It is unfortunate but we weren’t able to get A\* search to work properly, so it will be difficult to properly analyze it in comparison to the other methods which were successful. At final count, 156 nodes were inspected before an exception error occurred.

At first, I used our notes, and what I remembered of the algorithm, along with the slides to cover how the algorithm works. I believed I had a good impression of how it functioned; I could not have been more wrong! I had thought that each of the cheapest nodes would be the only source to check for the frontier and completely disregarded previously opened but unremoved nodes. Of course, my code (and I) ran into a wall and wouldn’t move from it.

I went back to the notes and realized that my pseudo-depth-first angle was incorrect. This clearly demonstrated that I did not know this algorithm as well as I expected. So, next, I tried to use the book to locate an implementation for the A\* algorithm, but found it to be woefully inadequate. It had a detailed algorithm for a recursive depth-first search around the same area but nothing in pseudo-code. From here, it was very difficult to decide on whether I could ethically use other sources, such as Google or StackOverflow.com, to find such an algorithm. Normally, the book and notes and slides are a guaranteed acceptable source, but these weren’t working.

So, I lost a great deal of time struggling with it until the due date, Monday, when it was mentioned that we could use other sources if needed. I wish I would have known this earlier.

For the Open Maze, the solution would look like the figure below. The solution would have been reached in 44 moves. With the A\*, I would expect around 80 nodes explored to find the final answer.

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Without the algorithm working, the other mazes proved too difficult to solve in the time I had available.