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Software Requirements Specification

for

Fitness Guidance Web Application

Version 1.0 approved

Prepared by

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Revision History

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
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|  |  |  |  |

# Introduction

## Purpose

This document outlines the Software Requirements Specification (SRS) for Fitness Guider...

## Document Conventions

The system is developed using the following technology stack: React.js with Material UI, Node.js with Express, PostgreSQL.

## Intended Audience and Reading Suggestions

This document is intended for developers involved in the design and implementation of the system...

## Project Scope

Fitness Guider is a standalone web application intended to assist users in their fitness journey...

## References

• PostgreSQL Official Docs  
• React.js Docs  
• Material UI Docs  
• JWT Authentication

# Overall Description

## Product Perspective

Fitness Guider is a standalone solution...

## Product Features

• BMI Calculator  
• Personalized workout plans  
• Customized nutrition and diet plans  
• AI chatbot  
• JWT Authentication

## User Classes and Characteristics

General Users: Anyone interested in fitness.

## Operating Environment

* Browsers: Chrome, Firefox
* OS: Windows/Linux
* DB: PostgreSQL
* Server: Node.js with Express

## Design and Implementation Constraints

React + Material UI, Node.js + Express, PostgreSQL, JWT.

## User Documentation

* User manual
* Online help section
* Admin panel guide

## Assumptions and Dependencies

* Assumes availability of stable internet
* Assumes basic digital literacy of users
* Google Maps API (for location integration)

# System Features

**3.1 BMI Calculator**

Priority: High

Stimulus/Response: User inputs height and weight; system returns BMI category

Functional Requirements:  
- REQ-1: Accept inputs  
- REQ-2: Validate and calculate BMI  
- REQ-3: Display result

**3.2 Workout Plan Generator**

Priority: High

Stimulus/Response: User selects level; system provides workout split

Functional Requirements:  
- REQ-4: Fitness level options  
- REQ-5: Weekly plan display

**3.3 Nutrition Plan Generator**

Priority: High

Stimulus/Response: User selects diet preference; system generates plan

Functional Requirements:  
- REQ-6: Choose preference  
- REQ-7: Generate meal plan

**3.4 Chatbot**

Priority: Medium

Stimulus/Response: User types query; bot responds

Functional Requirements:  
- REQ-8: Respond to FAQs  
- REQ-9: Contact support option

**3.5 Authentication**

Priority: High

Functional Requirements:  
- REQ-10: JWT login/signup/logout  
- REQ-11: Token validation

# External Interface Requirements

## User Interfaces

Responsive UI using Material UI components.

## Hardware Interfaces

Not applicable.

## Software Interfaces

React frontend, Express backend, PostgreSQL database.

## Communications Interfaces

Uses HTTPS, JWT, and REST APIs.

# Nonfunctional Requirements

• Performance: Load within 2 seconds

• Safety: Includes disclaimers

• Security: JWT, HTTPS, input validation

• Quality: Usability, reliability, maintainability, portability

• Business Rules: Authenticated access

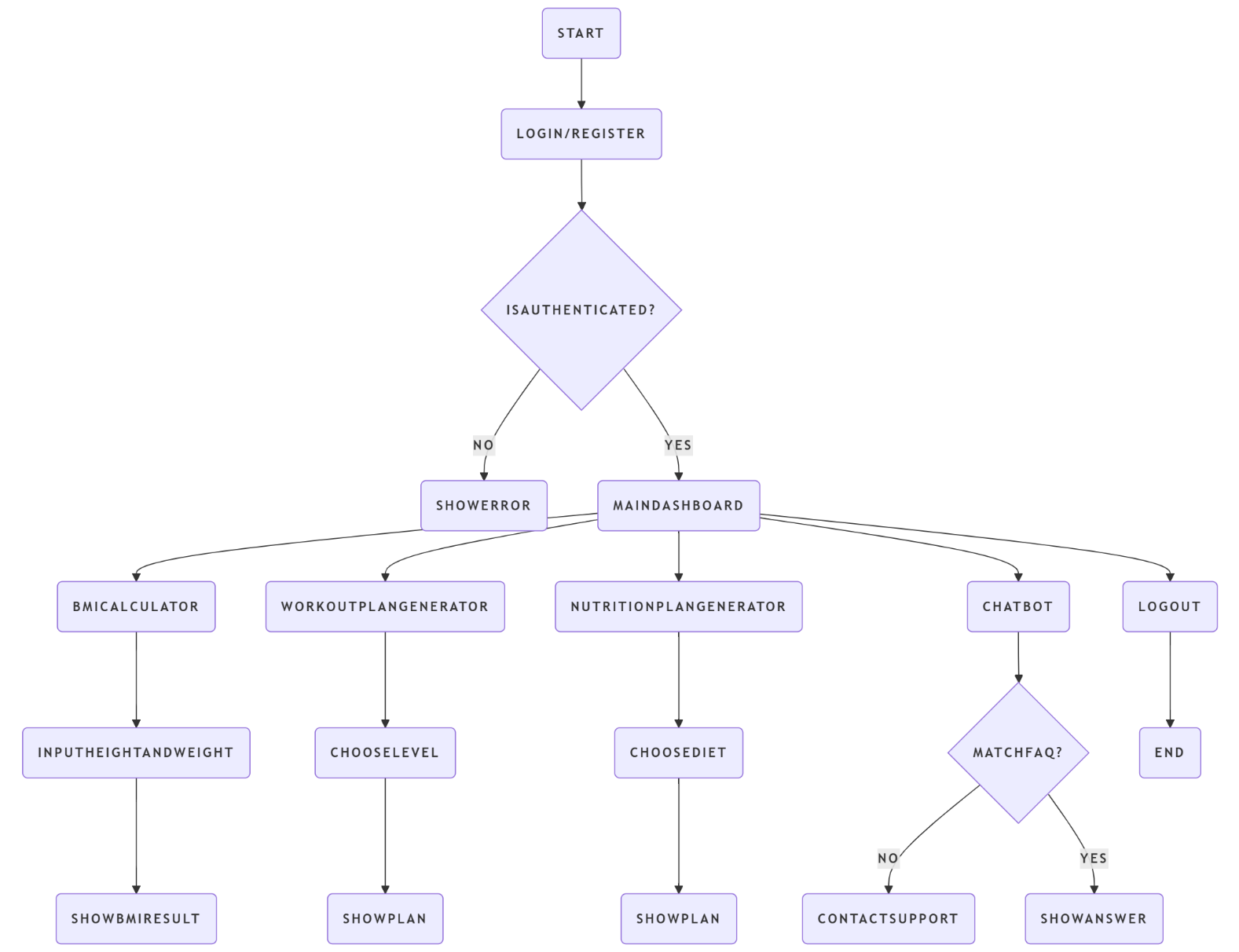
## 6. Other Requirements

• Store user preferences and history  
• Future: Mobile support, multilingual

## Appendix A: Glossary

**• BMI: Body Mass Index  
• JWT: JSON Web Token  
• API: Application Programming Interface**

## Appendix B: Issues List



## Appendix C: Analysis Models

• TBD-1: Chatbot scope  
• TBD-2: Admin dashboard