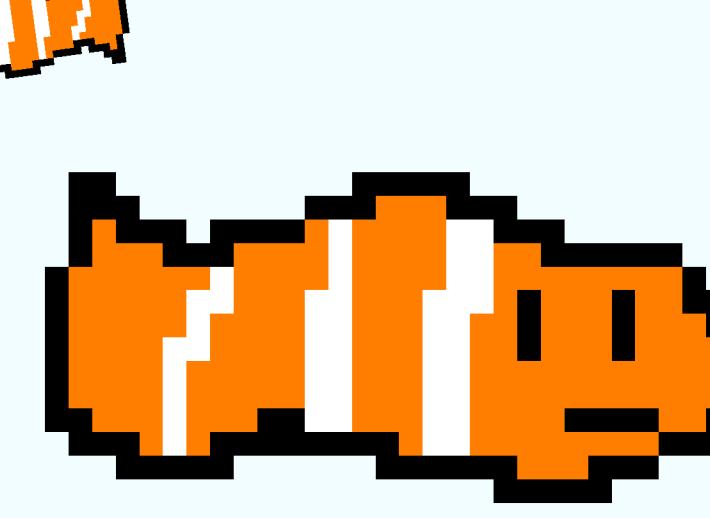


Team Members

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Covey Town Fishing Expansion by Team 405



Feature: Fishing Minigame

In the expansion to covey town we are finally adding a Fishing Minigame to CoveyTown. Fishing is a staple of many games and can be a fun social activity to get players to interact with each other and CoveyTown. Fishing works in CoveyTown as a skill-based event that can be started by interacting with the pond. With ten different types of fish, each with different randomized difficulties and scores, you'll have plenty of variety.



Figure: player attempting to catch a fish

Feature: Fishing Display Area

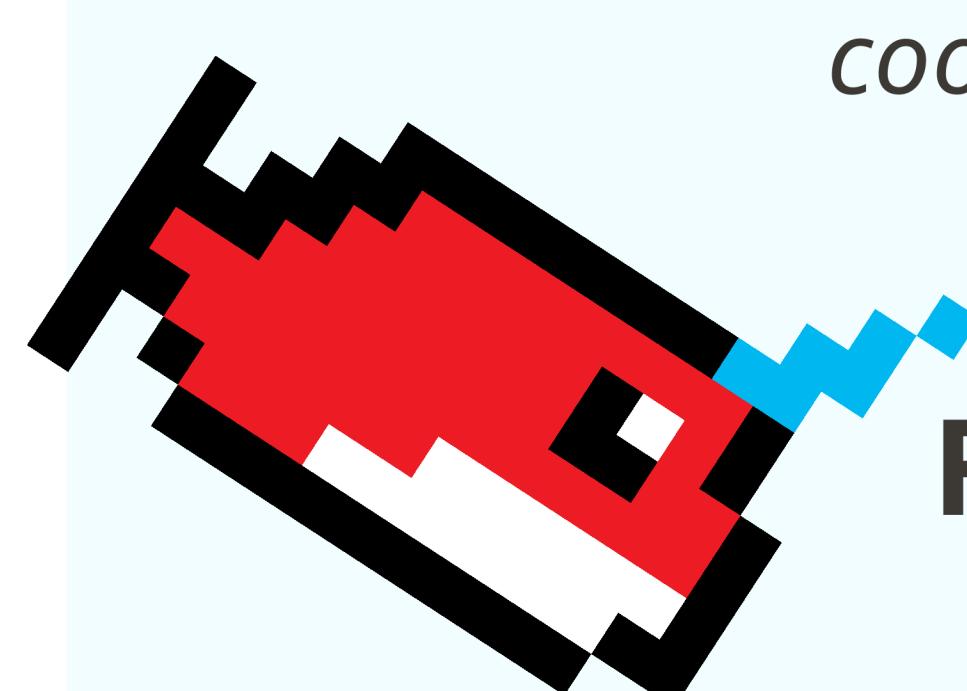
After struggling to catch a rare fish from the pond, it's added to your inventory and the fun has just begun. If you've caught a high-scoring fish, you may be able to display it in the town for everyone to view. This creates an interactive, competitive experience in CoveyTown that wasn't present before. The fish display persists with the town with our database implementation, so your prize will stay around for all to see as long as the town.

Project Overview

We have implemented a new Fishing Game for Covey Town. Fishing comes with three core activities that users can interact with as part of the fishing expansion. Players can now **catch fish** in the pond in Covey Town.

Players can now **display fish** they've caught in the fish display around the fish tank adding a friendly competitive aspect to fishing

Finally players can now go to the new trading table and **trade fish** with each other allowing people to cooperate with others to amass fish collections



Feature: Trading (Fish mostly)

If you want to grow your personal fish collection you can make your way to the Trading Area. Using your inventory, trades can be made as long as both players agree to it, so there's always the opportunity to grow your collection. Your inventory also persists with the town, so you can maintain your collection across sessions.

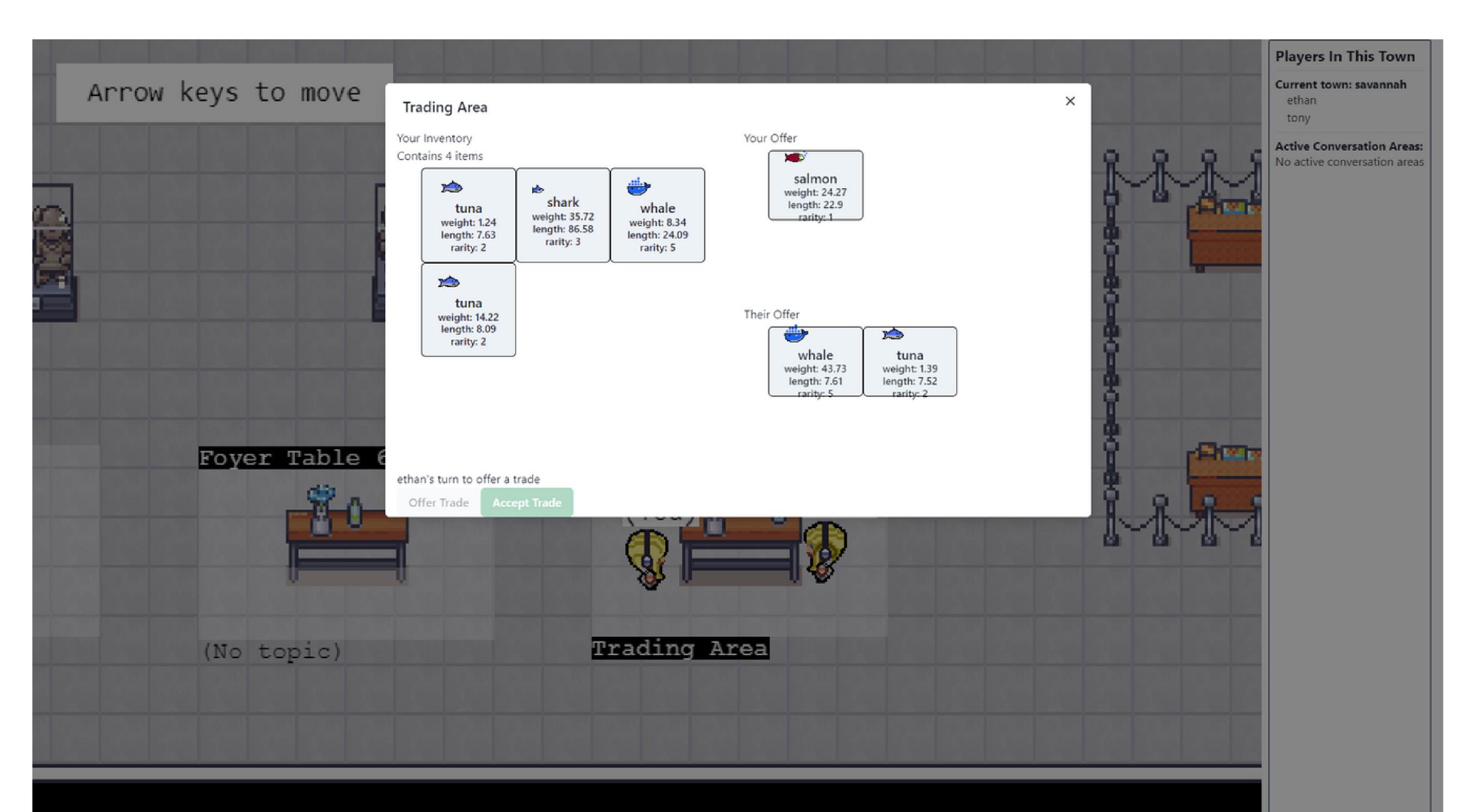


Figure: players making looking over an offer in the Trading area

Tech Stack and Design

Our project uses GameArea and InteractableArea controllers. We utilized the controller and model structure of the GameArea interface to implement our trading, since that required a shared state between two players. We utilized the flexibility of the InteractableArea interface to implement the FishingArea and DisplayArea, as those are done individually by one player. The persistence of the inventory is supported by our firebase implementation. It holds an array of GameItems that have a key that corresponds to a given player's username. Adding a registration and log-in system was outside the scope of this project, so as of now anyone who joins a town with an existing username will gain access to that username's inventory. The firebase database also holds the fish that is currently being displayed in the FishingDisplayArea, along with the user who it belongs to.

Future Work

There is more work that can be done to improve the extensibility of our code, to make future fishing areas with alternate settings and fish available much smoother to implement. There are also more functionalities we could add to a fishing game system as part of future work. Such as improved graphics and customized themed UI, more ways to utilize the fish you have, among many other ideas. There is also more work that can be done to generalize Trading, Game Items and Inventories which were implemented specifically for fishing. We would be able to go back to the code and refactor making those things more fleshed out so that they can be used for any potential future items that are added to the game.

One small thing that I think would have been cool to implement is making it so when a fish is put on the fish display the sprite of the fish appears in the tank.

Demo and Source

Our live demo site is hosted on [render.com](#) here

The source code is hosted on [Github](#) here

