# Maze Solver Game: Project Report

Course Code: 115

Group Number: 5

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## Introduction

What is the Maze Solver Game?

The Maze Solver Game is an interactive puzzle game designed to challenge players to find a path from the starting point to the exit in a given maze. The game integrates logic, problem-solving techniques, and programming concepts to create an engaging and educational experience.

Objective

Goals of the Game:

- To develop an interactive maze-solving experience.
- To implement and analyze different pathfinding algorithms.
- To enhance players' logical thinking and problem-solving abilities.
- To foster teamwork and collaboration among developers.

How It Works

Game Mechanics:

- The player starts at a designated entry point and must reach the exit.
- The game offers various mazes with increasing difficulty levels.
- Users can choose to solve the maze manually or employ algorithms to find an optimal path.
- The game visually represents the solution path when using an algorithm.

Pathfinding Algorithms Implemented:

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

Features

- Random Maze Generation
- Visualized Pathfinding
- Multiple Algorithm Options
- User-Friendly Interface

Tools and Techniques

- Programming Language: C
- Version Control: GitHub

Conclusion

This project successfully outlines the design, mechanics, and implementation of the Maze Solver Game. Through the development process, we have conceptualized various maze levels, analyzed different pathfinding techniques, and created an engaging puzzle-solving experience. The game serves as an excellent tool for developing algorithmic thinking and teamwork while providing an enjoyable and interactive challenge for users.

Thank You!