MAZE MAKER SOLVER

Object Oriented Programming & Data Structures

Michael Arianno Chandrarieta 2802499711
Harris Ekaputra Suryadi 2802400502
Muhammad Ryan Ismail Putra 2802522733

WHAT DID WE MAKE?

We made a Maze Maker + Solver Application where we, the users, can create a maze through the App, and run a desired Algorithm to solve it.

The users are able to place walls, startpoints, and endpoints on the 40x20 space provided by the app. When the Algorithm is ran after a desired maze is made, the system would try to find the endpoint and print its fastest route after.

WHAT ALGORITHMS?

Our program implements 3 Algorithms that the user would be able to choose:

DFS (Depth-First Search)
BFS (Breadth-First Search)
A* (A-Star)

Each of them has their own unique way of navigating through the maze created.. The Algorithms also has a different Data structure available to use for a comparison analysis.

WHY DID WE DO THIS?

Maze-solving algorithms have real-world applications, such as robotics navigation, AI pathfinding in video games, and route optimization in maps.

Our project allows users to create their own mazes by placing walls, start points, and endpoints and then solving them using different algorithms. By implementing and comparing different pathfinding techniques, we can gain insights into their strengths and weaknesses, helping to improve algorithm selection for various real-world applications.

https://github.com/MichaelFirstAC/Maze-Maker-Solver.git