LaSalle College
Vancouver

Course Number: VGP332
Course Title: Artificial Intelligence

Assignment 1:   Pathfinding Project

Date Assigned: Week 3
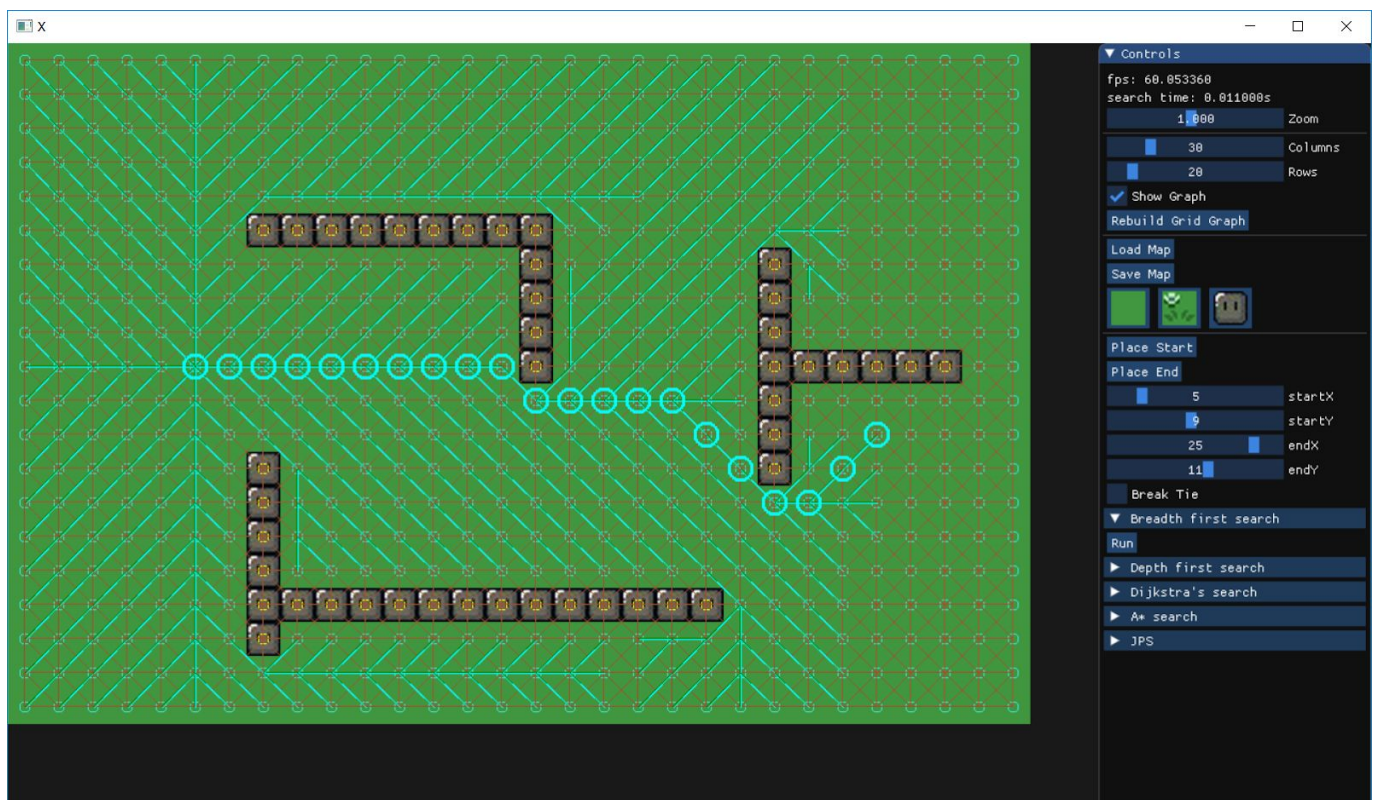
Due Date: Week 5

Description:
Your task is to build a pathfinding demo to showcase all the algorithms we covered in class. Specifically, your demo should include:

- Breadth-First Search (BFS)
- Depth-First Search (DFS)
- Dijkstra's Search
- A*

BFS and DFS are uninformed search and will not take edge costs into account, while Dijkstra's and A* will need to consider traversal costs as well. In any case, all implementations need to respect impassible nodes.

Your demo should allow the user to paint walls and tiles of different costs, as well as placement of the start and end positions. You will also need to visualize the resulting path, as well as the closed list to verify the graph node propagation.

Deliverables:
You will need to demonstrate all functionality in class and submit the full source code of your implementation.

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