

To: CS4500 Course Staff
From: Julian Hirn and Joshua Rosenberg
Subject: Software Components for Project
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Server-side

Application Layer Components

1. Referee: Determines if a given move is possible for a given player using data from StateHolder. Can coordinate with other components to kick clients if they misbehave
2. CertainMoveMaker: Tells StateHolder how to change its data based on move that has been approved by Referee
3. ClientCommunicator: Handles move requests including move requests from clients
4. PaymentHandler: Ensures that participating players have paid. Knows how to issue payments to any given user

Data layer Components

1. **StateHolder**: Holds the state of the game at all times
2. Leaderboard: Holds information about previous tournaments and players' past performances

Client-side

Presentation Layer Components

1. RegistrationUI: Allows players to register for a tournament, passing entered data to server communicator
2. GameUI: Graphical representation of a single game board
3. GameOverUI: Graphical representation of the state of an ended game (Player scores, who won, etc.)
4. TournamentUI: View the details about a tournament (participants, prize money, current rankings, etc.)

Application Layer Components

1. MoveMaker: Tells StateHolder how to change its data based on move that has been deemed valid by the server through the ServerCommunicator
2. ServerCommunicator: Knows how to issue requests to the server
3. HackerInterface: Interfaces with hacker's code (most likely but not necessarily through local TCP socket) to figure out what move they want to make after sharing information about state from StateHolder

Data layer Components

1. **StateHolder** (shared component with Server-side StateHolder)