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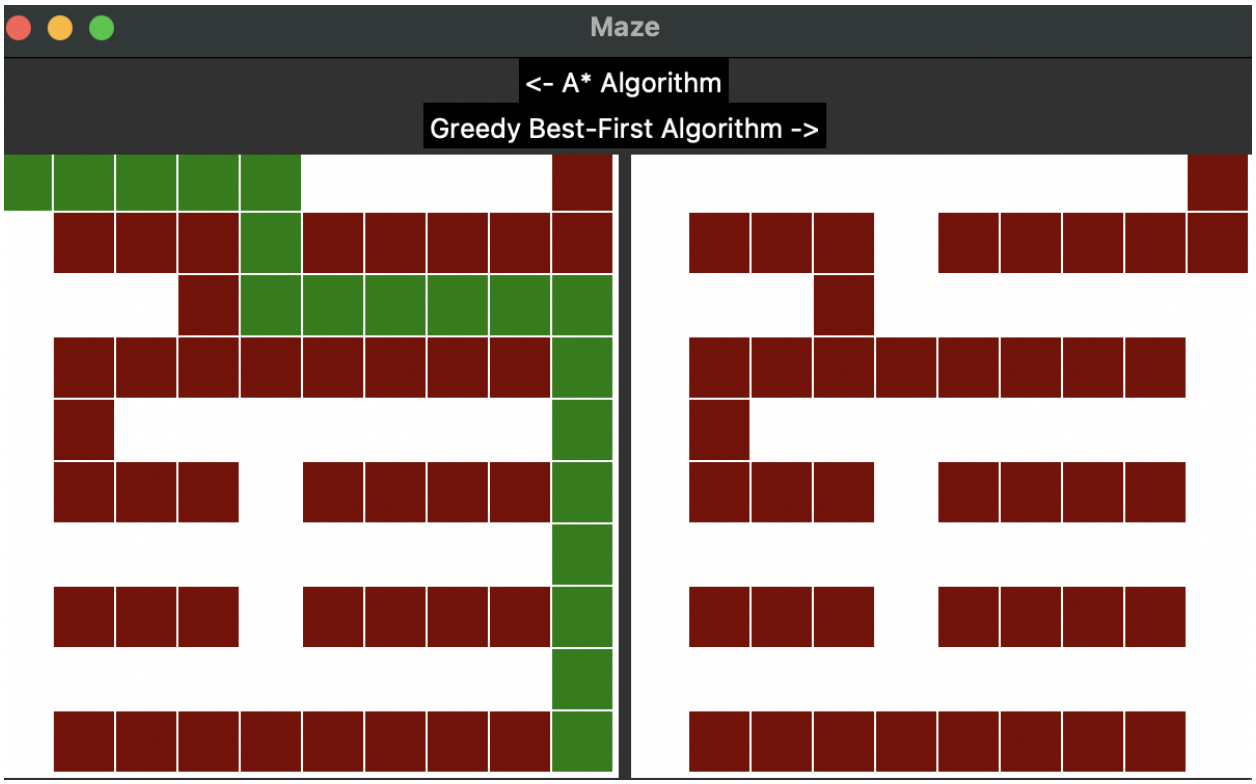
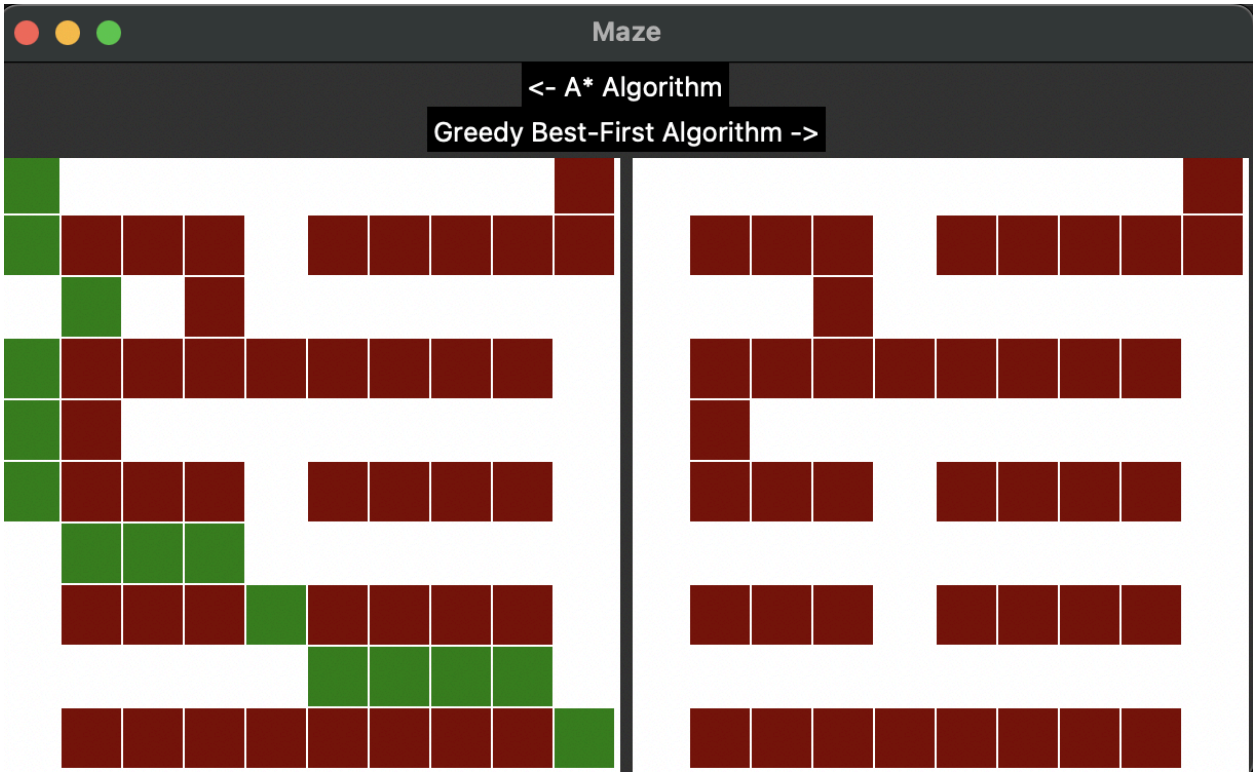
I would like to preface that I have put a lot of time into this project but for some reason I cannot get the Greedy-Best First to be displayed onto the visual. However here is my algorithm:

```
def find_path_greedy_best_first(self):
    # Greedy Best-First search algorithm to find the path
    open_set = PriorityQueue()
    open_set.put((0, self.agent_pos))
    while not open_set.empty():
        _, current_pos = open_set.get()
        current_cell = self.cells[current_pos[0]][current_pos[1]]
        print("Visiting:", current_pos)  # Add this line to print the position being visited
        if current_pos == self.goal_pos:
            self.reconstruct_path(current_cell, self.canvas_greedy)
            break
        for dx, dy in [(0, 1), (0, -1), (1, 0), (-1, 0)]:
            new_pos = (current_pos[0] + dx, current_pos[1] + dy)
            if 0 <= new_pos[0] < self.rows and 0 <= new_pos[1] < self.cols and not self.cells[new_pos[0]][new_pos[1]].is_wall:
                if not self.cells[new_pos[0]][new_pos[1]].parent:
                    self.cells[new_pos[0]][new_pos[1]].parent = current_cell
                    open_set.put((self.heuristic(new_pos), new_pos))
```

Anyways, here are the results for the first problem:



And for the second problem, diagonal movement playing a big role:



Problem 3:

α	β	Observed Behavior
1	1	Balanced Exploration of the search space
2	1	Prioritize minimizing the cost of the path traveled, may ignore states further from the goal
1	2	Prioritizes states closer to the goal
.5	.5	Balanced exploration with emphasis on the cost