Milestone 1: User account creation

Goal: Set up a way for user's to sign up for the distributed tournament system. Their account will store information about the tournaments they've entered, the code they have submitted for their tournaments, the results of the tournaments they've entered, as well as payment information.

Plan:

1. Create a simple server that accepts requests to create and edit user data by writing to files
2. Create a simple client with an interface that allows users to enter account information and send a request to the server to either create or edit their account. They should also be able to view their account.
3. Have a mocked out display for viewing the tournaments that have been entered and code submissions, as well as the history of wins and losses.

Demo:

Demonstrate a user signing up for an account, editing their information, and viewing their data.

Milestone 2: Tournament selection interface

Goal: Allow users to sign up for tournaments and submit code to play in those tournaments. For now the winner will be selected at random.

Plan:

1. Add an admin interface that allows for the manual scheduling of tournaments.
2. Create an endpoint for clients to upload their "AI" code.
3. Create an endpoint for clients to sign up for a tournament. When signing up it will ask them to select a code submission they'd like to run in the tournament and charge their account the entrance fee.
4. When the tournament happens, randomly select a winner and credit their account.
5. Populate the previously mocked view for viewing tournament history.

Demo:

Show a user creating a submission for their code and signing up for a tournament. When the tournament runs show that the result appears in their history and that their account balance was properly updated.

Milestone 3: Integrating game code with code submissions

Goal: Change the tournament from randomly selecting a winner to actually running individuals code to generate moves.

Plan:

1. Build a game that allows for the integration of arbitrary code
2. Run submitted code safely in a separate process, to get the AI's moves. Have some sort of logging of the moves to make sure that its working correctly
3. Change the tournament to actually run using game code instead of randomly selecting a winner

Demo: Build a good and bad AI, and show that the good AI wins in the tournaments. Show logs of the game to demonstrate the moves being made by the AI's.