

Project 2 Code Documentation

Initial Refactoring Changes

- 1) Changed recursive logic for input validation to iterative logic
- 2) Abbreviated “horizontal” and “vertical” to “H” and “V” for better UX

Implementing AI

- Enable users to select between 1 or 2 human players in the beginning
- If 1 human player, then the opponent will be an AI
- One among 3 difficulties (Easy, Medium, Hard) can be chosen for the AI opponent
- AI opponents are modeled as Player objects with `is_ai` set to `True` and an `ai_difficulty` field
- Gameplay loop has been updated such that all functions requiring player interaction can incorporate the AI opponent too
- The selection algorithm for each of the difficulties can be found in `player.py` under the `get_shot_placement` function

Implementing Custom Addition

- Players can view their individual stats using the “P” command during their turn
- The `view_stats` function in the `Player` class handles displaying the player stats. It makes use of a `get_stats` function to get the stat values
- Players can display the overall scoreboard using the “S” command during their turn
- `display_scoreboard` function handles displaying the scoreboard. It relies on the `get_stats` output from both player objects in the game