Data Representation

GameState

Our game state will consist of a board class, a mapping of player ID's to their state (the referee will have all mappings while each player will only have their own), and a list of turns. The board class will contain a Record of coordinate strings to pieces. The player state will contain the player's score and what is currently in their hand. The turn will contain the player ID, a list of moves, and the score of the turn. Below is a diagram of how we envision the data representation for the state of the game to be.

```
GameState
  - Map
    - Coordinate
        - x : Number
        - y : Number
    - Pieces: Map<Coordinate, Piece>
  - Players: Map<String (playerID), PlayerState>
    - PlayerState
        - Score
        - Hand : [ListOf Pieces]
  - Turns: [ListOf Turns]
    - Turn
        - playerID
        - Moves: [Listof Moves]
            - Move
                - Piece
                - Coordinate
        - Score
```

Wish List

- Add a tile to the board
    - Determine if a tile placement is valid
- Give a tile to player
- Initialize a game by placing the first tile
- Determine whose turn it is
- Calculate score of a turn
- Send information to players (prev turns, score, whose turn it is etc)
- Kick player out
- Recieve turn from player
- Get a random piece
- Determine when game is over
- Determine winner/send winner to players
- Handle exchanging tiles