CS396
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Blobs

Blobs - Project Report

Blobs is a Java and Slick2d-based Reversi-like board game solution with the following features:

- Alpha-Beta enhanced Mini-max based artificial intelligence
- Highlighted squares show the player possible moves
- A move history detailing the last two moves
- Inheritance-based implementation allowing for cleaner code and easier modifying

Project Analysis

For this project, we chose to use Slick2D, an openGL library and wrapper built for video games. Slick2d allowed us to easily display shapes and letters on the screen, and update them with per-frame precision.

Our AI and Human entities are both classes that are children of the Player class; a more generic class that allows us to generalize the operations pertinent to either entity. The Human class listens for player input and submits the player's move, while the AI looks 4 moves ahead, and calculates the best move using alpha-beta pruning.

Known Bugs / Limitations

- Mini-max is responsive, but slow.
- Sometimes our algorithm will not make the most effective moves near the endgame.

Unimplemented Features

- The ability for the user to pick their color would be nice.
- Actual buttons to restart the game would be nice.

Controls

- The user may click on a square highlighted in blue to spawn a new white piece on that square.
- The user may click on and drag a piece to a square highlighted in red.
- The player can start a new game by pressing P to go first, or A to have the AI go first.