tower to build
13. Make a few other enemies
    1. Same steps as with previous enemy
14. Let the spawner be able to randomly choose an enemy to spawn
15. Make sure the towers can be upgraded
    1. Determine a cost to upgrade the towers
    2. Determine the added bonus damage and speed to the tower
    3. Make the tower slightly bigger after upgrading
16. Randomly generate the path
    1. Determine the amount of point to generate
    2. Randomly generate the amount of points somewhere on the game field
    3. Connect the points and determine the path
    4. Draw the path
    5. Make sure the enemies know the new path
17. Randomly generate the tower spaces
    1. Generate a tower space close to each path point
    2. Choose the amount of tower spaces that need to be generated extra
    3. Randomly generate points on the field and check if a tower space can be there
       1. It cannot be close to another tower space
       2. It cannot be on the path, but it needs to be close to the path
    4. Keep generating points until you have enough correct ones
    5. Make each tower point a tower space where you can put towers.
18. The version you have now is what we wanted to achieve at the start
19. You can add more towers, more enemies, make the game look nicer, make the game play better, make the difficulty better or implement some other thing that makes the game better.
20. Enjoy