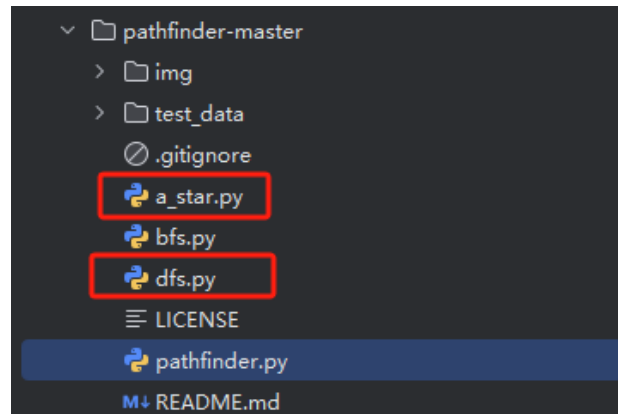# Assignment 2

Content:

- write your path finder (DFS and A*) algorithm
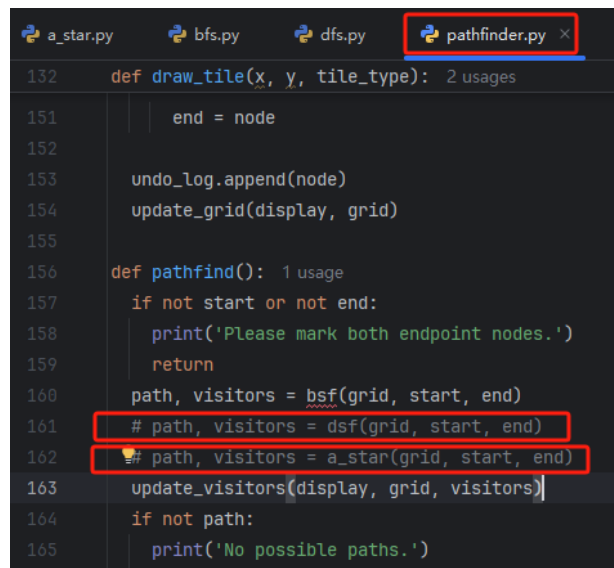
You can use the BFS algorithm (bfs.py) as a reference to complete the DFS (dfs.py) and A* (a_star.py) algorithm.

```
v ☐ pathfinder-master
    > ☐ img
    > ☐ test_data
      ⊘ .gitignore
      🐍 a_star.py
      🐍 bfs.py
      🐍 dfs.py
      ≡ LICENSE
      🐍 pathfinder.py
      M↓ README.md
```

Python library you need to install before run the code:
pip install pygame

The program entry point is the pathfinder.py file.

```python
132     def draw_tile(x, y, tile_type):  2 usages
151         end = node
152
153     undo_log.append(node)
154     update_grid(display, grid)
155
156   def pathfind():  1 usage
157     if not start or not end:
158         print('Please mark both endpoint nodes.')
159         return
160     path, visitors = bsf(grid, start, end)
161     # path, visitors = dsf(grid, start, end)
162     # path, visitors = a_star(grid, start, end)
163     update_visitors(display, grid, visitors)
164     if not path:
165         print('No possible paths.')
```

The way to submit homework:
Upload your source file (.py) and screenshot of your DFS and A* result on Canvas.

Due:
2024/10/20, 23:59 pm