The purpose of the FitTrack app is to provide a comprehensive platform for users to track their fitness goals, monitor progress, and receive motivational insights to achieve a healthier lifestyle SRS

# 1. Introduction

1.1 Purpose

The purpose of the FitTrack app is to provide a comprehensive platform for users to track their fitness goals, monitor progress, and receive motivational insights to achieve a healthier lifestyle. The app aims to benefit its target audience by offering a user-friendly interface to set daily step goals, log workouts, and generate fitness reports, thereby fostering a sense of accomplishment and encouraging continuous improvement. The target audience includes individuals seeking to adopt a more active lifestyle, fitness enthusiasts, and athletes looking to optimize their performance. By leveraging the app's functionalities, users can develop healthy habits, reduce the risk of chronic diseases, and enhance their overall well-being.

1.2 Scope

The scope of the FitTrack app encompasses the development of a mobile application that enables users to track their daily step count, log workouts, and generate detailed fitness reports. The app will allow users to set personalized daily step goals, monitor their progress, and receive motivational messages to help them stay on track. The boundaries of the app include integration with wearable devices and health trackers to collect data on user activity, while exclusions include features such as personalized coaching, meal planning, and social sharing, which may be considered in future updates. Examples of the app's capabilities include tracking steps taken, distance covered, and calories burned, as well as providing insights into user progress over time.

1.3 Definitions

Key terms related to the FitTrack app include 'fitness goals,' which refer to specific objectives that users aim to achieve through regular exercise and physical activity; 'workouts,' which encompass various forms of exercise, such as running, swimming, or weightlifting; and 'fitness reports,' which provide a detailed summary of user progress over a specified period. Other important terms include 'step count,' 'calories burned,' and 'distance covered,' which are used to measure user activity and progress. These definitions are essential to understanding the app's functionality and user interface.

1.4 References

TBD - References will be updated in future versions of this document to include relevant sources and citations.

# 2. Overall Description

2.1 Product Perspective

The FitTrack app is situated within the broader context of mobile health and fitness applications, offering a unique combination of features that cater to the diverse needs of its target audience. The app's ecosystem includes integration with wearable devices, health trackers, and other fitness apps, enabling users to access a comprehensive range of tools and services to support their fitness journey. The app's novelty lies in its user-friendly interface, personalized motivational messages, and detailed fitness reports, which set it apart from existing fitness apps and provide a compelling value proposition for users.

2.2 User Needs

Primary user needs tied to the FitTrack app's functionalities include the ability to set and track daily step goals, log workouts, and generate fitness reports. Users also require a user-friendly interface that allows them to easily navigate the app's features and access their progress data. Additionally, users need motivational messages and insights to help them stay on track and achieve their fitness goals. Examples of user needs include the ability to track progress over time, receive reminders to stay active, and access personalized recommendations for improving their fitness level.

2.3 Assumptions and Dependencies

External factors that may impact the FitTrack app's development and functionality include the availability of wearable devices and health trackers, changes in user behavior and preferences, and evolving trends in the fitness industry. Justifications for these assumptions include the growing demand for mobile health and fitness apps, the increasing adoption of wearable devices, and the need for personalized and motivational fitness tools. The app's development will depend on these factors, and the project team will need to monitor and adapt to these changes to ensure the app's success.

# 3. Specific Requirements

3.1 Functional Requirements

3.1.1 The FitTrack app shall allow users to set daily step goals, with the input being the user's desired step count and the output being a confirmation message indicating that the goal has been set

The FitTrack app shall allow users to set daily step goals, with the input being the user's desired step count and the output being a confirmation message indicating that the goal has been set. The condition for this functionality is that the user must be logged in and have a valid account. The app shall also provide an option to adjust the daily step goal, with the input being the new step count and the output being an updated confirmation message.

3.1.2 The FitTrack app shall enable users to log workouts, with the input being the type and duration of the workout and the output being a confirmation message indicating that the workout has been logged

The FitTrack app shall enable users to log workouts, with the input being the type and duration of the workout and the output being a confirmation message indicating that the workout has been logged. The condition for this functionality is that the user must be logged in and have a valid account. The app shall also provide an option to view logged workouts, with the output being a list of previous workouts.

3.1.3 The FitTrack app shall generate fitness reports, with the input being the user's activity data and the output being a detailed report summarizing the user's progress over a specified period

The FitTrack app shall generate fitness reports, with the input being the user's activity data and the output being a detailed report summarizing the user's progress over a specified period. The condition for this functionality is that the user must have logged sufficient activity data and be logged in with a valid account.

3.2 Non-Functional Requirements

3.2.1 The FitTrack app shall ensure user data security and privacy, with a minimum of 128-bit encryption for all data transmissions and storage

The FitTrack app shall ensure user data security and privacy, with a minimum of 128-bit encryption for all data transmissions and storage. The app shall also comply with relevant data protection regulations, such as GDPR and HIPAA.

3.2.2 The FitTrack app shall provide a user-friendly interface, with an average response time of less than 2 seconds for all user interactions

The FitTrack app shall provide a user-friendly interface, with an average response time of less than 2 seconds for all user interactions. The app shall also be compatible with a minimum of 90% of mobile devices and browsers.

3.2.3 The FitTrack app shall ensure high availability, with a minimum uptime of 99

The FitTrack app shall ensure high availability, with a minimum uptime of 99.9% and a maximum of 1 hour of scheduled maintenance per week.

3.3 Design Constraints

3.3.1 The FitTrack app shall be developed using a microservices architecture, with each service responsible for a specific functionality, such as user authentication or data storage

The FitTrack app shall be developed using a microservices architecture, with each service responsible for a specific functionality, such as user authentication or data storage. The rationale for this constraint is to ensure scalability, flexibility, and maintainability.

3.3.2 The FitTrack app shall use a relational database management system, such as MySQL, to store user data and activity records

The FitTrack app shall use a relational database management system, such as MySQL, to store user data and activity records. The rationale for this constraint is to ensure data consistency, integrity, and query performance.

3.3.3 The FitTrack app shall be deployed on a cloud-based infrastructure, such as AWS or Azure, to ensure high availability, scalability, and security

The FitTrack app shall be deployed on a cloud-based infrastructure, such as AWS or Azure, to ensure high availability, scalability, and security. The rationale for this constraint is to ensure that the app can handle a large number of users and traffic while minimizing costs.

# 4. Stakeholder Analysis

4.1 End-users (High)

The end-users are the primary stakeholders of the FitTrack app, as they will be using the system to track their fitness goals, set daily step goals, log workouts, and generate fitness reports. They will interact with the system on a daily basis, providing input such as their step count, workout details, and other relevant information. The end-users will also receive output from the system, including progress insights, fitness reports, and motivational messages. Their involvement is crucial to the success of the project, as the system's effectiveness in motivating users to achieve their fitness goals will depend on its usability, functionality, and overall user experience. End-users will also provide feedback on the system, which will be used to identify areas for improvement and inform future development.

4.2 Development Team (High)

The development team is responsible for designing, developing, and testing the FitTrack app. They will work closely with other stakeholders, such as the project manager and quality assurance team, to ensure that the system meets the required specifications and is delivered on time. The development team will interact with the system throughout the development process, using various tools and technologies to build, test, and deploy the app. Their role is critical to the project's success, as they will be responsible for translating the system's requirements into a functional and user-friendly product.

4.3 Project Manager (High)

The project manager is responsible for overseeing the development of the FitTrack app, ensuring that it is completed on time, within budget, and to the required quality standards. They will work closely with the development team, stakeholders, and sponsors to coordinate the project's activities, manage resources, and mitigate risks. The project manager will interact with the system indirectly, through regular progress updates, status reports, and feedback from the development team and other stakeholders. Their role is essential to the project's success, as they will be responsible for ensuring that the system is delivered according to plan and that any issues or problems are addressed promptly.

4.4 Sponsors (Medium)

The sponsors are the individuals or organizations that are funding the development of the FitTrack app. They will have a vested interest in the project's success, as they will be expecting a return on their investment. The sponsors will interact with the system indirectly, through regular progress updates and status reports from the project manager. They may also provide input on the system's requirements and functionality, based on their understanding of the market and the app's target audience. Their role is important to the project's success, as they will be providing the necessary resources and support to bring the system to life.

4.5 Quality Assurance Team (Medium)

The quality assurance team is responsible for testing the FitTrack app to ensure that it meets the required specifications and is free from defects. They will interact with the system directly, using various testing tools and techniques to identify and report any issues or problems. The quality assurance team will work closely with the development team to ensure that any defects are addressed promptly and that the system is thoroughly tested before it is released. Their role is important to the project's success, as they will be responsible for ensuring that the system is reliable, stable, and functions as expected.

4.6 Fitness Experts (Low)

The fitness experts are individuals with specialized knowledge and expertise in the field of fitness and exercise. They may be consulted during the development of the FitTrack app to provide input on the system's requirements and functionality, particularly with regards to the tracking of workouts and the generation of fitness reports. They may also be involved in the testing and validation of the system, to ensure that it is accurate and effective in tracking fitness goals and providing progress insights. Their role is relatively low-priority, as their involvement will be limited to specific aspects of the system's development and testing.

# 5. Risk Analysis

5.1 Risk

The risk of not meeting the project's timeline and budget is high, as the development of the FitTrack app is a complex task that requires careful planning and execution. If the project is not completed on time, it may lead to a delay in the app's release, which could result in a loss of market share and revenue. Additionally, if the project exceeds its budget, it may lead to a reduction in the app's features and functionality, which could negatively impact user experience and adoption.

5.1.1 Mitigation

To mitigate this risk, the project manager will work closely with the development team to create a detailed project schedule and budget. The project manager will also identify and prioritize the app's features and functionality, to ensure that the most critical components are developed and tested first. Additionally, the project manager will establish a change management process, to ensure that any changes to the project's scope or timeline are properly assessed and approved.

5.2 Risk

The risk of not meeting the app's quality and functionality requirements is high, as the FitTrack app is a complex system that requires careful design and testing. If the app does not meet its quality and functionality requirements, it may lead to a poor user experience, negative reviews, and a loss of market share and revenue.

5.2.1 Mitigation

To mitigate this risk, the quality assurance team will work closely with the development team to ensure that the app is thoroughly tested and meets its quality and functionality requirements. The quality assurance team will also identify and report any defects or issues, and work with the development team to address them promptly. Additionally, the project manager will establish a quality management process, to ensure that the app's quality and functionality are continuously monitored and improved.

5.3 Risk

The risk of not meeting the app's security and privacy requirements is high, as the FitTrack app will be handling sensitive user data. If the app does not meet its security and privacy requirements, it may lead to a data breach, which could result in a loss of user trust and revenue.

5.3.1 Mitigation

To mitigate this risk, the development team will work closely with the project manager and quality assurance team to ensure that the app's security and privacy requirements are met. The development team will also implement robust security measures, such as encryption and access controls, to protect user data. Additionally, the project manager will establish a security management process, to ensure that the app's security and privacy are continuously monitored and improved.