



**UE22CS341A:
Software Engineering Case Study**

Unit 1 Deliverable

A Software Requirements Specification (SRS) document for an **Personal Fitness Management System**.

SRS Document for ATM System

1. Introduction

1.1 Purpose

This document specifies the requirements for the **Personal Fitness Management System** (PFMS). The system allows users to track fitness activities, set goals, monitor progress, and manage their health and wellness.

1.2 Scope

The PFMS is designed for individuals who wish to improve their fitness and health. It provides a user-friendly interface for tracking workouts, nutrition, health metrics, and offers personalized recommendations.

1.3 Definitions, Acronyms, and Abbreviations

- **PFMS:** Personal Fitness Management System
- **BMI:** Body Mass Index
- **UI:** User Interface
- **API:** Application Programming Interface

1.4 References

- IEEE Standard for Software Requirements Specifications (IEEE Std 830-1998)

1.5 Overview

The document details functional and non-functional requirements, system features, external interface requirements, and constraints.

2. Overall Description

2.1 Product Perspective

The PFMS is a standalone, web-based application built using **PHP** for server-side logic and **MySQL** for data storage. It provides features to manage and track fitness activities and health metrics.

2.2 Product Functions

- **User Registration:** Create and manage user profiles.
- **Activity Tracking:** Log and monitor physical activities (e.g., workouts).
- **Nutrition Logging:** Track food intake and daily calorie consumption.
- **Health Metrics Monitoring:** Calculate and track BMI and other health indicators.
- **Goal Setting and Progress Tracking:** Set fitness goals and monitor progress.

2.3 User Classes and Characteristics

- **Individual Users:** Fitness enthusiasts who want to track their fitness progress.
- **System Administrators:** Responsible for system maintenance and security.

2.4 Operating Environment

- **Software:** Developed using **PHP**, **MySQL**, **HTML**, **CSS**, and **JavaScript**. Hosted on an **Apache web server**.
- **Hardware:** Accessible from any device with a web browser.

2.5 Design and Implementation Constraints

- Must run on a web server with **PHP** and **MySQL** support.
- Must ensure data security and integrity, especially for health information.

2.6 Assumptions and Dependencies

- Users have access to modern web browsers and devices with internet connectivity.
- The hosting server supports **PHP** and **MySQL**.

3. External Interface Requirements

3.1 User Interfaces

- **Web Interface:** The system provides a responsive, user-friendly interface.

3.2 Hardware Interfaces

- None in the current version.

3.3 Software Interfaces

- **Database:** Uses **MySQL** for user data storage.
- **Web Server:** Hosted on an **Apache server**.

3.4 Communication Interfaces

- **HTTP/HTTPS:** Communication between client and server will occur over **HTTP**, with plans to implement **HTTPS** for secure transmission.

4. System Features

4.1 User Registration and Authentication

- Users can create accounts, log in, and manage profiles.
- Functional Requirements:
 - Register using an email and password.
 - Reset passwords via email.

4.2 Activity Tracking

- Users can log physical activities and track progress.
- Functional Requirements:
 - Manually enter workout details.
 - View historical workout data.

4.3 Nutrition Logging

- Users can log meals and track nutritional intake.
- Functional Requirements:
 - Enter meals and calculate daily calorie intake.

4.4 Goal Setting and Progress Tracking

- Users can set personal fitness goals and track their progress.
- Functional Requirements:
 - Set goals for fitness (e.g., weight loss, muscle gain).
 - Display progress through charts or metrics.

5. Non-Functional Requirements

5.1 Performance Requirements

- The system should load user dashboards within 3 seconds.
- Should handle up to 100 concurrent users.

5.2 Security Requirements

- Encrypt passwords in the database.
- Use **HTTPS** for secure communication.

5.3 Usability Requirements

- Provide an intuitive and easy-to-navigate interface.
- Include help documentation within the system.

5.4 Reliability Requirements

- The system should have 99% uptime.

- Perform regular backups to prevent data loss.

6. Other Requirements

6.1 Data Privacy

- Comply with data privacy laws and allow users to request account deletion.

6.2 Localization

- The current version is available only in English. Future versions may support additional languages.