Description: I started rock climbing with my oldest daughter 4 years ago and a few months later, I began to log all of our climbs. The log initially including climbing grades, locations and handful of other climbing metrics, and has evolved to include a dozen columns. A template of the log has been distributed to a half dozen other climbers and acquaintances over the last year. MyClimbs will provide the ability to read in this template, and perform visual and text based analysis.

Users/Stakeholders: Climbers interested in logging and analyzing their climbing progress.

Invocation: Users will launch MyClimbs with their climbing log as an argument.
Example: $ *python myClimbs.py myLog.csv*

Functionality: Once MyClimbs is launched, a text-based menu will guide users through options for reporting and analysis. Below are the 3 categories of climbs MyClimbs will analyze:
   1. Bouldering
      a. Grades
            i. V Scale (Hueco): VB - V17
            ii. Fountainbleau : 4 – 9a
      b. Reports
            i. Total feet climbed over a given time period
            ii. Climbing Pyramid
            iii. V-Sum
   2. Summer Roped (Trad, Sport, Top Rope)
      a. Grades
            i. Yosemite: 5.4 – 5.16a
            ii. French: 4a – 9c
      b. Reports
            i. Total feet climbed over a given time period
            ii. Climbing Pyramid
   3. Winter Roped (Ice, Mixed Climbing)
      a. Grades
            i. Mixed: M1 – M16
            ii. Water Ice: WI 1 – WI 7
      b. Reports
            i. Total feet climbed over a given time period
            ii. Climbing Pyramid

In addition to the functionality above MyCimbs will be able to report the total distance climbed (feet/meters) for any period of time for all categories.
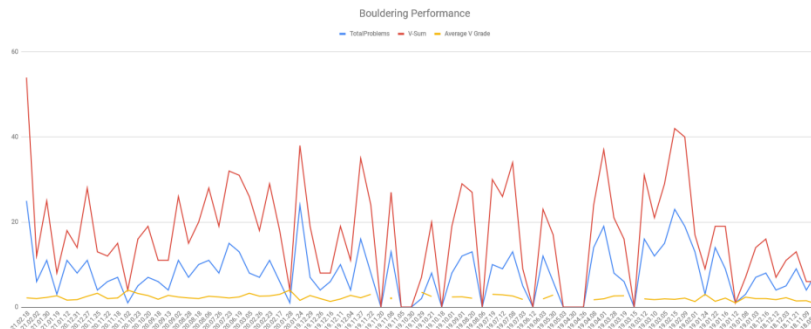
Structure: I initially wanted to design this program to work with Mountain Projects API and export formats, but they have since removed that capability. I intend to abstract the accessor (csv reader) from the underlying aggregation and reporting code so that the front end can be updated if Mountain Project, or any other popular climbing tracker, decides to allow users to export their logs.
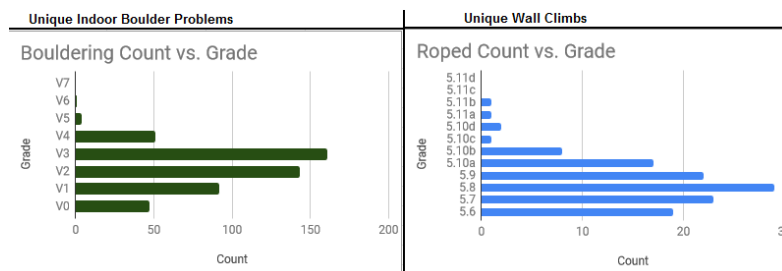
The MyClimbs class/file structure is listed below:

- myClimbs.py - The driver (main) class, and will provide the menu options for the user.
    - "What type of climb to you want to analyze (Bouldering | Summer Rope)"
    - "What year would you like to analyze (Ex: 2019)?"
    - Help menu
- userClimbingLogs.csv – A generic example of a user climbing logs
- climbLogReader.py - A csv reader/parser module used to read in log data.
- climbTypes.py - A module containing classes for climb types
    - Climbs – An aggregator and parent class, methods for reporting total number of climbs, and generating climbing pyramids
        - Bouldering – Extends the Climbs class, provides methods for V-Sum reports, and climbing grades specific to bouldering
        - Summer Rope - Extends the Climbs class, and climbing grades specific to Summer roped climbing
        - Winter Rope - Extends the Climbs class, and climbing grades specific to Winter roped climbing

Examples of Graphical Results:

- Bouldering V-Sum

- Climbing Pyramids

Additional Notes: If time and LOC permit, I would like to add a class for Winter Rope climbs (this is why there are shown in a light grey color above). Functionally speaking this should be quite easy once summer rope climbs has been created, however I will have likely exceeded allotted LOC limits by then.