Code Documentation for PokemonBattlerMonteCarlo Project

By Rachel Hussmann

Overview

The purpose of the PokemonBattlerMonteCarlo project was to practice our skills from Programming and Problem Solving I and II, such as inheritance, polymorphism and interfaces. It also was to get us started on our major project of the first half of the semester: our Pokemon TCG game. This project has five classes: Charmander, Pikachu, Pokemon, Stadium, and TestPokemon.

How It Works

Charmander

The Charmander class sends information about the Charmander to the super class Pokemon. It has two constructors, one that allows the stats of the Charmander to be set and a default constructor that sets the stats to the following:

- HP: 39
- Attack: 62
- Defense: 43
- Speed: 65

Pikachu

The Pikachu class sends information about the Pikachu to the super class Pokemon. It has two constructors, one that allows the stats of the Pikachu to be set and a default constructor that sets the stats to the following:

- HP: 35
- Attack: 55
- Defense: 30
- Speed: 90

Pokemon

The Pokemon class holds information about a Pokemon object and is a super class to two classes: Charmander and Pikachu. The Pokemon class holds four variables about the instance of the Pokemon.

- int hp – The health points of the pokemon
- int attack – The attack stat of the pokemon
- int defense – The defense stat of the pokemon
- int speed – The speed stat of the pokemon

The class also holds the getters and setters for each of the variables.

Stadium

The Stadium class is responsible for battling two Pokemon objects. Using polymorphism, the Charmander or Pikachu objects can become Pokemon since that is their superclass. The Stadium class contains one method

- battle
    - Parameters: Pokemon p1 – One of the two pokemon in the stadium to battle, Pokemon p2 – The other pokemon in the stadium to battle
    - Functionality – Battles the two pokemon by checking speed stats and removing hp based on defense and attack stats.
    - Returns: Nothing, but prints out the winner of the battle

TestPokemon

The TestPokemon class contains the main method and runs the program. It contains tester objects of the Charmander, Pikachu and Stadium class. It runs the trials and outputs the winner of the battle.

Output

The project outputs the winner of the battle.

Screenshots