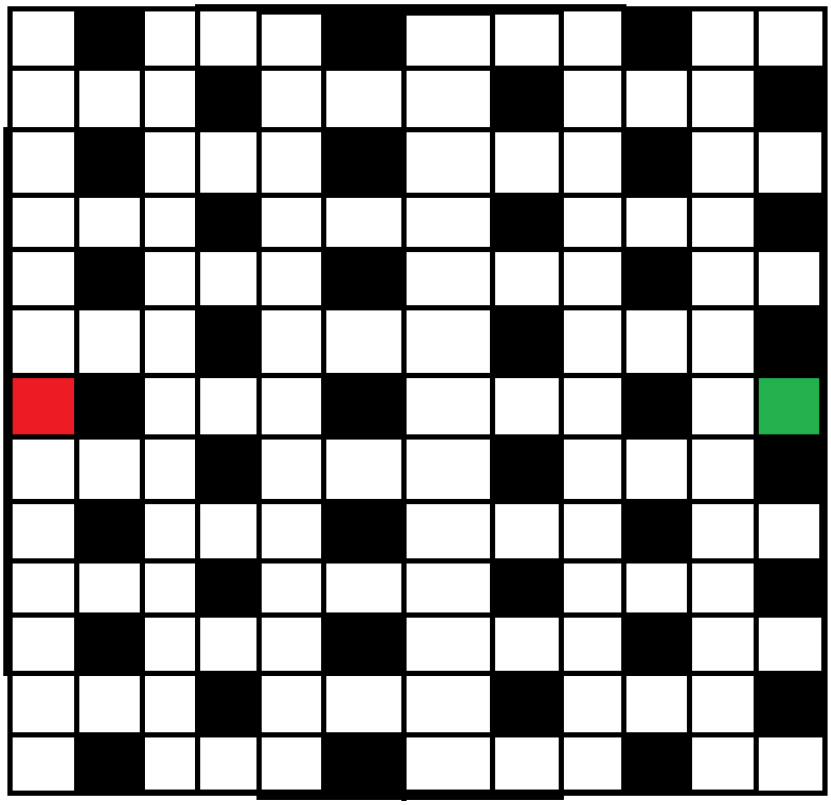
Pre-class Work – Lesson "Synthesis and computational applications" CS110

For this final session you will have to prepare one or a maximum of two slides for a 1 minute presentation to class on your final project. You might find it helpful to think about the following questions, as you prepare the slide:

• What is the goal of your final project?

My final project will compare the time scaling time complexities of two different pathfinding algorithms under different scenarios - a completely "open" level, an "outdoor" level with a few obstacles, and an "indoor" level resembling the hallways of a building's interior.



• How do you plan on achieving the goal?

I have broken down the project into four main parts:

1. Creating functions to automate level creation - this is required because I will need to show the scaling time complexity by scaling levels (making them bigger).
2. Implementing the breadth-first pathfinding algorithm
3. Implementing the best-first pathfinding algorithm
4. Comparing the two algorithms

• Why is your project important and interesting?

Please save the slide as a picture which can then be copied into a google doc in class so that the session can run smoothly.

I think this project is important because similar algorithms are typically used in videogames which require a

stable amount of frames per second (FPS) to provide a good playing experience. Being able to choose the right algorithm (or creating a hybrid between the too) should allow for an FPS boost. Furthermore, I think the project is interesting because it is highly visual and belongs to an industry I am really interested in.