# Trackracks - Fitness Tracker

Software Requirements Specification Document

This module is a single fitness management system that essentially tracks the progress made by an user and adaptively suggests better plans to further optimize workouts. It intelligently adapts to the routine of the user based on the user logging in every activity and further proposes the specifics of the next workout for optimal growth. It also features a diet tracker to help the user reach the required calories in a day. In this module, the administrator can edit, add and remove user data that includes both fitness routine logs as well as the diet logs. The user can sign up, log in their routine and diet and visually observe their progress.

# Contents

# 1. INTRODUCTION
The following subsections of the Software Requirements Specifications (SRS) document provide an overview of the entire SRS.

## 1.1 DOCUMENT PURPOSE

 The purpose of this document is to show the software requirements of the TrackRacks web application. The functionality and scope of this software are described in this SRS document.

## 1.2 PRODUCT SCOPE

The Trackracks platform aims at helping the user to address the issues from multi-disciplinary angles related to fitness and nutrition.
The major benefits of this software are -
1.  It is a unique software which helps to users log and track various gym routines along with the weights used in each session. It also recommends the next set of weights that the user should take up so as to provide optimal muscle growth.

2.  It has a built-in calorie tracker which tells the user the amount of calories to be consumed in order to reach their fitness goals.

## 1.3 INTENDED AUDIENCE AND DOCUMENT OVERVIEW

This SRS document is intended for developers , professors, students for reading. The rest of the document contains the functional and non functional requirements of trackracks.

## 1.4 DEFINITIONS, ACRONYMS AND ABBREVIATIONS

Reps : Repetitions
SRS- Software Requirement Specification.
Servers: Machines that store all the information and records.

## 1.5 DOCUMENT CONVENTIONS

The entire document is in Times New Roman font. The headings are numbered 1,2,3... and so on and sub-headings are numbered x.1,x.2. and so on. Both headings and sub-headings are in bold.

Main title          : Font Times New Roman Size 14
Subtitles           : Font Times New Roman and size 14
Content             : Font Times New Roman and size 12


## 1.6 REFERENCES AND ACKNOWLEDGMENTS

Software Engineering book written by Roger Pressman ,Ian Sommerville.

# 1.  OVERALL DESCRIPTION

Describes the general factors that affect the product and its requirements.  This section does not state specific requirements. Instead it provides a background for those requirements, which are defined in section 3, and makes them easier to understand.

## 1.1 PRODUCT PERSPECTIVE

The purpose of the system is to help users to save time by optimizing the fitness goals and providing tangible metrics to improve their well-being. The system will collect data and store it for fast and easy reference. With the help of this data the user can track their progress and also visualize their progress over time. Additionally, the system also suggests improvements over the existing routine to help reach the users goal quickly and feasibly. It will also provide help with tracking the diet and calculating the calorific intake of the user for optimal progress .The system is thus helpful to reduce the time and increase the users chances of reaching their fitness goal.

## 1.2 PRODUCT FUNCTIONALITY

Some major product functionalities of the system are as follows:

- System will keep track of user workout routines.
- System displays a graph indicating the progress of the user.
- Displays the calories consumed by the user that day.
- Displays the predicted weight and sets information for the next workout.
- Add, remove, edit training information.
- Add, remove, edit dietary information.

## 1.3 USERS AND CHARACTERISTICS

Primary users of the system will be individuals who wish to reach their fitness goals and can by any individual interested in fitness or working out , Developers, Admin. Very little technical expertise is required for reading the outputted data since it is in both graphical and tabular form.
Educational level of Trackracks – Low
Experience of Trackracks – None
Technical Expertise – Little

## 1.4 OPERATING ENVIRONMENT

Open source ,HTML,windows, Ubuntu.

## 1.5 DESIGN AND IMPLEMENTATION CONSTRAINTS

High performance, User-friendly,Security based System, validation of Users, very fast response time.

## 1.6 USER DOCUMENTATION

A link is provided for help and very easy User Interface.

## 1.7 ASSUMPTIONS AND DEPENDENCIES

Assume that all the information entered by the user will be correct. If any wrong information found then system will notify an alert. The system is required to save generated reports.

## 2. SPECIFIC REQUIREMENTS

## 2.1 External Interface Requirements

### 2.1.1 User Interfaces
The User Interface Screens are described in table 1.

**Table 1: Trackracks User Interface Screens**

| Screen Name | Description |
|---|---|
| Login | Log into the system. |
| Home Page | Display the progress of the user with the weights and reps used. Add or update the past logs. |
| Add new log | Add new log including weights, reps and sets of the routine done. |
| Exercise History | Display the progress in the specific routine done. |
| Diet | Display the user's diet goals and the amount of calories consumed today and the remaining calories to be consumed. |
| Add Meal | Add a new meal with the calorific details to be logged |
| Reports | Select, view, save, and delete reports |

### 2.1.2 Hardware Interfaces

The system shall run on :

Operating system: Any Windows OS.

Javascript. Web Browser : Google Chrome , Mozilla

firefox.

### 2.1.3 Software Interfaces
The system shall interface with a MongoDB database.
To implement the project we have chosen React for the front end interface, ExpressJS for the back end.

### 2.1.4 Communications Interfaces

This System supports all current web browsers except Tor, Opera, and Safari.

## 2.2 Functional Requirements

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# 3. <u>NON-FUNCTIONAL REQUIREMENTS</u>

Non-functional requirements define the needs in terms of performance, logical database requirements, design constraints, standards compliance, reliability, availability, security, maintainability, and portability.

## 3.1 PERFORMANCE REQUIREMENTS

Performance requirements define acceptable response times for system functionality.
- The load time for user interface screens shall take no longer than two seconds.
- The log in information shall be verified within five seconds.
- Queries shall return results within five seconds
- The system shall consume very little of primary memory

## 3.2 SECURITY REQUIREMENTS

Developers will be able to log in to Trackracks. They will have access to the logs by every user. Admins and Developers will have access to the entire codebase to ensure the system is futureproof. They can also perform site maintenance to ensure stability as well as correct any bugs that appear. Access to the various subsystems will be protected by a user log in screen that requires a valid UserId.

## 3.3 SOFTWARE QUALITY ATTRIBUTES

### 3.3.1    Standards Compliance

There shall be consistency in variable names within the system. The graphical user interface shall have a consistent look and feel.

### 3.3.2   Reliability

Specify the factors required to establish the required reliability of the software system at time of delivery.

### 3.3.3   Availability

The system shall be available 24*7.

### 3.3.4   Maintainability

The TrackRack System is being developed in JavaScript using MongoDB as its database. There is widespread support for the above technologies.

### 3.3.5   Portability

The TrackRack system shall run in any browser that supports JavaScript and HTML5.

## 3.4 Actors

The Actors on the scene are :

### 3.4.1    End Users

These users use the login capability provided to set goals, add and update daily logs for both dietary and workout routines

### 3.4.2    Developers

These actors have the capability to add new features and perform site maintenance activities

### 3.4.3    Administrators

These actors are capable of editing, viewing and removing user data apart from their ability to implement changes to the codebase