Software Requirements Specification

for

Restaurant Management System

Version 1.0 approved

Prepared by

R.Rohith (23MIC0025)

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Revision History

Date	Version	Description	Author
04-02-2025	1	Initial Draft	R, Rohith

1. Introduction

1.1 Purpose

The purpose of this document is to define the requirements for the **Restaurant Management System (RMS)**. It serves as a guideline for the development, testing, and deployment of the system.

1.2 Document Conventions

- Requirements prefixed with **"FR"** indicate functional requirements.
- Requirements prefixed with **"NFR"** indicate non-functional requirements.

1.3 Intended Audience and Reading Suggestions

This document is intended for:

- **Developers:** To understand the system's functionality and ensure smooth implementation.
- **Testers:** To create test cases and validate system features.
- **Stakeholders (Restaurant Owners/Managers):** To verify that the system meets business requirements.

1.4 Project Scope

The RMS allows restaurant owners to efficiently manage tables, menus, and orders. It features a dashboard for earnings tracking, a profile management system, and an order management module that assigns and processes table orders, ensuring accurate billing and smooth table turnover.

1.5 References

- IEEE Standard for SRS (IEEE Std 830-1998)
- Restaurant POS System Guidelines

2. Overall Description

2.1 Product Perspective

The RMS replaces manual restaurant operations with a digital, automated system, improving accuracy, efficiency, and ease of use.

2.2 Product Features

- User authentication with a secure login system.
- Dashboard for financial tracking.
- Restaurant area management.
- Menu management.
- Order management tied to tables, ensuring smooth billing.
- Bill generation within the system.

2.3 User Classes and Characteristics

- **Restaurant Owners/Managers:** Responsible for managing restaurant settings, menu, and orders.
- **Staff/Waiters:** Responsible for order entry, table management, and bill processing.
- **Admins:** Maintain the system and handle security/user permissions.

2.4 Operating Environment

- Operating System Compatibility: Windows, Linux, macOS.

2.5 Design and Implementation Constraints

- Must support multiple concurrent users within the restaurant.
- Should ensure seamless data synchronization with MySQL for real-time updates.
- Must adhere to data security and privacy regulations.

2.6 User Documentation

- A user manual with step-by-step guides.
- FAQs and troubleshooting tips for common issues.

2.7 Assumptions and Dependencies

- Requires a stable internet or local network connection for database communication.

3. System Features

3.1 User Authentication

- **Description:** Secure login for restaurant owners and staff to prevent unauthorized access.
- **Priority:** High

3.2 Dashboard & Financial Tracking

- **Description:** Displays earnings reports (daily, weekly, monthly, projected earnings).
- **Priority:** High

3.3 Restaurant Area Management

- **Description:** Enables adding/removing tables for accurate order assignment.
- **Priority:** Medium

3.4 Menu Management

- **Description:** Allows adding, updating, and removing food items and pricing.
- **Priority:** High

3.5 Order and Billing System

- **Description:** Links orders to specific tables, calculates totals, and generates a bill within the system.
- **Priority:** High

4. External Interface Requirements

4.1 User Interfaces

- Intuitive and visually appealing UI.
- Dashboard with statistics for quick insights.

4.2 Hardware Interfaces

- Minimum System Requirements: 8 GB RAM, Quad-core CPU, 256 GB SSD

4.3 Software Interfaces

- Database integration for storing user, menu, and transaction data.

4.4 Communication Interfaces

- Local database connectivity using JDBC.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- The system should be able to handle multiple simultaneous order transactions without lag.

5.2 Safety Requirements

- Ensure data backup and recovery mechanisms to prevent loss of transaction history.
- Ensure data privacy

5.3 Security Requirements

- Use a password authentication based login

5.4 Software Quality Attributes

- **Usability:** User-friendly interface for easy navigation.
- **Scalability:** Designed to support future enhancements.

6. Other Requirements

- Future scalability to include cloud-based synchronization for multi-branch restaurants.
- Integrating multilingual functionality to ensure broader accessibility