1. What is your project idea about? **Our project is a workout assistant app that helps to track and progress your lifts.**
2. If you use any datasets, describe the dataset and provide how one can access and download it. **We did not use any datasets.**
3. Describe your design for main packages, classes, methods, functions, and iterations between them. **The central design was to use a class known as liftPal in order to process and store the data of each client. Each client will make their own liftPal object that each has a circularly linked list, programmed earlier in the file, that tracks the schedule of the workout plan and a dictionary that holds the maximum weights used by the client.**
4. Describe any libraries that you use. **We did not use any libraries.**
5. Describe the data structures you use. **The two unique data structures we used were a dictionary that holds the maximum weights for each exercise that the client uses and a circularly linked list that holds the workout schedule. The linked list is circular because the exact schedule simply loops back around after each day has been done, meaning that if you want to know what you will be exercising several days in the future you can just loop through the list several times until you reach your desired day.**
6. Design some Test cases that can test the correctness of your software. **Since this program is user interactive, I will provide inputs for you to do and the expected output.**
    a. **Input:**
        i. **Back**
        ii. **Chers (invalid input should be avoided)**
        iii. **Chest**
        iv. **Arms**
        v. **Legs**
        vi. **Rest**
        vii. **N**
        viii. **6**
        ix. **Squat**
        x. **135**
        xi. **Bench**
        xii. **185**
        xiii. **Curl**
        xiv. **70**
    b. **Output:**
        i. **Your final schedule is Back, Chest, Arms, Legs, Rest**
        ii. **In 6 days you will be hitting Chest**
        iii. **For your first time doing this exercise, you did 135lbs**
        iv. **For your first time doing this exercise, you did 185lbs**
        v. **For your first time doing this exercise, you did 70lbs**
        vi. **You max lifts for your exercises in ascending order are as follows:**
        vii. **Curl- 70lbs**

viii. **Squat- 135lbs**
ix. **Bench- 185lbs**

7. What is your current expectations of your software? For example, do you expect that it works well? What are the expected weaknesses? **I expect that the program will always be able to take incorrect data and not fail, due to the while loops protecting the program and its casting the data to int or string. The distinct variable and method names allows the reader to easily determine it's purpose and use it well. The dictionary makes it easy to track the maximum weight the person has done for each exercise (squat, bench…). The linked list makes it easy to know what muscle group the person has to work on that current day or even future days. Some expected weaknesses of the program is that it only works for one person. If there were a lot of exercises or people enlisting into this program, it might be inefficient and run slower. Also, the time complexity of insertion sort is O(n^2) for the worst case and O(n) for the best case which is pretty mediocre. Using a faster sorting algorithm like merge sort or quick sort could make the program faster for bigger inputs.**