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15-112 Term Project Design Proposal

Project Description

Name

* UCL Foosball 19

Description

* A single-player soccer game modeled after the famous UEFA Champions League Football Tournament

Structure

* 32 soccer teams compete to win a trophy, playing 63 matches over two phases: a group stage and knockout round.
* User controls one team and competes against CPU to win trophy.
* User plays his/her own matches as foosball games against computer-controlled AI

Competitive Analysis

* Ultimate Football Management 15 (UFM 15) by mouse breaker.

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| Similarities |
| Uses databases to store player statistics |
| Simulates computers’ matches based on teams’ abilities. |
| Elegant and structured user interface to navigate between screens. |

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| Differences | |
| UCL Foosball 19 | UFM 15 |
| User determines outcome of his fixtures based on his performance in foosball games. | User’s games simulated based on team strength. No user-controlled influence. |
| User data will be saved in file for future reference. | User must restart after exiting game |
| Tournament structure limited to avoid inefficiency. | Game may endlessly run. Player can transfer teams. Poor storage of data. |

* Flash Soccer Manager 2010 by Mouse breaker

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| Similarities |
| User may control team setup |
| Simulates matches based on teams’ abilities |
| Tracks player data and presents statistics |

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| Differences | |
| UCL Foosball 19 | Flash Soccer Manager 2010 |
| Attractive exhibition of gameplay. | Gameplay features may be considered uninviting by user. |
| User has direct control over his team’s performance | User watches as game is simulated based on computer analysis. |

Structural Plan

Screens

* Organized into classes representing each possible screen that a user may need to interact with over the course of the game. Teams
* Generated as instances of a class teams.

Players

* Generated as instances of a class Players. A bunch of players will form an attribute “.players” of a particular team

Mouse Presses and Keypresses

* Switch between screens as user pleases.

Foosball Game

* For both teams, each position of players, Defender, Forward etc. represented as united line of players on soccer pitch image.

Foosball Functionality

* Arrow keys “p” and “s” called into action as user demands, and if certain requirements are met over the course of user’s match.

Functions

* Collision detection during match and over user interfaces.
* Run functions initializing game setups as user demands.

Timeline Plan

Tuesday Nov 20th- Finished designing user interface. Initialize developing computer-controlled AI

Tuesday Nov 27th – Finished developing structure to manage player data. Finished implementing save feature. Approaching completion of developing efficient match simulation engine.

Tuesday Dec 4th - Finished complete game setup. Finished testing and analysis of game features. Finished implementing modification to increase game efficiency/ reduce redundancy.

Version Control

Upload current copy of game File to google docx every two nights.

Module List

* Pygame

MVP requirements met swiftly:

* BeautifulSpoon 4
* Requests
* Sockets

Design Docs TP2 Update

N/A

Design Docs TP3 Update

AI feature added, Career Mode discarded

Team Management feature included.