Software Requirements Specification (SRS): Personal Gym Tracker App

1. Introduction

This document outlines the Software Requirements Specification (SRS) for a Personal Gym Tracker App. The application is developed using Flutter and Firebase, initially targeting the web and later porting to iOS and Android. The app is for personal use, focused on tracking workouts.

1.1 Purpose

The purpose of this document is to define the functional and non-functional requirements for the Personal Gym Tracker App.

1.2 Scope

The app allows users to create custom workouts, log sets and reps, track progress over time, and view history. It is intended for personal use and not for commercial distribution.

1.3 Definitions, Acronyms, and Abbreviations

- SRS: Software Requirements Specification
- UI: User Interface
- UX: User Experience
- Firebase: Google's Backend-as-a-Service platform
- Flutter: Google's UI toolkit for building natively compiled applications

2. Overall Description

The app uses Firebase for backend services including authentication and Firestore for data storage. Flutter ensures cross-platform compatibility for web and mobile.

2.1 Product Perspective

This is a standalone application that interacts with Firebase for backend functionalities. It is built using the Flutter framework with a clean architecture pattern.

2.2 Product Functions

- Create and manage custom workouts
- Log exercises with sets, reps, and weights
- View workout history
- Display progress via charts
- Use rest timers during workouts

2.3 User Characteristics

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The intended user is the app developer who is also the sole user. Some technical familiarity with mobile/web apps and workout routines is assumed.

2.4 Constraints

- Initial deployment is web-based
- Firebase free-tier limitations
- Personal use only, no external user support

3. Specific Requirements

- Use Firebase Authentication for login
- Store data in Firestore with user-based access control
- Build UI using Flutter widgets and ensure responsive design
- Implement a timer using Dart async or a Flutter timer plugin
- Display progress charts using fl_chart

3.1 External Interface Requirements

- Firebase Authentication API
- Firestore Database
- Flutter Web Hosting via Firebase

3.2 Functional Requirements

- FR1: The user shall be able to create a workout plan.
- FR2: The user shall be able to log sets, reps, and weights.
- FR3: The user shall be able to view workout history.
- FR4: The user shall be able to start and stop timers.
- FR5: The user shall be able to view charts showing progress over time.

3.3 Non-Functional Requirements

- NFR1: The app should load within 2 seconds on the web.
- NFR2: The app must function across Chrome, Safari, and Firefox.
- NFR3: The app must store user data securely.
- NFR4: The app should sync data across platforms in real-time.

4. Appendices

None at this time. All referenced tools and platforms are publicly available online.