Fitness Solution Report (Brief Overview)

Description: The goal of Group 110's final project is to provide the user with a complex fitness report that is tailored to their unique characteristics, environment, and overall workout objectives. The script takes in multiple arguments in the form of various biometric identifiers, then personalizes the output based on these characteristics. The report was structured and stylized using Pandas, and provides the user with various recommendations to begin their fitness journey. This information has been coded to be easy to read and interpret.

Repository Files:

- fsr.py
    - Script for our project
    - Takes in user's biometric identifiers as arguments and outputs fitness report
- fsr_test.py
    - Test script for our project
    - Makes sure each function in the fitness report is handling arguments properly (raises AssertionError if not)

Instructions:

1. Install the following modules: Requests, Time, Sys, Pandas, Tabulate, BeautifulSoup, Random, and Argparse
2. Open file labeled 'fsr.py' in your source code editor interface of choice
3. Run the file in your terminal by following the example below:
    a. Windows:
        i. python3 fsr.py 18 120 M 68 gain 3
    b. Mac:
        i. python fsr.py 18 120 M 68 gain 3
    c. Explanation
        i. 18 is the age
        ii. 120 is the weight in pounds

iii. M is the gender
iv. 68 is the height in inches
v. gain is the user's objective
vi. 3 is the amount of days the user wants to workout

4. Receive dataframe output

Interpreting the Output: After receiving output from our project, the user is shown a display of workouts tailored to their fitness objectives and desired workout frequency. Additionally, they are provided with a recommended number of calories to consume, along with dietary suggestions that correspond with this number. In tandem with this information, the user is given a recommended deload schedule that is based on their workout frequency and goals. To help motivate the user, we have included a dataframe that contains daily tips. These include, but are not limited to: optimal times to eat, short snippets of motivation, and more. Finally, a graph will be displayed that shows the user's weight changes after weeks into the program based on their desired objective (outputting nothing if the user is maintaining weight).

Improvements (Excluded from the Final Project):

1. The end goal of this project is to output a stylized pandas report that includes a dataframe for every function of our script. Some steps that we have to take to make this result a reality include:
    - Completing the last 4 functions of our code
    - Making sure that all functions return a Pandas dataframe
    - Using some sort of external module to stylize/colorize all data frames
2. We also plan on going through our code and further organizing it. We will structure it to be more readable, add helpful comments to help viewers understand everything that is occurring, and correct all errors. We also need to make docstrings more consistent and edit the parse_args() function to provide more helpful descriptions for users that do not know exactly what to enter.
3. Lastly, we plan on creating a test script that thoroughly analyzes each of our functions and makes sure all possible inputs will work. This will be divided amongst our group, but we will work together to integrate everything via scheduled Zoom meetings.

Works Cited:

- Concept: Printing Tabulate Output
    - URL: **Click here**
    - Explanation:
- Concept: Web Scraping
    - URL: **Click here**
    - Explanation:
- Concept: Writing parse_args() function:
    - URL: **Click here**
    - Explanation: