
Software Requirements Specification

for

Restaurant Automation

Version 1.0 approved

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1. Introduction

1.1 Purpose

The purpose of this document is to show the detailed explanation of the objectives, features, user interface and application of Restaurant Automation System. Document provides the detailed profile of the external interfaces, performance considerations and design constraints imposed on the implementation. This document will further assist the various stakeholders by serving as a reference manual.

1.2 Document Conventions

The standard font used throughout the document is Arial, with font size 11. The Titles of the various sections of this SRS document have been represented in bold, with font size 14 and font Times New Roman. Important parts of the document have been indicated in bold.

1.3 Intended Audience and Reading Suggestions

This document is intended to assist the users when they use the software and for developers and the project managers to plan their project and implement the software required. This Software Requirement Specification document is divided into five subsections.

Section 1: Introduction

Section 2: Overall Description of the Software giving information about functions, user classes, operating environment, constraints and documentation.

Section 3: External Interface Requirements giving a brief introduction to user, hardware, software and communications interfaces.

Section 4: Gives functional requirements of different features.

Section 5: Provides a list of non-functional requirements

Section 6: Other requirements

1.4 Product Scope

This software will enable restaurants to run in a time efficient and cost efficient manner. The employees can maintain a database of all the orders and status of all the tables, by which everyone in process knows what is the current status, and there's no time lapse. The customers can login with their mobile number and order online, once the order will be approved, or the waiter could do the same online. For the hotel staff, it could show all tables and their orders, specifications and the status of it. It could show the status, as cooking, reached table, and all for each table. Then, waiters do not have to manually go to kitchen and give the order or check. Also, the customers can reserve a table at their required time slot with a mobile number. This way, they could change their menu according to times, ingredients and requirement. This way, the management could also get statistics of the orders and ingredients easily without manual work, and let them improve quicker.

1.5 References

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

2. Overall Description

2.1 Product Perspective

The Restaurant Automation System helps the restaurant manager to manage the restaurant more effectively and efficiently by computerizing meal ordering, billing and inventory control. The whole system is designed for a general computerized digital restaurant. So that any restaurant owner can get it and can start automated process to his restaurant.

2.2 Product Functions

The following functions are provided by the software:

- Create Account
- Account Login
- Reserve Table
- Order Food
- Cancel Order
- Take Order
- Serve Food
- Check Inventory
- Payment
- Customer Review
- Show Statistics
- Show Status
- Change Menu

2.3 User Classes and Characteristics

The System has the following user classes:

- Customer
- Chef
- Waiter
- Manager
- Receptionist

The customer can create account and after login can order food via desktop. The Chef sees the order and takes/rejects the order. The customer can cancel order within a specified time. When the food is ready, the chef tells the system that it is ready. The waiter can take order and serve the food and confirm the same in the software. The receptionist can take cash and update the same in the system. The manager can edit the price, check the statistics and the inventory and see to it that the required items are available to the cooking staff. The customer can fill in the review, which is optional.

2.4 Operating Environment

Operating System: Windows 7,8, 8.1, 10

Language: Java

Whole system should be covered by internet connection. And there should be a display for the Chef in the kitchen. There should be desktops for receptionist, manager, waiter, chef.

2.5 Design and Implementation Constraints

The constraints are:

- Cannot implemented as an Android/IOS App
- Doesn't work on outdated/slow servers
- No other languages except English is used in this implementation
- Advanced security features haven't been introduced.

2.6 User Documentation

License and User Manual will be provided along with the software.

2.7 Assumptions and Dependencies

It is assumed that the display will be provided to the Chef. There would be proper Banking System working independent to Restaurant Automation System. Proper internet connection is assumed.

3. External Interface Requirements

3.1 User Interfaces

Works with Windows User Interface and Java is used to create the GUI. The interface will be user friendly. Customer can give the orders as well as reviews without any technical difficulties.

3.2 Hardware Interfaces

There are no special hardware interface requirements.

3.3 Software Interfaces

The Restaurant Automation System will interface with a Database Management System (DBMS) that stores the information necessary for the System to operate. The DBMS must be able to provide, on request data concerning the restaurant's menu, employees (and their passwords) and available requirements. Additionally, it should take and archive data provided to it by the system. This data will include records of all orders and transactions executed by the System. The DBMS must store all data such that it can be used for accounting, as well as to show the statistics

3.4 Communications Interfaces

There are no special communication interfaces requirements.

4. System Features

This subsection presents the identified functional requirements for the subject Restaurant Automation System. Where possible, the requirements have been demarcated based on their relevance to the users of the system, that is, customers, waiters, chefs and supervisors.

4.1 SignUp & Login

4.1.1 Description

Takes the necessary input from the users and creates an account and enables login

4.1.2 Functional Requirements:

Sign-Up: Takes as input name, mobile/ID and password (in case of restaurant staff) and registers account.

Login: Asks information of mobile/ID, user type (customer, waiter, chef etc.) and password (in case of restaurant staff) and Logs in.

4.2 Reserve Table

4.2.1 Description

Takes the necessary input from the users and checks for availability and reserves it.

4.2.2 Functional Requirements:

Check-Availability: Takes information like date, time, number of people and checks the availability.

Reserve: Reserves the table if available.

4.3 Food Orders

4.3.1 Description

Takes the necessary input from the users and deals with the orders

4.3.2 Functional Requirements:

Order Food: Asks user to enter the food from the available menu and the order is placed

Take Order: Waiter can take order and enter it into the system

Cancel Order: User can cancel the order before the chef accepts.

Display Order: Display the order to the chef

Reject Order: Chef can reject the order

Serve Food: Waiter serves the food and updates the same in the system.

4.4 Inventory Check

4.4.1 Description

Checks whether the required items are available for the cooking or not and make subsequent actions if it is not available

4.4.2 Functional Requirements:

Display required items: Displays the required items

Check Inventory: Check whether the required items are available or not.

Add to Inventory: Manager adds the required goods if deemed necessary.

4.5 Menu

4.5.1 Description

Adds items to and deletes items from the menu.

4.5.2 Functional Requirements:

Add item: Takes input as name and cost of the item and adds it to the menu.

Delete item: Selects an item from the current menu and deletes this item from the menu.

4.1 Payment

4.6.1 Description

Takes payment from the customer and asks them to fill the customer review

4.6.2 Functional Requirements:

Show Bill: Display the total cost of the meals

Payment Type: Ask for payment type Card or Cash.

Confirm Payment: The receptionist confirms the payment.

Give feedback: Customer is asked to give feedback.

4.2 Statistics and Status

4.7.1 Description

Shows the necessary statistics and Status as requested by the user

4.7.2 Functional Requirements:

Show-Status: Shows the status of each order of a table

Show Statistics: Shows the statistics of the orders and ingredients

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- The product will be based on local server
- The product will take initial load time.
- The performance will depend upon hardware components
- Different databases are required

5.2 Safety and Security Requirements

- The whole system is secured. Only Admin can access all the data.
- The system will use suitable transfer protocols.
- The system will use secured payment system external to this system.

5.3 Software Quality Attributes

Maintability

Different versions of the product should be easy to maintain. For development it should be easy to add code to existing system, should be easy to upgrade for new features and new technologies time to time. Maintenance should be cost effective and easy.

Usability

This can be measured in terms of ease of use. Application should be user friendly. Should be easy to learn. Navigation should be simple.

Flexibility

Should be flexible enough to modify. Adaptable to other products with which it needs interaction. Should be easy to interface with other standard 3rd party components.

5.4 Business Rules

This software should be use only after proper contract agreement with the company developing it. In case of any problems the user should immediately contact the project manager. The software should not be outsourced to any third party without prior permission.

6. Other Requirements

- Licensing requirements: Applicable
- Legal, Copyright and Other notices: All rights reserved by our organization.
- Applicable Standards: It should be as per the industry standards