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CSCI 406

Section A

31st January 2024

Maze Report

1. **Vertex**

Vertices will be states containing a tuple of Rocket’s and Lucky’s current location on the original maze, and the starting state would be a tuple of where both Rocket and Lucky starts. The end state will be a state with a singular value of goal or win.

1. **Edges**

Edges will connect one state to another state that are considered valid and possible, and a valid movement is when if and only if either Lucky or Rocket is in a certain color room, only one of them can cross through the same color corridor.

1. **How will BFS work?**

The game will end either Rocket or Lucky reach the final node, so any state that has at least one value of the final node in its tuple, that state will connect to the end node. Now the graph from a singular start and ending, BFS can start on that singular start and traverse the state map to find to the ending if possible.