My final project is a maze game. The instructions are as follows:

Instructions:

Your goal is to get to the end of the maze. You will be able to see the whole maze at the beginning of the level. To start moving, hit the space bar to zoom in on your current location. You can continue to zoom in and out throughout the game using the space bar, but you can only move if you are zoomed in.

To start a game, select a difficulty. There are 3 difficulties, and their rules are as follows:

* Easy - Zoom in and out as many times as you'd like. This will be the smallest maze of the 3 difficulties.
* Medium - You can only zoom out 5 times throughout the duration of the maze. This will be a medium sized maze.
* Hard - You can only zoom out 3 times. Use them wisely! This will be the largest maze.

The instructions, which are also provided in-game, explain the bulk of what you’re supposed to do once you start the game. As for the internal functionality, I am using two arrays to split up the screen into blocks. From here, I use another array to set the color of each block. This color will be either black or white depending on whether or not the block is a space in the maze.

To generate a solvable maze, I use a varying amount of for-loops to turn on/off different blocks in order to create at least one path through the maze.

To accomplish the zoom functionality, I simply followed a similar process to the larger version of the maze. I used a 3-by-3 area for the zoomed in region, and I kept track of where the user was inside the maze. From there, I assigned the correct colors to the 3-by-3 area based on the larger maze and the user’s current location.