Software Requirements Specification

Restaurant Management System

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# 1.0. Introduction

## 1.1. Purpose

The purpose of a restaurant management system project is to provide a comprehensive solution for managing the day-to-day operations of a restaurant. The system aims to automate and streamline tasks such as ordering, billing, inventory management, and reporting to improve efficiency, accuracy, and customer satisfaction. The overall goal is to increase productivity and profitability while providing a seamless and enjoyable experience for both customers and staff.

## 1.2. Scope of Project

The scope of a restaurant management system project typically covers the following areas:

1. Ordering: The ability to take and manage customer orders, including menu customization, order tracking, and table management.
2. Billing: An efficient and accurate billing system, including integration with payment processing and receipt printing.
3. Inventory Management: A system for tracking food and beverage inventory, including ordering, receiving, and usage tracking.
4. Reporting: Generating and analyzing reports related to sales, inventory, and customer data.
5. User Management: Access control and user management, including secure login credentials and permissions.
6. Integration: Integration with other systems and devices, such as barcode scanners, receipt printers, and payment processing systems.

The scope of the project may vary depending on the specific needs and requirements of the restaurant, but the above mentioned are the common areas covered in most restaurant management systems.

## 1.4. References

IEEE. *IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications.* IEEE Computer Society, 1998.

## 1.5. Overview of Document

The next chapter, the Overall Description section, of this document gives an overview of the functionality of the product. It describes the informal requirements and is used to establish a context for the technical requirements specification in the next chapter.

The third chapter, Requirements Specification section, of this document is written primarily for the developers and describes in technical terms the details of the functionality of the product.

Both sections of the document describe the same software product in its entirety, but are intended for different audiences and thus use different language.

# 2.0. Overall Description

## 2.1 System Environment

Author

Reader

Editor

HS DB

Online Journal

Article Manager

Web Publishing System

Reviewer

Figure 1 - System Environment

## The system environment of a restaurant management system project typically includes the following components:

## User Devices: Devices used by customers and staff, such as smartphones and tablets, to interact with the system.

## Databases: Databases used to store customer, menu, and transaction data, such as MySQL or MongoDB.

## Development Tools: Development tools and environments used to build and maintain the system, such as Visual Studio or c++

## The specific components of the system environment will depend on the requirements and constraints of the project, but the above components are typical in most restaurant management system projects.

## 2.2 Functional Requirements Specification

Functional Requirements Specification (FRS) of a restaurant management system project typically includes the following functions:

1. Order Management: The ability to take customer orders, including menu customization, order tracking, and table management.
2. Billing: An efficient and accurate billing system, including integration with payment processing and receipt printing.
3. Integration: Integration with other systems and devices, such as receipt printers, and payment processing systems.
4. Customer Management: A system for managing customer data, including personal information, order history, and loyalty programs.
5. Menu Management: A system for managing menu data, including menu items, ingredients, and nutritional information.

## 2.3 User Characteristics

The Reader is expected to be Internet literate and be able to use a search engine. The main screen of the Online Journal Website will have the search function and a link to “Author/Reviewer Information.”

The Author and Reviewer are expected to be Internet literate and to be able to use email with attachments.

The Editor is expected to be Windows literate and to be able to use button, pull-down menus, and similar tools.

The detailed look of these pages is discussed in section 3.2 below.

## 2.4 Non-Functional Requirements

The non-functional requirements for a restaurant management system project may include:

Performance: response time for user actions, system scalability, processing time, etc.

Usability: ease of use, intuitive interface, user-friendly design, etc.

Reliability: system availability, data integrity, error handling, backup and recovery, etc.

Security: data confidentiality, user authentication and authorization, network security, etc.

Compliance: industry standards, government regulations, etc.

Maintainability: ease of maintenance, software updates, bug fixing, etc.

Portability: compatibility with different hardware and software platforms, etc. 3.0. Requirements Specification

## 3.1 External Interface Requirements

External Interface Requirements of a restaurant management system project typically include:

User interface: A user-friendly graphical interface that is easy to use and navigate.

Payment gateway: A secure and reliable payment gateway for online transactions.

Kitchen display system: A display system that shows the kitchen staff the orders that need to be prepared.

Customer ordering system: A system for customers to place their orders online or through a mobile app.

Delivery interface: An interface for tracking delivery orders and ensuring timely delivery to customers.

Inventory management: A system for tracking inventory levels and ordering supplies as needed.

Reporting and analytics: A system for generating reports and analyzing data to help the restaurant make informed decisions.

Marketing and promotions: A system for managing marketing campaigns and promotions to attract customers and drive sales

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