

To: Professor Matthias
From: Andre Dangi & Anne Wesley
Subject: System for Fish game
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Initialize Hexagon Board: *Purpose:* This component's job is to create the hexagonal game board in which the game takes place. *Represent:* This component represents the hexagonal board and the very initial start of the game. *Role:* This component role is to serve as the game board.

Set Fish Tiles: *Purpose:* This component runs through each tile on the hexagonal board and sets the number of fish it contains. *Represent:* It represents the number of fish (points) available in each tile. *Role:* Serves to initialize the number of points.

Place Penguins: *Purpose:* This component sets down penguins on the board depending on where players decide. *Represent:* This is a game mechanic that starts at the very beginning of the game. *Role:* Serves to help initialize the game by letting players set their penguins down.

Create Player Queue: *Purpose::* Create the turn queue for the game. *Represent:* Order of turns for the game. *Role:* Help maintain order of queue in the game.

Remaining moves: *Purpose:* Check if a player has any remaining moves. *Represent:* A checker for the player's status. *Role:* Helps the game know who is still playing and who has lost.

Remove Tile: *Purpose:* Remove the ability to move to a tile. *Represent:* A sunken ice tile. *Role:* Helps progress the game.

Move To: *Purpose:* Facilitate movement for a player's penguin if the destination can be reached. *Represent:* A player's movement. *Role:* Helps progress the game;

Game Status: *Purpose:* Determine if the game has ended based on movement conditions. *Represent:* The status of the game. *Role:* End the game if nobody can move.

Render Board: *Purpose:* Print the hexagonal board. *Represent:* The game board in a visual form. *Role:* Make the hexagonal board visibly available to help facilitate the game.

Connect TCP: *Purpose:* Make a TCP connection for online multiplayer. *Represent:* The connection made by each player that takes their input in from another computer. *Role:* Adds online multiplayer capabilities.

Log In/Sign up: *Purpose:* Logs users in or helps them sign up for an account. *Represent:* The connection between the database and user allowing them to access their accounts. *Role:* Gives users access to their accounts.

Edit Account: *Purpose:* edits the user's account details. *Represent:* The details of the user account such as password and username. *Role:* Lets the user change the details of their account.

Components: Initialize Hexagon Board, Set Fish Tiles, Place Penguins, Create Player Queue, Remaining Moves, Remove Tile, Move To, Game status, Render Board, Connect TCP, Log In/Sign up, Edit Account