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Modified A*:

We implemented the basic A* algorithm but used faster data structures to achieve better speeds. We were initially using a ArrayList for the Closed list and a PriorityQueue for the Open list. In our faster implementation we created two HashMaps, one to replace the ArrayList and one to work alongside the PriorityQueue. We made a compromise to use more memory to achieve much faster speeds; By having both a PriorityQueue and a HashMap with the same data we can use the HashMap when we need to search and the PriorityQueue when we need the next lowest value.

Admissible Heuristic:

We didn't make any changes to our heuristic for part 4, it is the same as for part 2.