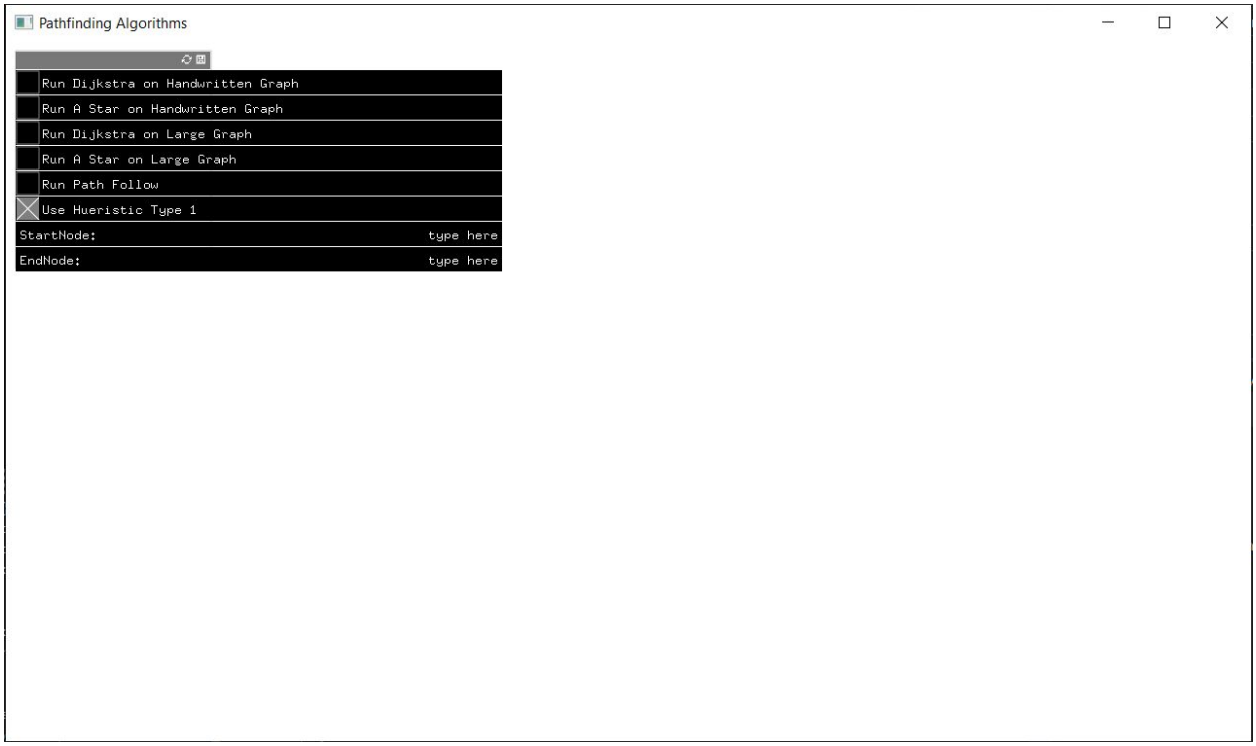
After running the program you should see something like this



First Steps: For the first part of the assignment, there is nothing to execute. You can see both the graphs in the bin/data/Graphs folder. The file named Hometown is the graph of my hometown and the other one is the large graph downloaded from the internet.

Dijkstra and A*: To execute Dijkstra on the small graph, click on the button that says “Run Dijkstra on Handwritten graph”. To run A* on the small graph, click on the button that says “Run A Star on Handwritten graph”. To see the path returned by the algorithms, look at the console window.

There are two input fields StartNode and EndNode which will let you specify the start and end nodes for the large graph. The large graph has a total of 1500+ nodes. Any input greater than the number of nodes will be discarded and a random node will be chosen. The input for these fields will only work for the large graph.
To run Dijkstra on the large graph, click on the button that says “Run Dijkstra on Large graph.
To run A* on the large graph, click on the button that says “Run A Star on Large graph”.

Heuristics: I’ve implemented two ways for computing heuristics, one is random (this is type one), the other is hand authored (this is type two). To use the second heuristic, (keep in mind that these heuristics are only authored for the small graph), click on the toggle that says “use heuristic type one”, if it is off, then the algorithm will use hand authored heuristics, if it is on, it will use the randomly generated heuristics. After choosing the toggle, click on the button that says “Run A Star on Handwritten graph”

Putting it all together: To run the path follow, click on the button that says “Run path follow”, it will show up the boid and some obstacles, use the key “t” to toggle between show/hide the grid. Now click somewhere on the window, the boid will calculate the path and traverse to that path using seek behavior