MapSolver Assignment – Spira Data Corp.

Michael McCarthy

e. [mmccarthy347@gmail.com](mailto:mmccarthy347@gmail.com)

p. (403) 966-0965

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MapSolver User Guide:

This project was developed as a console application. To run, the following is needed:

1. One argument – the full txt file path and name
2. Properly formatted text files – as shown in requirements that were given at start date of assighnment (May 11, 2017)

Known Bugs/Issues:

1. Error Handling – There is minimal error handling. To get the prototype complete on time, this was not top priority.
2. Max and min height handling – not implemented
3. Check file for S and E (1 only) – not implemented
4. Odd result paths with columns side by side with open space blocks – I noticed that too many ‘.’ Are being displayed when columns are side by side, like in example given in assignment handout. This is a bug in the system. I did not have enough time to resolve this.
5. Text files – I was not able to test a various error prone files to see how application handles.
6. Design/Structure – I generally like to have some sort of controller to manage IO, data manipulation, and the business logic. In this project, due to a smaller project, I felt not to try and try to over complicate things. Also, the lack of time I had to spend on the assignment, due to various outside factors, keeping the code structure simple was chosen. Two classes were designed:

* Maze.cs – handles everything, creates the maze grid, finds the possible paths, and appends the solution back to the file
* Block.cs – stores data for each grid location of map given on text file
* Wish list
  + I would of liked to separate some of the constants within some of the code
  + Separate all LINQ queries from Maze object into a data model object
  + Couple other areas where some code refactoring could be done
  + Improved error handling

Test Cases:

I included some of the text files that I used to develop and test against. However, I never got to test with larger mazes, so not to sure how the app will perform. The test files are located to the project directory: MazeSolver\MazeSolver\MazeFiles