Introduction

Our app not only tracks your current workouts but also offers personalized workout suggestions for when you need inspiration. With detailed instructional videos for common exercises, you'll know how to perform each move safely and effectively. The app also integrates a calorie tracker, allowing you to log your meals and monitor your calorie intake to help you achieve your fitness goals. Our optimized progress tracking enables you to easily monitor your fitness journey, making it simple to identify when adjustments to your workout routine are necessary. Additionally, we offer personalized user profiles that highlight your goals, accomplishments, and favorite activities, which can be shared with others in the fitness community for added motivation and engagement.

Our stakeholders have been actively involved in the development process to ensure that the application is not only user-friendly but also aligned with the diverse needs of our end users. Their input has been instrumental in shaping a platform that enhances the user experience by making the interface intuitive, engaging, and easy to navigate. In collaboration with stakeholders, we have set the objective of creating a seamless interaction between users and the application, ensuring that every feature is designed to minimize complexity while maximizing efficiency. Additionally, we recognize the importance of maintaining user privacy and safeguarding their data, and as such, our stakeholders have prioritized robust security measures and privacy protocols throughout the development cycle

Features

The main features of the application include Progress Tracking, Workout videos, and a Calorie Tracker. Once an account is created users will be able to create a User Profile that showcases information about them and any fitness goals they may have. Information about the user includes body weight, height, sex, and BMI. This will be used by the user to help them track/monitor the goals they have. Customization will allow them to change the colors of their profile, and change their user picture and goals. As each user works out, they will be able to either manually input their exercise, reps, sets, and weights into our logging system or can select workouts from our library and then manually insert sets, reps, and weights. Our library of workouts will allow users to

search exercises categorized in muscle groups to help users easily identify which exercises workout which muscle. Along with identifying which muscle works out, users will also be able to watch instructional videos to help them understand how to perform each exercise. Our last main feature is Calorie tracking, which allows users to estimate how many calories they burned during their workout and also allows them to track the calories they intake. Like the workout tracker, users will have to manually input this data, but will help them monitor their caloric intake to meet their fitness goals.

Integration Requirements

To ensure seamless integration of all features into the entire system, we will utilize **React** for the front-end framework, coupled with Tailwind CSS for streamlined styling and responsive design. This combination will enable the development of a highly interactive and visually appealing user interface. On the back end, a **RESTful API** architecture will be implemented using **Flask**, providing a lightweight yet powerful framework for handling server-side operations. **Firebase** will serve as the database and authentication solution, offering a reliable and scalable platform to manage user data and security efficiently. For deployment, we are considering **Heroku** and **DigitalOcean** as potential options, both of which offer flexible and scalable environments suitable for hosting modern web applications. **Heroku** offers ease of use with its pre-configured services, while **DigitalOcean** provides more control and customization, catering to different deployment needs. Furthermore, the entire project will remain within an **open-source ecosystem**, promoting transparency, collaboration, and scalability.

User Interface

The User Interface should provide a nice and human-friendly layout for the end user, including critical elements such as Login functionality, organized navigation bar, search function, and structural layout of the contents. Specifically, an overview of the contents should be enabled before potential users sign up for their accounts. As users log in they should be automatically redirected to their account page with the ability to switch to other sections using the side tabs on the left hand side.

Constraints

One of the main constraints we will work on is deciding where to host our instructional videos for each exercise. Depending on the user's system and storage

requirements, we have options to locally save the videos with the end user, at the cost of their storage. We also have the option to store them online but risk availability and lower speeds. Understanding how to implement this and decide on an option that benefits both us and the user will be the primary focus. Another main constraint is obtaining said videos. We are not able to use online videos already created due to copyright issues and therefore have to rely on animations or our own videos which may limit the amount of instructional videos being provided.

Use Cases

Use Case	Login / Authentication system
Description	New/returning users can browse but must log in/sign up to perform functions
Actors	New users and returning users
Steps	1. User attempts to perform a function 2. User will be prompted to login/signup 3. User either logs in or signs up 4. User will have access to functions of the website
Expected Outcome	The expected result of this use case is a new user will have signed up for an account or a returning user will have successfully logged back in

Use Case	Workout Search
Description	Users looking for workout information will be able to look up logged workouts through a search bar and displayed in a table
Actors	Existing users
Steps	1. User navigates to search page 2. User enters a query 3. User is displayed a table of workouts or a page that says Not Available 4. User is able to query again
Expected Outcome	The user will be displayed a table of workouts that match their search criteria but if no results match, then we will display a google search result instead

Use Case	Calorie Tracker

Description	A user looking to track their calorie intake and track their nutrition
Actors	Existing users
Steps	1. User navigates to calorie tracker 2. User inputs calories/macros consumed 3. User will be displayed a table of their calories/macros consumed
Expected Outcome	Existing users will be able to log their calories and macros, be able to see previous logs, and see their expected calorie deficit/surplus

Use Case	Workout Tracker
Description	A user looking to track their workouts will have the option to manually input their workouts with name of workout, sets and reps
Actors	Existing users
Steps	1. User navigates to workout tracker 2. User inputs workout manually or from preset list of options 3. User will be displayed a table of their workouts performed
Expected Outcome	Existing users will be able to track their workouts that have been logged

Priorities and Milestones

According to our stakeholder's requirements, our team's priority is to design a visually pleasing and functional user interface with smooth navigation, which will be the key milestone for the first scrum cycle. In the second cycle, the focus will shift to setting up the database to store workout data and related information, with the milestone being a searchable table that displays this data on the website. Additionally in this cycle, a key priority will be to find/create instructional videos to integrate into our database. The final cycle will prioritize developing a working authentication system, along with launching the landing and signup pages as the final milestones before testing and deployment. A key feature we will also prioritize in this cycle is adding "salt" to users password login to add more security in order to keep their data protected.