Threshold Correction Maze Solver

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Project Description:

The *Threshold Correction Maze Solver* is a web based display, solving, and storage system for two-dimensional mazes. Mazes are represented by a grid of squares. On the Maze Display page the user starts with a completely white grid and then clicks on the squares to change their state between white and black. White squares represent the floor and can be transversed. Black squares represent the walls of the maze and cannot be transversed. Each maze has two more types of squares, the start and the end of the maze. When the solve button on the maze display is pressed, a path from the start to the end square will be found and displayed. This path is found using the A* algorithm. From the Maze management
page, mazes can be renamed, deleted or saved to the user's database. Mazes saved to the database can be reopened in the Maze Display. The final page of the application is the Maze Stats page. This page displays graphs created from the maze data saved in the user's database.

Project Tracker:
https://csci-3308-spring21-021-3.atlassian.net/secure/RapidBoard.jspa?rapidView=1&projectKey=Y21

VCS:
https://github.com/CSCI-3308-CU-Boulder/3308SP21_021_3

Contributions:
Ben:
_____Lead backend programmer, primarily responsible for setting up the database and transfer of information; drafted and/or contributed to the writing of milestone documents.
Ethan:
_____Assisted in cementing the design of the pages based off of Kyle's wireframes, constructed the main page; connected all pages and assisted in the visual continuity across all pages; helped direct and organize group presentation; drafted and contributed to documents for milestone projects.
Kyle:
_____Established visual design of the pages via wireframes; responsible for the construction of the architectural diagram; constructed the stats page and worked in line with Ben and Surya to link the back end; drafted and refined documents for the milestones.
Tommy:
Primary assist in early documents and concept drafting; built initial maze management page.
Surya:

_____Lead maze programmer, responsible for the construction and implementation of the maze solving algorithm as well as maze visualization within the application; worked with Kyle and Ben to link the maze data to the backend for the stats page.

Deployment:

https://project-3308.herokuapp.com (project-3308.herokuapp.com)
https://project-3308.herokuapp.com/