Software Requirements Specification

for

5.Restaurant Billing Management System

Version 1.0

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Contents

1 Introduction

This SRS (Software Requirements Specification) document describes the requirements needed for the Restaurant Billing Management System. This SRS will help to understand the goals and objectives of the system. A clear understanding of the system will also help further stages in order to design and implement the system. This document aims to help users to know about the system and its features.

1.1   Document Purpose

This document is a Software Requirements Specification (SRS) for the Restaurant Billing Management System. It explains the functional, non-functional requirements. It includes a set of use cases that help users interact with the system and understand its features. The application aims to provide services like adding an item, modifying an item, viewing an item, deleting an item, adding orders to cart and viewing bills. The document is organized into several sections to help and assist the development of the system from the user perspective. It also describes non-functional requirements and other factors necessary to provide a complete and comprehensive description of the requirements for the software.

1.2   Product Scope

This Restaurant Billing Management system will be an application intended to manage the orders in a restaurant and provide billings. The purpose of the system is to minimize manual calculations among the employees at restaurants and save time. Also, the goal of this software system is to make the user experience comfortable and straightforward.

Following are the features provided by the system :
　　　1. Manage the items in the restaurant.
　　　2. Manage the orders from customers.
　　　3. Calculate the bills accordingly.

1.3   Definitions, Acronyms and Abbreviations

● **RBMS :** Restaurant Billing Management system will be an application intended to manage the orders in a restaurant and provide billings.

● **Login/ Authentication:** The system allows the admin to access the software using the login feature, which has a login id and password. When entered correctly, they'll get access to the application.

- **Use Case:** A use case is a methodology used in system analysis to identify, clarify and organize system requirements. The use case comprises a set of possible sequences of interactions between systems and users in a particular environment and related to a specific goal.

- **Abbreviations:**
  - a. App: Application
  - b. DB: Database
  - c. GUI: Graphical user interface
  - d. H/D: Hardware
  - e. RBMS : Restaurants Billing Management System
  - f. SRS: Software requirement specifications
  - g. S/W: Software

1.4   Document Conventions

This document follows the IEEE formatting requirements. Times New Roman font size 13, 14 and 18 has been used throughout the document for text. Use of italics for comments. Use of bold for headings. Document text is single-spaced, and 1" margins are maintained in this document.
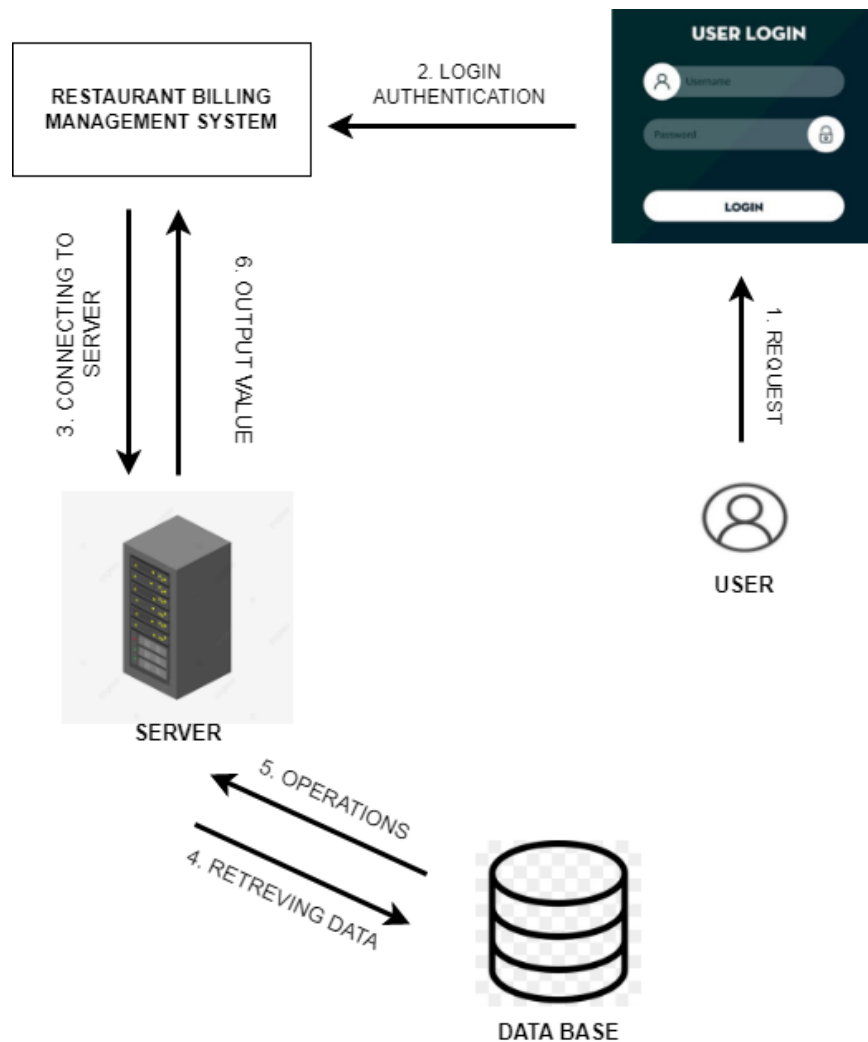
1.5   References and Acknowledgments

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

- Object Oriented Modelling and Design with UML-Michael Blaha, James Rambaugh.

2 Overall Description

2.1 Product Overview

This system will be an application with a simple GUI so that users need not have trouble accessing the application. This product serves users/ admins/ cashiers of restaurants to manage the number of items in the restaurant, so that they can add or delete items and modify them. This product also allows them to take orders from the available items and calculate bills. Today, we all are familiar with apps and online platforms, and we prefer to do things online rather than doing it on pen and paper. Calculating the bills for users can be done easily using this application. In other ways, we have to remember bills, expenses and do manual calculations, which is time consuming, difficult and now can be eliminated.

2.2 Product Functionality

Restaurant Billing Management System application allows:

- **Login :** Login with userId and Password.
- **Add Item :** Allows users to add items in the restaurant which has the following details :
  - a. Item Name.
  - b. Item Price.
  - c. Item Quantity.
- **Delete Item :** Allows users to delete an item based on the item name from Inventory.
- **Modify Item :** Allows users to modify an item based on the item name from Inventory.
- **View Items :** Allows users to view all the items that are present in the inventory.
- **Add Orders to Cart :** Allows users to add orders from customers to the cart.
- **Calculate Bills :** Calculates the bill of any particular order with discounts applied if any.
- **Simple GUI :** A simple GUI so that users can easily access and use the application.

3   Specific Requirements

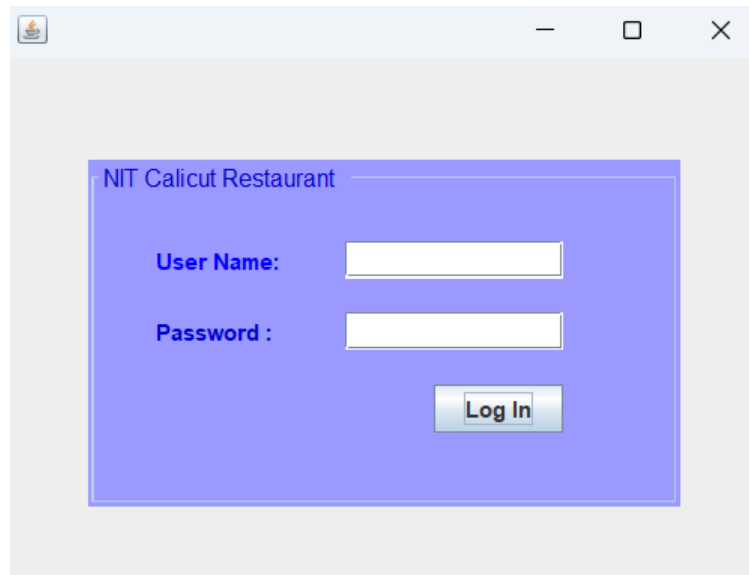## 3.1   User Interfaces

3.1.1   Login Page
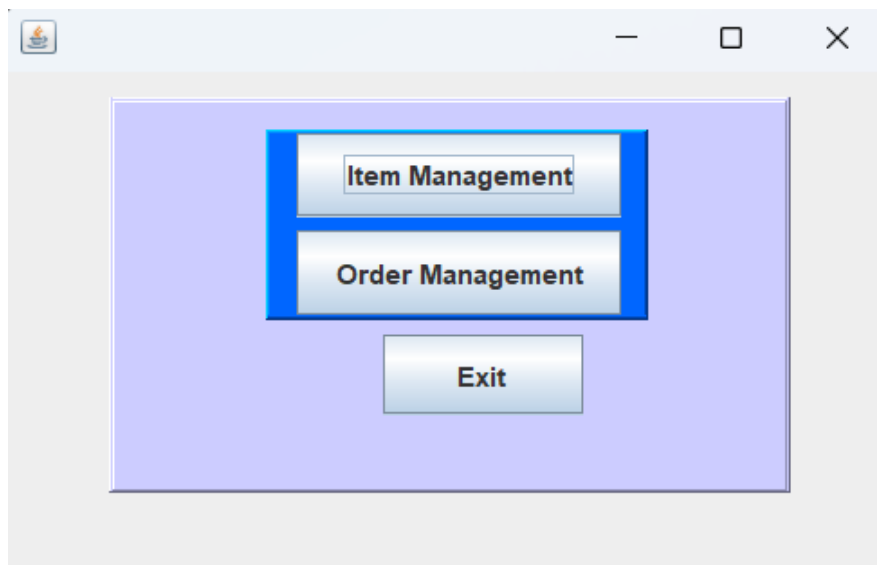

Figure 1: Login Page

3.1.2   Main Menu

Figure 2: Main Menu
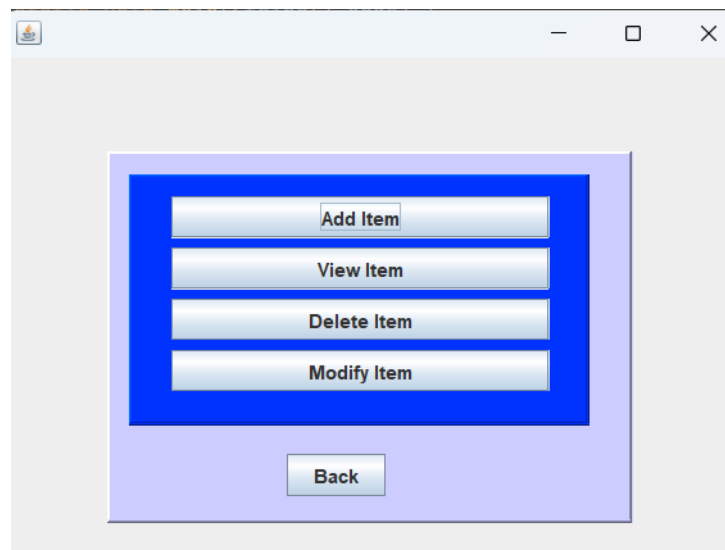
3.1.3 Item Management Page

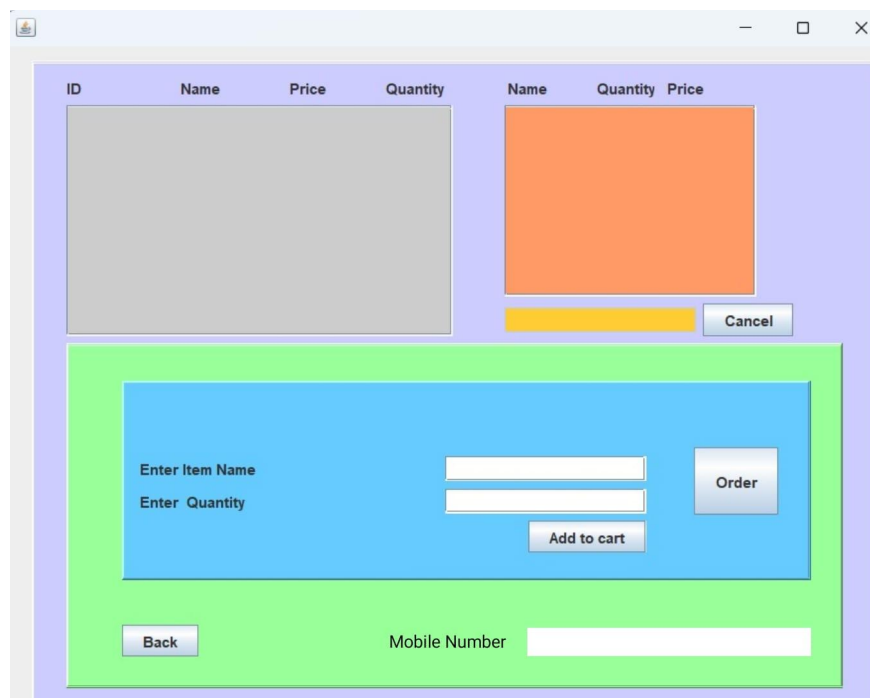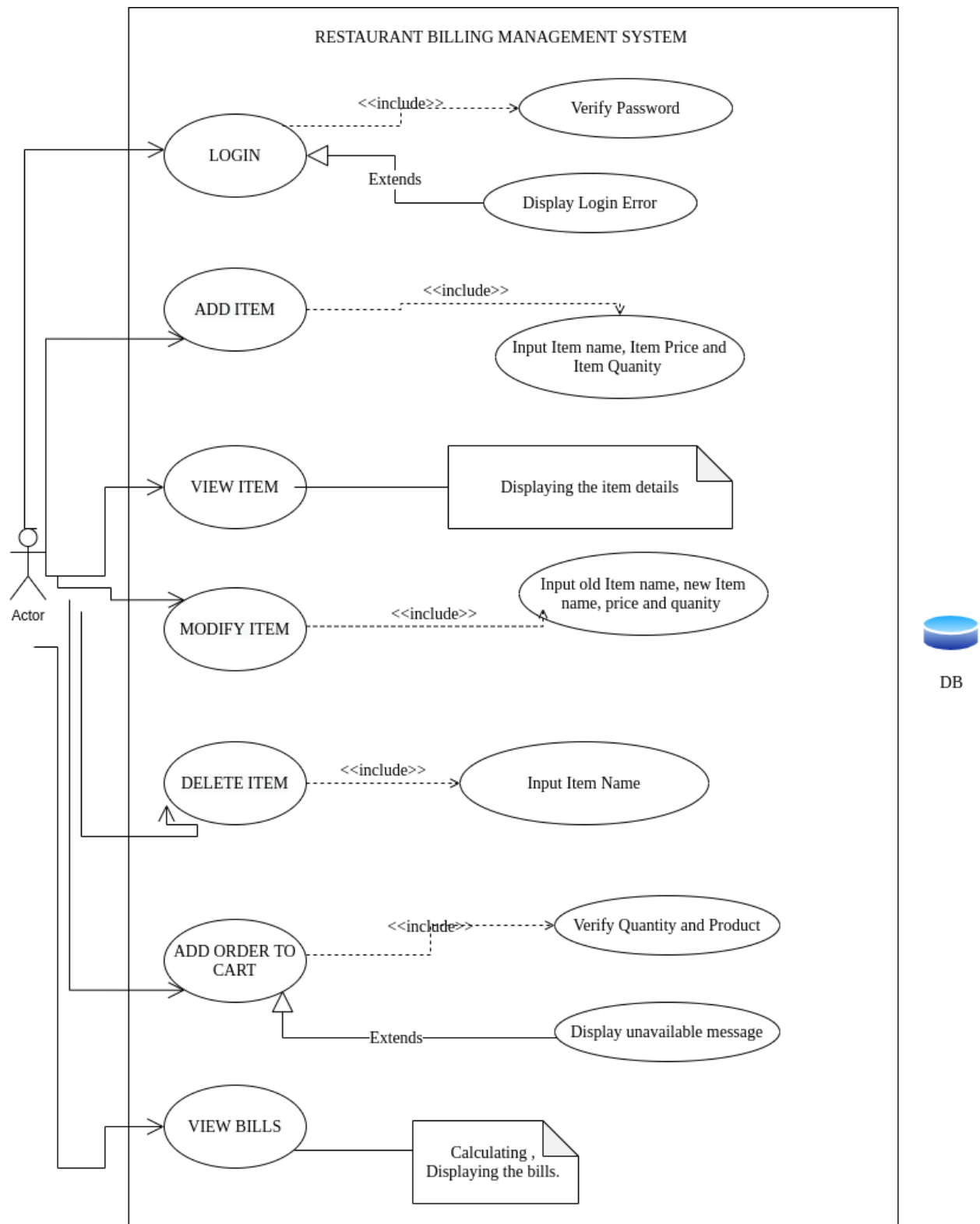Figure 3: Item Management Page

3.1.4 Order Management

Figure 4: Order Management Page

3.2   Functional Requirements

F1: This system shall allow users to login with their UserID and password.
F2: This system shall allow users to add Item Details such as name, cost and quantity.
F3: This system shall allow users to modify the item details
F4: This system shall allow users to view the items and their details.
F5: This system shall allow users to delete the items.
F6: This system shall allow users to enter orders from customers based on their items in inventory.
F7: This system shall allow users to tell if the quantity ordered is available or not.
F8: This system shall check for any discounts applicable to the customer order based on his number of visits.
F9: This system shall calculate the total bill of an order.

3.3 Use Case Model

3.3.1 Use Case #1 (Login – U1)

Purpose - To authenticate users to use the app.

Requirements Traceability – F1

Actors - User

3.3.2 Use Case #2 (Add Item – U2)

Purpose - To allow users to add the details of an item. The following details of an item can be added.
      a. Item Name
      b. Item Price
      c. Item Quantity

Requirements Traceability – F2

Actors - User

3.3.3 Use Case #3 (Modify Item – U3)

Purpose - To allow users to modify the details of an item. It finds the item to modify by item name. The details: Name, Price, and quantity can be modified of the item that has been found.

Requirements Traceability – F3

Actors - User

3.3.4 Use Case #4 (View Item – U4)

Purpose - To allow users to view all the items along with their details.

Requirements Traceability – F4

Actors - User

3.3.5 Use Case #5 (Delete Item – U5)

Purpose -   To allow users to delete items based on the item name.

Requirements Traceability – F5

Actors - User

3.3.6 Use Case #6 (Add orders to cart – U6)

Purpose -   To allow users to add orders to the cart. Users can input the item name and the quantity that has been ordered by the customer.

Requirements Traceability – F6, F7, F9

Actors - User

3.3.7 Use Case #7 (View Bill – U7)

Purpose -   To provide the bill of the orders with discounts applied (if any) that have been added to the cart from User Case 6 if it is valid.

Requirements Traceability – F6, F7, F8, F9

Actors - User