Project 1 Reflection: Kickboxing Trainer
Alex West

Program Overview:
The project submission is a game-ified training program to help a user get ready for a fight, or increase strength or conditioning. The overarching goal of the game is to reach 20 experience points. The user chooses their experience level at the outset: beginning kickboxers start with 0 experience points, intermediate kickboxers with 5, and advanced kickboxers with 10. Once experience level is determined, the user is asked how much time they can work out (30, 45, or 60 min). Once the user indicates how long to work out, the program produces a customized workout with a warmup, a certain number of rounds of kickboxing, and core exercises. Once the workout is produced, the program prints out a review of the day, how many experience points the user has, and how many remain until the goal is reached. A 30 minute workout adds ½ an experience point, 45 minute adds 0.75, and 60 minute adds a whole point. The workouts are divided by day, and the program continues to ask "how many minutes can you work out today?" until the goal is reached.

To run the program, all that is needed is to call the kickboxingtrainer.py program in the command line, making sure you are in the correct directory first.

Challenges, Techniques, Reflections:
I wasn't quite sure how to begin this project, having never programmed before this class. So, I started with what I was most comfortable with - functions. I wrote the functions to read the text files of all the workout moves (warmup, kickboxing, and core) and return random combinations of moves based on user input of time (30, 45, or 60). This took the longest amount of time, and I ran into snags trying to create lists and merge them into dictionaries. I managed to solve the problems, and the functions worked. Then, I knew I had to create the classes.

I didn't really know how to start, so I went back to the drawing board and ran all the project 1 examples from the assignments folder. This was where it all started to click for me. I didn't have the idea for the game-ification until I started to play all the games. I then realized I could use experience points over the course of 'days' in the program. The production line example was closest to what I wanted to do (though much more complex), so I went to the code and examined how the classes worked, and everything started to make sense!

I created the Trainer class to hold the initial inputs, the review, the test of 'readiness' (whether the user has reached 20 points), and the rungame function. I then created a Workout class (called within the Trainer class) to create each custom workout. The Workout class held all the functions I had written, with minor tweaks. Finally, I added some formatting details. When it finally worked it was so exciting! The really cool part is the random kickboxing combinations that the program produces. They are truly random, without any of the usual human habits, so they're really difficult.