PokeGame

The intent of this project is to create a Pokémon style game where a player can navigate a map with a mouse and keyboard and interact with Pokémon. The player should be able to battle Pokémon it finds, and capture Pokémon. A battle should be a situation where it takes over the screen and is essentially a mini game. There should be different Pokémon available, and they should have unique attributes.

To complete this project, I will need to use the Pygame library, and a tile map editor called ‘Tiled’. I will find opensource game art which is free to use, I will use extensive object-oriented programming, and graphical programming. The above descriptions are a loose description of the original ideas and is likely subject to extensive change as the project progresses.

The progress of this project will be logged using git version control, and will be stored in a repository on my computer and on GitHub. This planning document will be updated as I complete certain features, and will be adjusted. Upon completion, several versions of this document will be kept.

Feature Plan

|  |  |  |
| --- | --- | --- |
| Feature | Target Date | Date Completed |
| A basic window and instance of Pygame is running, with correct files set up   * A window displays * It can be exited by clicking x or on esc key | May 24th, 2018 | May24th, 2018 |
| A basic player class has been made   * Player can move around the screen * Player has a graphic | May 25th, 2018 | May 24th, 2018 |
| A map is implemented   * A map has bee created using Tiled * A map has been loaded successfully into the game | May 29th, 2018 | May 25th, 2018 |
| A camera has been created, linked to player   * The camera follows the player * The camera stops at edged of screen | May 30th, 2018 | May 26th, 2018 |
| Player can visually rotate when changing direction   * Looks smooth * Does not interfere with planned collisions | May 28th, 2018 | May 27th, 2018 |
| Collisions are working   * Collisions with map and player * Collisions are not glitchy | May 31st, 2018 | May 30th, 2018 |
| Debug Mode added   * Player’s hit\_rect outlined * Wall hit\_rects outlined | May 31st, 2018 | May 30th, 2018 |
| Pokémon are added   * There are multiple Pokémon moving on the map * There are collisions between Pokémon and player | June 1st, 2018 | May 31st, 2018 |
| A basic instance of a battle is made, executed, returns to main game   * Should allow the user to win or lose * Should allow the user to capture the Pokémon | June 6th, 2018 | June 2nd, 2018 |
| Captured Pokemon are displayed.   * A side bar menu on the right side of the screen * It updates as pokemon are added | June 3rd, 2018 | June 3rd, 2018 |
| Different Pokémon are added   * Inheritance * Different types | June 8th, 2018 | June 3rd, 2018 |
| The ‘battle’ is improved   * Your pokemon battles instead of the player * The player can shoot pokeballs (probably from fixed position) | June 8th, 2018 | June 8th, 2018 |
| A more advanced battle is made   * Both wild and trained pokemon can attack * Pokemon had different type attacks * You can kill the pokemon or capture them, or lose your current pokemon | June 9th, 2018 | June 9th, 2018 |
| There is some form of instruction for the user   * A nice loading/intro screen * A brief instructions screen with basic info | June 11th, 2018 | June 11th, 2018 |
| Improve documentation   * Use docstrings for functions * Line comments to identify function of complex code blocks | June 12th, 2018 | June 12th, 2018 |
| Pokémon can become stronger   * They have increased health * They have stats | June 13th, 2018 | June 12th, 2018 |
| The game is adjusted for user experience   * The player moves slower * The pace of the battles are slower | June 13th, 2018 | June 12th, 2018 |
| Some extra touches   * Add in my name * Add title and name into main window (top of menu) | June 13th, 2018 | June 12th, 2018 |
| Add an endgame screen   * Triggered when one of each Pokémon are caught * Looks nice, possibly scrolling text. | June 13th, 2018 | June 13th, 2018 |
| Final organization and submission. | June 14th, 2018 | June 14th, 2018 |

Week 1 Notes:

So far progress has been steady, and several features were completed before their deadlines. When adding the player movement, the player’s graphic did not rotate to match the direction of rotation of movement. This is a new goal which was added at the end of this week, and should be completed the start of next week before moving on to collisions and adding Pokémon. Current project size: ~170 lines across 4 files. I am optimistic that I will be able to complete the planned features of the game early, and add even more.

Week 2 Notes:

Progress has continued ahead of schedule, and collisions were added successfully, Pokémon were added with an image I drew in Photoshop, the Pokémon move around the map and collide with the trees. When the player touches the Pokémon, a new screen is loaded when the player ‘battles’ the Pokémon. This battle consists of both sprites moving until the player touches the Pokémon, then the Pokémon dies, and the player returns to the main map. Currently there is a bug where the Pokémon can move through some walls on the battle map. Next week I intend to add a way to capture Pokémon instead of killing them, and let the player use these Pokémon.

Week 3 Notes:

During this week there was a considerable amount of time that was taken on working through bugs I encountered in implementing the battle mechanics. I believe I am successful in making most of the battle mechanics, and the next step is to implement attacks for the trained and wild Pokémon. I am currently exactly on schedule, however implementing attacks will take some time, and there is a strong probability that it is not reasonable for me to work on Pokémon evolving and leveling up or build a shop. I learned the danger in equating position vectors of sprites, as it can create a reference instead of a clone.

Week 4 Notes:

The weekend preceding week 4, I coded a lot and there is a rather advanced battle scene. I deleted the goal of having a shop, as it will not contribute to the game or my learning as much as other goals will. I improved the battle further, allowing Pokémon to die and be cycled through. I added both an intro and outro screen, and I enjoyed the practice in animating sprites by using math to manipulate their positions. I added an instructions screen to give the user information on how to play the game, and on what the goal is. I made it so the end screen is triggered when the player catches all 8 types of Pokémon. Now there is a clear play flow, with an intro, a main game, battle ‘mini games’, and an outro screen when a larger goal is reached. The text at the end changes slightly with the player’s stats. I spent some time working on adjusting the various game mechanics to ensure a reasonably challenging but casual experience. I also now keep track of individual Pokémon’s kills, and a Pokémon gains 20 health per kill. I also added a reasonable amount of documentation in my code, and the code is already written in a very readable way.

Summary:

In working on this project I learned a lot about the process of creating a game or any large project, I learned more on how to use Git version control effectively, and I got to practice object oriented techniques such as inheritance. I believe I did a good job of sticking to a schedule, and I was able to create a rather complex game with decent playability. I put a significant amount of time into this project, and my game has surpassed my expectations.