To: CS 4500 staff
From: Mirai Sahara and Andrew Duffy
Subject: "Fish" Game Design Proposal
Date: 9/27/2020

Project Milestones:

Milestone #1: Basic GUI

Basic GUI - display a game board. Can add small functions to change various things like grid size for demo purposes (this code can then be reused later for the actual model).

Milestone #2: Game Model

Once we have the basic components laid out on a GUI, we can begin to implement the logic of a game. This involves the building of a game model that keeps track of the hexagons, penguin positions, fish values, and score. It will also involve the creation of functions that alter the data-based gamestate. Can possibly be demoed with some kind of text representation in the console.

Milestone #3: Tethered Game-Logic to GUI

Implement player movement. When a penguin is moved, the tile it moved from should be emptied, and the fish given to the player. Earning fish should increment the score. This milestone requires the creation of the controller, a change on the GUI will change the data-based game model and vice versa. Upon completion of this milestone, the game will be locally playable. This milestone will be the best for demoing to investors. Anyone will be able to sit down and play the game with one or many investors and show them the intent of the project.

Milestone #4: Server Creation

There needs to be a central hub for the users to connect to- the creation of which will happen during this milestone. There won't be any flashy-investor attracting modifications to the visuals of the project, but the functionality that this server will provide will eventually allow for the users to play online AND pay our startup for the pleasure.

Milestone #5: Server Communication

Now that the serve is up and running, we will need to go back to the game's code and convert the Model to data that is sent to the server and distributed to each user. This will take some coordination to maintain game-consistency, but once completed the project will be, for our purposes, complete. The ability for player AI's to connect into and play the game is implemented here. At this milestone automated games should be possible.