M5 - Project Charter

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Abstract

This is the project charter of a workout and sports activity tracker mobile application targeted at both non-commercial, small and medium businesses, and enterprise customers. This document defines goals and expectations for the project, including deadlines, user and system requirements and optional and mandatory requirements. Furthermore, there will be personas with accompanying user stories that illustrate the expected user base. All agreements, deliverables and requirements not mentioned in this document are deemed non-binding.

1 Introduction

This project aims to develop a comprehensive workout-tracking application that provides fitness enthusiasts with a variety of features. The application will include all kind of features, such as tracking workouts, adding new exercises, and creating new workout routines as well as following preexisting powerlifting or bodybuilding workouts and plans. In spite of this, the application will be focused primarily on social aspects. Users will be able to interact with friends and join groups where they compete and compare their sports activities and achievements. There will be a wide variety of possible organizations and groups, including small friend groups, small communities, schools, universities, large corporations, and many others.

Users will be able to see their rankings in each group that they are part of, as well as the rankings of other users. These rankings can be based on overall sports performance metrics, strictly strength-based, or a mixture of both, depending on the group settings. A worldwide ranking system will enable each group of users to compare themselves with other groups - this feature will add competition between groups and organizations.

The social aspect is the key focus of the application, it will connect users from different organizations and groups, including small friend groups, small communities, schools, universities, big companies, and more. Providing a competitive and social environment will motivate users to stay on track with their fitness goals and improve their physical and mental health. The platform will connect users with like-minded individuals and will encourage them to share their fitness progress.

The project is initiated by a group of students with a passion for sports. Our team members are mostly focused in Computer Science and are experienced in Software development as well as entrepreneurship. We've been using workout tracking apps for years and are yet to see a product which fulfills our requirements and provides a seamless experience on top of it. Furthermore we believe that current market options don't put enough emphasis on the social side. Companies like Strava have shown that users are interested in social media-like workout app, but it is limited by its focus on running and other long distance activities. In the the following sections of this document we will outline the project's goals, objectives, requirements, and deliverables, as well as a timeline for development and potential risks and challenges.

The goal of this project is to build a mobile application that takes inspiration from available workout-tracking applications and expands the social aspect to engage users with their friends and groups they are associated with, similar to social media applications. We gamify working out and help people reach their fitness goals.

2 Features

2.1 Profile

The user profile will store information related to the user's workout history, workout statistics, personal records, and body measurements. Additionally, the profile will feature a calendar that allows users to view their workouts over past months and monitor their consistency as well as progress over time. For each exercise users will be able to see the maximal weight that they've used - for a one rep max as well as for higher rep counts. There will also be a feed with history of completed sets and reps in previous workouts. Using all of the collected data the app will also show some graphs with workout volume or total time over a period (for example last three months).

2.2 Workouts Planner

The application is designed to cater to fitness enthusiasts and athletes seeking a personalized fitness experience. Therefore, the most important feature aside from the social feed is the workout builder. Everyone has a different preferred workout selection, intensity, and available time to workout. Some users might be completely new to working out and want to do just some bodyweight exercises, while others are preparing for a powerlifting competition. This why want to let the users have full control of their workouts

Users can create individualized routines from scratch or choose from a number of pre-made workout programs, spanning all fitness levels and sports (Weightlifting, Callisthenics, Footbal, Cycling). Some examples of planned fitness-specific such options are: Smolov Squat Program, Stronglifts 5x5, 5/3/1 by Jim Wendler, Full Body Split, Five Day Split, Calisthenics, and others. We'll also recommend some of those programs to users depending on the user's fitness level and goals, so the they get are useful and appropriate for them.

In summary, the application's workout planner will accommodate all possible preferences by both giving full customisation options for experienced athletes, as well as providing easy to follow, ready to use workouts. Users can track not only sets and reps but also intensity, can designate different types of sets, such as dropsets, amrap, max-out and so on. The specific barbell used to complete the exercise is also important for some athletes, so we also allow them to track that.

2.2.1 Exercise Metrics

The application will also provide users with a range of training metrics such as Rate of Perceived Exertion (RPE), types of sets (warm-up, failure, drop sets), and max-out features. These features will allow users to customize their workouts and track their performance for accurate progress measurement over time. The RPE feature will allow users to assess the intensity of their workout sets, which adds a whole new dimension to the information about a specific workout. For example, the user may not be able to use more weight in comparison to his previous workout but if his RPE is lower, he is still making progress. The set types feature will enable users to distinguish warm-up and failure sets in their workouts. The max-out feature will also enable users to track and celebrate their maximum weight lifted by having a distinct designation in the calendar and social feed. Furthermore, the users will be able to choose from different types of fitness equipment used in weight training. These include the standard and speciality barbells, dumbbells, and weights added by chains or bands.

2.2.2 Custom Workouts

The application will have a feature that allows users to create their own custom workouts according to their specific fitness goals and needs. This feature will give users more control over their workouts. It will enable them to choose exercises that target specific muscle groups they want to improve and choose between different ways to execute a chosen exercise - for example, barbells, dumbbells or machines.

Users will have access to a range of exercises, including cardio, strength training, and stretching, as well as non-gym-related activities that they can select from to create their custom workouts. They will be able to set the number and types of sets and reps or duration for each exercise. This will allow them to tailor the workout to their individual fitness level and goals.

In addition to creating custom workouts, the application will also allow users to save their customized workouts for future use. This feature will enable users to quickly access their favourite workouts

without having to recreate them every time they want to exercise. Users will be able to edit and modify their saved workouts to adapt them to their changing fitness needs.

2.2.3 Workout Templates

The application will feature a workout planner that allows users to create custom workouts, explore pre-made workout routines, and access pre-made programs. Users will be able to create their own routines from scratch or use the number of predefined example routines available. Additionally, the application will provide pre-made workout programs like Smolov Squat Program, Stronglifts 5x5, 5/3/1 by Jim Wendler, Full Body Split, Five Day Split, Calisthenics, and others. These programs are designed to help users achieve specific fitness goals like strength training, weight loss, and muscle gain. Users will be able to follow these programs as they are or customize them to suit their needs.

2.2.4 Exercise Tracker

The application will feature an exercise tracker that allows users to track their progress over time. The tracker will display an overview of the selected workout, as well as all other information such as the weight used, reps performed, sets completed, and total weight lifted for each exercise. Additionally, users will be able to add notes to each workout and specific training days.

2.2.5 History and Statistics

In addition to keeping track of all workouts completed by the user, the application will provide statistics regarding the progress of the user over time on different metrics, such as strength progress over time, 1RM on compound exercises and body weight. This feature will allow users to track their progress and identify areas for improvement.

2.3 Social

The social aspect is the key focus of the application, it will connect users from different organizations and groups, including small friend groups, small communities, schools, universities, big companies, and more. Through the application's social features, users will be able to interact and engage with others in the fitness community. They will be able to share their progress and motivate each other to achieve their fitness goals. Every user will also have the opportunity to create and edit his personal profile, compare his strength level with his friends, comment on their workouts, and leave specific notes about each workout.

2.3.1 Groups and Organisations

Our app will be unique in supporting a group structure. Groups can be created by any user and can be configured to have a specific focus. For example you can create a running group where you'll invite all your friends that like to run and the leader board will be set to display total distance ran for a period. Another social structure is the organisation, which can consist of multiple groups and is for a specific institution - a company or a university, for example. There will also be a global ranking for individual users and groups. This will enable users to see how their group stacks up against others on a global scale. This feature provides users with a sense of community and connection to others around the world who share their fitness interests.

2.3.2 Leaderboards

Leaderboards have already been mentioned a couple of times, but have not been properly defined. In order to enable users to compare their physical level and exercise history through leaderboards. They are inherent for any group and organisations. A default one can be chosen. It will be the first one displayed and will be when ranking users in the group. That's not all, leaderboards for all other different metrics are also going to be available to compare other expressions of physical skill or consistency. The feature will provide users with a sense of competition and motivation to push themselves further in their fitness journey. No matter the type of group, each individual user will have the choice of what part of his data to share.

2.3.3 Connecting & Motivating

In its fundamentals, the social features of the application aim to create a supportive and engaging environment for fitness enthusiasts, where they can connect with like-minded individuals, share their progress, and motivate each other to achieve their goals. The application's social features will be an integral part of the user experience. They will provide users with a range of networking tools that enable them to connect and interact with others in the fitness community on a global scale.

3 Requirements

In this section, we will outline the user, system, functional, and non-functional requirements for the workout-tracking mobile application. These requirements will serve as a guide for the development team and provide a clear understanding of what is expected from the final product. These requirements will give the most important parts of each component of the application.

3.1 User Requirements

The user requirements outline the needs and expectations of the end-users, which must be addressed to ensure a successful product. The key user requirements for the application include:

- Intuitive and seamless user interface and smooth user experience (UI/UX) across different devices.
- Ability to create, customize, and save workout routines and plans.
- Access to a library of exercises and pre-made workout templates.
- Detailed tracking of exercise progress through statistics and history log over time.
- Social features that encourage interaction, motivation, and competition among users.
- Integration with popular wearable devices and other fitness applications - particularly the default health applications of Apple, Samsung, and Google.
- Data privacy and security, users must have control over their personal information.
- Regular updates, bug fixes, and feature enhancements to keep the application engaging and to dynamically fulfill emerging requirements.

3.2 System Requirements

The system requirements define the technical specifications and infrastructure necessary to build and maintain the application. Most of the key system requirements are:

- Integration with third-party health and wellness apps.
- The app should be able to retrieve information from device-detected activity, including the phone itself or smart sport accessories like the Apple Watch.
- Information and data should be synchronized between users.
- The app should be optimized for performance and load quickly, with minimal lag or delays.
- The app should be compatible with the latest versions of iOS and Android, as well as older versions where possible.
- The app should be user-friendly and easy to navigate, with intuitive design and clear instructions.
- The app should have strong security measures in place to protect user data and prevent unauthorized access.
- The app should allow users to customize their settings and preferences, such as notifications and privacy settings.

- The app should have a robust backend system for data storage, processing, and retrieval.
- The app should comply with relevant industry standards and regulations (GDPR).
- The app should have a comprehensive testing and quality assurance gates in the deployment pipeline.

3.3 Functional Requirements

The functional requirements describe the specific features and functionalities that the application must have to meet its intended purpose. The key functional requirements are:

- User authentication and registration: Ensure that the authentication process is secure and reliable, and includes options for password recovery and two-factor authentication.
- Profile creation and management: Allow users to customize their profiles with information such as age, gender, weight, height, and fitness goals.
- Custom workout creation and customization: Make sure the app includes a wide range of exercises and workout types. Provide options for selecting specific exercises, sets, reps, and rest periods.
- Access to pre-made workout programs: Offer a variety of pre-made programs tailored to different fitness levels and goals, including powerlifting and bodybuilding programs.
- Exercise tracking and progress monitoring: Provide users with a comprehensive view of their workout history and progress.
- Social features: Include social features such as friend connections, group creation, and ranking systems, to encourage user engagement and create a sense of community.
- Integration with wearable devices and other fitness applications for data synchronization, including heart rate, step count, and workout logs.
- Notification system to remind users of workouts, achievements, and social interactions.

3.4 Non-Functional Requirements

The non-functional requirements refer to the quality attributes that the application must possess, such as performance, reliability, and maintainability. The key non-functional requirements are:

- Responsiveness and fast loading times across different devices and platforms. The app should look good for all expected screen size and resolutions
- Scalability to handle a growing number of users and data. There should be measures in place to handle sudden rise in user base.
- High availability and fault tolerance. The app should be have a uptime of a minimum 95%. Users should be able to use the app locally even when there is downtime.
- Data security measures to protect user information and ensure compliance with regulations such as GDPR.
- The use of the app needs to be easy for customers by following common usability guidelines and having a simple and intuitive UI.
- Usability - the app should have extensive user documentation which covers all functionality

4 User Base

In this section, we will explore the application's target user base, including personas, user stories, and scenarios that will help the development team understand the needs and expectations of the end users. The personas and user stories created in the following subsections are examples of the expected application's users.

4.1 Personas

The described Personas are example users and they thrive to describe in what way the application will change and support their life.

Fitness Beginner: A user new to working out, seeking guidance and motivation through pre-made workout plans and a supportive community.

Casual Gym Goer A user who goes a few times a week to the gym and wants to simply track their workouts and progress, would be interested in pre-made weekly workout splits.

Fitness Enthusiast: A dedicated individual who follows a strict workout regimen and wants a comprehensive tool to plan, monitor and achive their fitness goals.

Competitive Athlete: An athlete who participates in sports competitions and wants to compare their performance with others, improve their rankings and share their progress with their followers.

Group Exercise Instructor: A leader of group fitness classes who wants an easy way to create, share, and monitor workouts for their class participants.

Fitness Coach/Trainer: A professional who designs and monitors workout plans for clients, requiring a tool to manage and track their clients' progress efficiently. This allows the coach/trainer to easily set up groups and monitor the user activity.

Corporate Wellness Manager: Is responsible for the physical and mental health of members of the organisation. They want to be able to create weekly challenges for everyone in the organization.

4.2 User Stories

The described User Stories are examples of "Personas" and their natural language description of the way they intend to use the application and the features they image being present.

As a Fitness Beginner , I want an easy to use interface, pre-made workout templates that i can follow, and a clear visualisation of the exercise.

As a Casual Gym Goer , I want to seamlessly track my progress and stay consistent with my established fitness routine. I should be able to see my progress overtime. The social feed is also important to me so i can see what my friends are doing.

As a Fitness Enthusiast , I want to customize my workout plans, so i can have all my workouts in the app. I would like the ability to note the type of sets that i am performing and choose from different barbells and dumbbells. I want to see how strong i am in comparison to my friends so we can compete against each other.

As a Competitive Athlete , it's important for me to monitor my strength progression over time. I want to compare myself to other competitive athletes. I also want to share my PRs and competition results in the app.

As a Group Exercise Instructor , I want to create different groups and share workout routines with my class participants, so they can easily follow along and track their progress during the course.

As a Fitness Coach/Trainer , I want to monitor my clients' progress, so I can provide immediate personalised feedback and adjust their workout plans accordingly.

As a Corporate Wellness Manager , I want to create engaging fitness challenges and events, so I can promote a healthy lifestyle among groups of employees.

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4.3 Scenarios

The following scenarios are specified for the possible users inside a University/College or High School.
Scenario for Fitness Beginner:

Fitness Beginner: A 19-year-old university student who has decided to get in shape amidst their busy study schedule. They download the app and create an account. The app asks a series of questions to assess their current fitness level and goals. Based on the responses, the app generates a beginner-friendly workout template tailored to the available facilities at the university gym. The student follows the program and logs each workout, gradually building confidence and balancing their fitness journey with their academic responsibilities.

Casual Gym Goer A 28-year-old university lecturer who enjoys working out during lunch breaks to maintain their fitness level. They use the fitness app to track their progress and easily adjust their workouts based on their available time. The app helps them stay consistent by sending reminders and providing an overview of their achievements, motivating them to keep up with their fitness routine.

Fitness Enthusiast: A 20-year-old member of the university's rugby team who wants to target specific muscle groups and improve their performance. They use the fitness app to customize workout plans, incorporating various exercises and equipment available at the university sports centre. The user enjoys the flexibility to choose from different types of workout sets and exercises, allowing them to tailor their training according to their goals.

Competitive Athlete: A 22-year-old track and field athlete who wants to stay ahead of their university competitors. They use the fitness app to compare their performance with other athletes within the university sports community. The app provides an up-to-date leaderboard, motivating the user to work harder, identify areas for improvement and create a strong community.

Group Exercise Instructor: A 26-year-old group exercise instructor at the university sports centre. They use the fitness app to create different workout groups tailored to the needs of their class participants, such as "Beginner Yoga" or "Advanced HIIT." The user shares customized workout routines with each group, enabling participants to easily follow along and track their progress throughout the semester.

Fitness Coach/Trainer: A 32-year-old fitness coach who works with university sports teams and individual students. They use the fitness app to monitor their clients' progress, providing immediate personalized feedback and adjusting workout plans as needed. The app streamlines communication and data sharing between them and their clients, ensuring an efficient and effective coaching experience.

Corporate Wellness Manager: The user is responsible for promoting a healthy lifestyle among university staff members. They use the fitness app to create engaging fitness challenges and events, such as the "Campus Step Challenge" or "Faculty vs. Staff Soccer Game." The app allows the manager to track participation, motivate employees, and foster a sense of camaraderie, ultimately promoting a healthier campus community and overall better work-life balance.

5 Timeline

The timeline section provides an overview of the project's development goals and estimated timeframes for each goal. This will give the potential investors and stakeholders a clear understanding of the project's progress and when to expect key milestones.

The suggested timeline provides a high-level overview of the project's development phases and timeframes. It is important to keep in mind that these are estimates, and the actual duration of each phase may vary depending on the project's specific needs, challenges and development phase. It is important to understand the core of this project - a social platform created for physically active and competitive individuals, created by self-challenging and motivated students.

5.1 Phase 1: Planning and Design

In this phase, the team will focus on creating detailed design documents, wireframes, and user stories. This will help to ensure that all features and requirements are well-defined and accounted for before beginning development.

Estimated duration: April - May 2023 / 1 - 2 months

5.2 Phase 2: Development

During the development phase, the team will focus on implementing most of the features and functionality outlined in the planning and design. This includes creating custom workouts, developing the exercise tracker, and implementing the fundamental social features - creating and editing personal accounts, and following and having followers.

Estimated duration: June - October 2023 / 3 - 5 months

5.3 Phase 3: Testing and Quality Assurance

Once the main components of the development phase are complete, the project will move into a testing and quality assurance phase. This will involve identifying and fixing any bugs or issues, as well as ensuring that the application meets all functional and non-functional requirements.

Estimated duration: August - September 2023 / 1-2 months

5.4 Phase 4: Beta Launch

After the testing and quality assurance phase, the application will be released to a limited group of users for beta testing. This will allow the project team to gather valuable feedback and make any necessary changes before the full launch.

Estimated duration: October - December 2023 / 1-2 months

5.5 Phase 5: Full Launch

Once the beta testing phase is complete and any necessary changes have been made, the application will be launched to the public. This will include marketing and promotional efforts to attract users and generate interest in the application.

Estimated duration: Expected January - February 2024

5.6 Phase 6: Ongoing Maintenance and Updates

After the full launch, the project team will continue to work on maintaining and updating the application. This may include implementing new features, fixing bugs, and addressing user feedback.

Estimated duration: Ongoing