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Final Project Proposal

Ghostblade: Shinobi Gauntlet – Developing a Command-Line Maze Adventure Game in Rust

CS 523 Rust Programming, Winter 2024

Inspired by early adventure games such as Legend of Zelda and Crystalis, I have always wanted to create my own version of this genre. During my previous term at PSU, I had the opportunity to create a simple version of such a game for AI training. However, it turned out to be too complex for simple AI agents to solve, so I had to create a more straightforward game instead, leaving this project unused. Now, I see this as a great opportunity to build upon that initial version and develop it into a more complete game.

The original CLI adventure game in Ruby

For my final project, I plan to create Ghostblade: Shinobi Gauntlet - a command-line maze adventure game in Rust. In this game, the player takes on the role of a ninja (Ghostblade), whose mission is to reach the castle and rescue the trapped princess. To succeed, the player must navigate and overcome different map challenges such as patrols, locked doors, hidden paths, grappling hooks, and drawbridges. I aim to create at least 10 levels with increasing difficulty and implement at least 5 different types of map mechanics.

In the original game, the map is created using a text file that stores the locations of all elements - the player's starting position, walls, patrol units, and the goal. I plan to expand on this system by adding more tile types and gradually increasing the map sizes to make the gameplay

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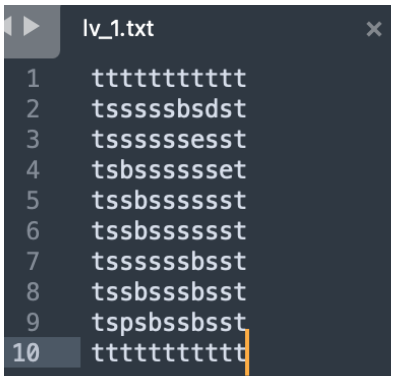
more engaging. As a potential bonus feature, I would like to create a map editor for the game, though this would be considered an extra feature outside the main scope.



Map file example

The original game was written in Ruby, which has been known for its clean syntax and rich built-in functions that allowed for rapid prototyping within a short time frame. Converting the game to Rust should not be too difficult, but the real challenge lies in implementing the different map mechanics. I believe this will provide an excellent coding experience in Rust.

In summary, my goal is to port a command-line adventure game I previously developed in Ruby to Rust, while enhancing and expanding it into a complete gameplay experience. Through this project, I hope to explore the Rust programming language while gaining deeper insight into the language's characteristics and potential applications for future projects.