CS225 Software Development

Class Project

FURPS+

**Functionality**

Original by Katherine, edited by Phoenix.

* What will the system do?
  + Login Screen
    - A game description greeting the user.
    - User enters a username and password.
    - Creates a new account if username is unused.
    - Saved usernames shown in a dropdown.
    - Account is retained between sessions.
    - Entering credentials allows access to a previously created bracket.
  + Bracket Prediction
    - Either starts with an empty bracket or the bracket associated with an account.
    - User can construct their predicted bracket.
      * Teams can be moved forward and back on the bracket at will.
    - Can show team stats and information.
    - Bracket can be finalized once filled out which makes the prediction eligible for the leaderboard.
  + Simulation
    - Shows the winners of each match including their score.
    - Team’s scores are weighted based on their rank.
    - Calculate points earned by each user from correct predictions.
      * The later the matchup the higher the points.
      * Points earned for each matchup will be shown to user.
    - Show a user leaderboard of all accounts with finished brackets and their scores.
* When will it do it?
  + Login Screen
    - On program start.
  + Bracket Prediction
    - After a valid login is entered or account is created.
  + Simulation
    - When the simulation button is pressed after the bracket has been finalized.
* What kind of computation or data transmission will be performed?
  + The program computes winning teams using weighted randomizations.
  + Calculates scores for player brackets using round based weighted points.

**Usability**

* Scalable GUI
  + Elements in the GUI should resize once the GUI frame is resized.
* Undo
  + Users can erase a bracket or division of bracket, so they can start from scratch.

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* Display the simulated scores for each game
  + In each games individual bracket the teams scores should be displayed so it is clear to the user why a certain team won and the other lost.

**Reliability**

* Validate Bracket before finalizing
  + Ensure that all necessary fields are filled out, if not display a message to the user asking them to complete the bracket before finalizing.
* Catch input output exceptions
  + Catch for incorrect log in credentials

**Performance**

**Supportability**

**PLUS**

* Providing stats for each team that influence the situation
  + Teams that are ranked in the top 10 will have a minor advantage against other teams to provide a real life simulation.
* Providing the option to compare the predicted bracket to the actual tournament.
  + Compare the users bracket (the simulated one) with the actual tournament winners from 2017.
* Display a tooltip next to the winning team
  + Tooltip will display the college information of the winning team once the mouse is has hovered over the tooltip icon.
  + Display tooltip with info of every team.
* Correctly predicted teams to be displayed with green text
  + If the user correctly chose a team to win the team name should be displayed in green.
* Incorrectly predicted teams to be displayed with red text
  + If the user incorrectly chose a team to win the team name should be displayed in red.