Project Proposal

1. The Big Idea: What is the main idea of your project? What topics will you explore and what will you generate? What is your minimum viable product? What is a stretch goal?

The main idea of our project is to create a web application that automatically generates a workout routine for you based off the user's preference. For example, if the user wants to do a shoulder workout routine, the app will generate a list of shoulder workouts. In order for us to execute this project, we will have to explore the types of exercises, the broad areas of muscle groups and the science behind working out. This will then help us generate a list of workouts the user will want to do. Our MVP (minimum viable product) is a web application that will generate a list of workouts for the user. The stretch goal for our project is to generate a database to store the number of reps, sets and weights for each exercise.

2. Learning Goals: Since this is a team project, you may want to articulate both shared and individual learning goals.

Some shared learning goals we have as team is to develop a fundamental understanding of how we can combine Python, HTML/CSS and (hopefully) SQL databases. We hope by the end of this project, we will have enough knowledge to begin working on side projects during our free time. In addition, some individual learning goals we share is learning how to equally delegate coding responsibilities as a contributing member of a team. Because we are so young in our coding journey, we want to make sure we understand from a project management perspective, of how long each task will take.

3. Implementation Plan: this will probably be pretty vague initially. Perhaps at this early juncture you will have identified a library or a framework that you think will be useful for your project. If you don't have any idea how you will implement your project, provide a rough plan for how you will determine this information.

We initially plan to create dictionaries or lists of workouts that we determine fits into the workout choice of the user. When a user selects their workout for the day, the application would pull from each workout category we have created. For example, if a user selects 'Chest Day', the application would randomly generate a workout plan by pulling 1 or 2 exercises from the upper chest exercises list. Then it would pull some from the lower chest list. A stretch goal for this would be for the application to generate a long-term workout plan designed for the user's fitness goals and body type as well a visual display of how to do the exercises. Additionally, we plan to gather information from research from experts in the fitness space.

4. Project schedule: You have 8 weeks (roughly - I know thanksgiving week is off) to finish the project. Sketch out a rough schedule for completing the project. Depending on your project, you may be able to do this in great specificity or you may only be able to give a broad outline. Additionally, longer projects come with increased uncertainty, and this schedule will likely need to be refined along the way.

Week(1-2): Outline project goals. What exactly do we want the project to do? Conduct research on fitness plans.

Week(2-4): Create logic map of what we will need from python and other platforms to do. Determine the structure of the code. Begin coding initial functionality.

Week(4-6): Code remainder of the basic code.

Week(6-8): Debug code and make aesthetically pleasing

5. Collaboration plan: How do you plan to collaborate with your teammates on this project? Will you split tasks up, complete them independently, and then integrate? Will you pair program the entire thing? Make sure to articulate your plan for successfully working together as a team. This might also include information about any software development methodologies you plan to use (e.g. agile development). Make sure to make clear why you are choosing this particular organizational structure.

To start we plan to do an assessment of the skills of each of us on the team. This will include reviewing which things we as team members are best at working on and prefer working on. We plan to split tasks evenly for us to do individual learning. At that point we plan to reconvene with our findings to create the structure of the code together so that we all have an understanding of the big picture. We plan to meet bi-weekly to insure that we stay on top of our work schedule. We plan to have each of us also see how other members are doing their work so that we all equally learn beyond our comfort zones Lastly, we will continually review each team member's performance so that we can improve our teamwork skills.

6. Risks: What do you view as the biggest risks to the success of this project?

The biggest risk of our project is integrating all of the moving parts. We don't see it as much of a challenge to create the python, but the challenges come when integrating that into an application. The additional challenge is creating recommendations based on a unique user profile.

7. Additional Course Content: What are some topics that we might cover in class that you think would be especially helpful for your project?

The most relevant topics include:
-Object Oriented Programming
-Input/Output Programming
-Web-app Development