Computer Science 102

Group 9 Game Project

Team Members’ roles:

Ntsika Mduba: - Documentation and back end

Pranay Patel: - Back end

Liso Mafu: - Documentation, front and back end

Zolile Sibanda: - Front and back end

Nkululeko Ntakana: - Back end

Hamilton Go - The Game:

Requirements Specification:

Background and Motivation

Hamilton Go is based on the popular and successful Nintendo game - Pokémon. An attacker against an opponent, one versus one. A turn-based battle game with multiple characters to choose from and specialist attacks and abilities. Each player is given a turn to make a move to attack which lowers the opponents health points. Some moves can be used to increase one's own health points while others defend against oncoming attacks. The one who loses all of their health first is the loser.

You may ask, don't the rounds become repetitive ? In the case that a battle is drawn out, the character gains energy points to unleash a much more powerful attack to end the game or significantly decrease their opponent’s health.

Problem Statement

The idea of a Pokémon based game is challenging. In many aspects the original game is very complex with hundreds of different characters and abilities, but it is not in our team's moral interest to completely rip off the well-known game, producing one far less than the original. As this would show a lack of creativity.

Another issue is being able to create a balanced game. With numerous different characters it is quite difficult to make sure that all the characters are balanced. Not one of them has any ability or power level that is so much greater than the rest of them that it breaks the game and makes it boring. Ensuring that a greater damage by another character - Pikachu - is compensated with a lower health.

Approach

Milestone 1: creating the basic code that will hold and call separate characters

Milestone 2: creating a way for characters to attack and use abilities on each other

Milestone 3: creating code necessary to cycle turn by turn and end game when hp is lost

Milestone 4: creating graphics and guis to support all the previously mentioned code

Milestone 5: creating code to call previously made code in the structure to implement the tournament mode

Milestone 6: creating code for AI/ randomised computer moves for p v E option

Milestone 7: creating a simple graphical tutorial for the player to understand how to play the game correctly

Design (architecture of system)

* Update UML diagram

Implementation (Important code snippets)

Visual Guide (user tutorials)

* Navigation with front end screenshots

HamiltonGo GitHub Repository:

<https://github.com/liso-mafu/HamiltonGo>

References:

<https://technicalwriterhq.com/documentation/software-documentation/how-to-write-software-documentation/>

<https://www.squibler.io/learn/documentation/product-documentation/#:~:text=Product%20documentation%20includes%20all%20technical,on%20the%20latest%20version%20releases.>