Leaderboard/Matchmaking Team Milestones & Tasks

Members:
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Feb 26 - March 2

Group Focus: Create diagrams for initial system
By March 2 11:59PM, we should aim to build the following systems:

- Player ranking system
    - Compare two players (i.e. does one rank higher than the other in a certain game?)
- Random Matchmaking
    - Determine how a win or loss affects a player's rank
    - Determine logic for whether two players can be matched together given their respective ranks, and how a difference between player ranks can influence the previous point
- Fixed Matchmaking
    - Initialize a match between two specific players (friends)
- Leaderboard system (should be extensible for each game)

Individual tasks:
Elijah:
Team Leader ® duties
Draw diagrams for topics that overlap between various teams:

- Networking components in the matchmaking process.
- Receiving game statistics from Game Logic team and updating player statistics accordingly (also, which statistics we need to track)

Contribute to class_diagram as described in group deliverables

Harderick:
Draw out class structure diagrams that describe:

- How player statistics will be stored
- How we can use those statistics to build representations of leaderboards for the GUI team to work with

#3:
Create use-case descriptions for matchmaking or anything else that comes to mind. Some ideas to focus on:

- Some players just want to play against their friends. In such a case, how will they connect with the friend?
- On the other hand, some players will only use random matchmaking.

#4:
Determine matchmaking logic:

- For matchmaking to put two players together, how close do they need to be in Elo (or some other statistic)? Should this be affected by matchmaking time (e.g. threshold grows if a match isn't found within a certain time)?
- How can we determine how a match affects a player's Elo? See https://www.chess.com/terms/elo-rating-chess
- Should the matchmaking logic work differently for each game?

(In case players want to know how matchmaking works, it might be a good idea to create a short writeup that describes it.)

#5:
Draw a diagram (possibly a sequence diagram?) to explain the matchmaking process.

- Work closely with member #4 to ensure that the sequence diagram describes the matchmaking logic properly.
- For now, when making the diagram:
    - assume that you have some list of players who are currently matchmaking. The networking team will handle that part.
    - reference Harderick's diagrams to see how you get statistics from each player object.

March 3 - March 7

Focus: Handle integration with other teams, update diagrams accordingly
Integration:

- Handle integration with GUI team
- Handle integration with Networking team
- Handle integration with Authentication team

Other things:

- Determine milestones/deadlines and make planning document

Deadline: Friday, March 7 11:59PM