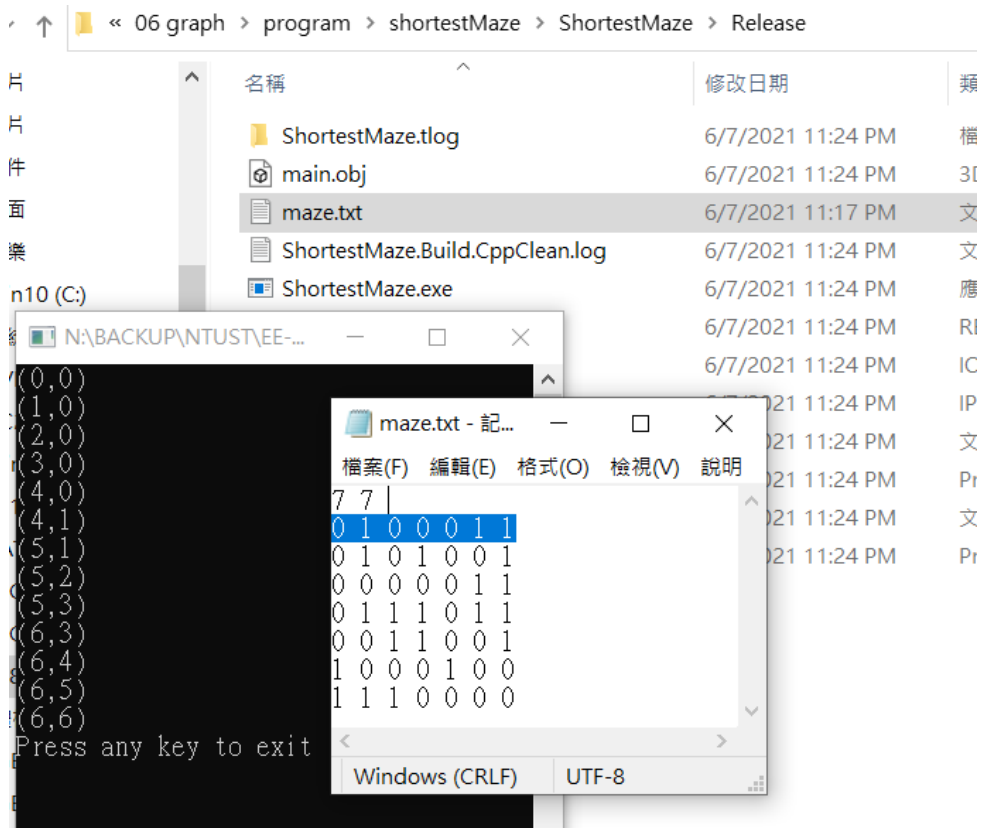
Program Homework: Find the shortest path of a maze
(Due: PM:6:00, June 16, 2021)

We have solved the maze problem using the stack data structure in previous lectures. In the graph chapter, we learned Depth First Search and Breadth First Search to traverse all nodes of a connected graph. In addition, we also introduced the Dijkstra's algorithm to find the shortest path of a weighted graph. In this homework, you had to design a program to find the shortest path of a maze. For simplicity, only four directions {(-1, 0), (1, 0), (0, -1), (0, 1)} are allowed for searching the shortest path of a maze.

A video is provided for you to understand this homework better. You can click the video link https://youtu.be/0JfgTidbjCc to learn how to solve this maze shortest path finding problem.

- A demo **ShortestMaze.exe** file and a **maze.txt** file are provided for demonstration. You can execute the **ShortestMaze.exe** with the **maze.txt** included in the same directory. As shown below:



- You can change the maze data in the maze.txt to verify the correctness of your

program. Our TA will also use another maze.txt to check your program.