Date: Sep. 28, 2020
To: CS4500 Staff
From: Jake Hansen and Nick Thompson
Subject: Fish Milestones

As per our Systems memo, we have broken down the work for the Fish project into seven major component systems. We have laid out the order for developing these systems so that we can demo as early as possible, while building the models first to avoid the technical debt that developing them late would likely cause. The following is our current roadmap for implementing the components:

Board Model
The board model will be vital for maintaining the state of the game. The rest of the game stack cannot be developed without a working Fish board. If the board model was to be created after some of the other milestones, any changes or adjustments that may need to be made to the board might cascade, causing restructuring to the other subsystems that depend on it.

Game GUI - Demoable
For the purposes of demoing our progress as early as possible, the game GUI is the second highest priority. We intend to demo a game with a scripted set of moves as soon as we have a model in place to facilitate the game mechanics and a view to visualize it so that our stakeholders can see the progress we are making.

Game Controller - Demoable
With a working game board and GUI to show visible progress, the last component of the game stack is to enable user interaction through the game controller. Since this component is a bridge to the game board, it can be completed last. After the game controller is complete, a real game with user interaction can be demonstrated.

Player Model
Once the game can be played via our controller API, we will need to build the player model before the tournament model can be developed. This should be a small unit of work, but unfortunately it is not likely to show much visible progress.

Tournament Model
As with the game model, we will need to build the tournament model prior to the controller and view in order to minimize the amount of technical debt any changes to the spec will cause.

Tournament GUI - Demoable
Once we have a model implementation, our next step will be to implement the GUI so that we can demo what a tournament will look like, using real players but faked games. The GUI demo will show a tournament, except without the controller in place the wins and losses will be determined arbitrarily rather than through play.

Tournament Controller - Demoable
After the model and view are complete, the final step for the tournament stack is to build the controller. This will enable real user interaction with tournaments and bridges the gap to the game stack, allowing real Fish tournaments to be played. It makes the most sense for the controller to be the last step since it needs to link the completed game stack to the rest of the tournament stack. At this point the entire tournament system will be complete for a full demo.