Software Requirements Specification

for

Restaurant Automation System

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version
Himanshu Mundhra	19-1-18	Restaurant Automation System	1.0

1. Introduction

1.1 Purpose

This SRS document aims to serve as a systematic and detailed explanation to the requirements of the Restaurant Automation Software – Version 1. This is the first release of this software. This will also serve as a validation document for the stakeholders. This document contains all the necessary information required by the software to start developing and will aid the developer right up till the end.

1.2 Product Scope

This product aims to automate the day to day proceedings taking place in a restaurant. A reliable software as ours ensures error free outputs when it comes to billing, and payments, and also makes sure the timely updating of the inventory stocks of various ingredients. It will also provide the user with records regarding the sale of specific items and the monthly sales and expenses as and when required. It provides flexibility when it comes to changes to be made in the Menu Card as well. Thus, by freeing the users of the hassles of manual 'labour' m we aim to increase the functional efficacy of the restaurant.

1.3 References

The following standards apply:
IEEE STD 830 -1998, IEEE Standard for Software Requirement Specification

2. Overall Description

2.1 Product Functions

- *Menu Card and Orders. System facilitates the storing of prices of different sale items and also supports changes in the existing data. It also helps us to print menu cards with these updated values as and when required, along with taking the orders of the customers.*

- *Inventory Management. What we mean by this is to order an optimal amount of ingredients on a regular basis so that there is no wastage and the materials, when used, are fresh. Moreover, an emergency stock of two days is to be maintained in case of some irregularities in order to ensure smooth working of the restaurant.*

- *Billing and Accounting. The system provides us with bills after each sale, along with on demand production of sales and expenses records. It also handles the transactions made during the purchase of ingredients and takes care of the necessary steps to be taken.*

2.2 Operating Environment

This software is platform independent and can be run on any operating system.

2.3 Design and Implementation Constraints

The generation of a hard copy (*if required*) of the receipts, bills, and well the menu card will require a printer (*preferably with lamination for the Menu Card*). The software on its own can at most generate a soft copy on the screen. Optimal utilization of memory whilst storing the data is also a must.

2.4 Assumptions and Dependencies

- Some of the very basic assumption is the familiarity of the user in handling such software, (*though we try to make our interface as user friendly and interactive as possible*).

- We also depend on our supplier to provide us with top class ingredients without any delay on a regular basis, lest our schedule might go haywire.

- Smooth functioning of the system on which we work with our software, along with proper coordination between the hardware and software interfaces.

- The system should have enough space for the database to properly store the data and process it as and when required.

3. External Interface Requirements

3.1 User Interfaces

The system enables the user to login to the software with the required credentials and then will allow him (her) to access the various details available through to software.
- It enables the user to check the statistics of sales and expenses at the click of a button.
- The dispatch of order to the dealer for the supply of ingredients and the clearing of payment dues will be available at the click of a button. On a below par level of a certain stock, the software will generate a message which alarms the user about the situation.
- Taking an order from a customer, one of the most important tasks will be the primary option in our interface. Also the revisal of the menu will be possible through the main screen itself, which shall be reflected back on to the menu.

3.2 Hardware Interfaces

Console input devices – either a keyboard and a mouse or a touchscreen display. Data is fed into the system through these and the software processes it and performs the necessary actions.
A functional printer if the need of a hard copy arises.

3.3 Software Interfaces

JAVA for the programming and a Database Management System (preferably SQL) connected through JDBC suffices.

3.4 Communications Interfaces

This software is a localized one which operates on one master system. Hence there is no need as such of a communication interface.

4. System Features

The following the main features of this software which aims at automating and hence optimizing the proceedings in the restaurant.

4.1 Menu Card and Orders

The software has the feature of storing the data corresponding to the various items being sold in the restaurant in a dynamic way, which enables us to modify the data as per our conveniences. We may add or delete items from the database, or change their prices. All these changes we make are reflected on to our Menu Card and hence we always have an up-to date Menu for our customers' perusal. As soon as the customer has given their order, a receipt is generated and that formalizes the transaction.

4.2 Inventory Management

This feature ensures the smooth flowing of work in the restaurant. It ensures regular order of ingredients from the dealer, but also makes sure no extra materials are bought in order to minimize wastage. Moreover, a regular inflow of ingredients makes sure that the materials are fresh and hence maximizes taste, thereby increasing the word of mouth publicity. An emergency stock of stackable items is maintained which could last for about two days and keep the restaurant functional in case of some irregularity. Daily updates on the stock of ingredients are taken at the end of each day, decrementing the data by the amount used up on that day. For stackable item, when this value goes below a threshold value, the system alerts the user and the order to the dealer for these items can be placed.

4.3 Billing and Accounting

Each time an order is placed, subsequently the bill is produced to formalize the transaction. This prevents any confusion or discrepancy from creeping in and minimizes the waiting time of our customer. Each time an order of ingredients is received, it makes a suitable payment to the required entity, depending on the balance. This system also helps in generating statistics about the sale of items in particular and overall sales to keep the user abreast of the progress of their establishment.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

Reliability and Accuracy: The accounts records and payment transaction amounts generated by the software must be accurate and precise in order to prevent any impending chaos.

Fast: The payment taking place through the software while purchasing ingredients of production should be facilitated to be processed out completely in less than a minute or so.

User Friendly: Since the user of the software might not always be acquainted to such systems, the more interactive and visual the interface is, the higher the yield.

Attractive: Since our software deals with the menu card as well, the production of an enticing and lucrative menu card is a must to give the sales a boom.

Flexibility: The prices of items can be subject to frequent change. Moreover the menu card might be modified to add specials, or to suit the time of the year as and when required

5.2 Software Quality Attributes

Human-computer interface issues: Our interface is more visual than textual to enable easy handling of the software by the user, along with an interactive interface.

Reusability: The software is not really specific to any particular restaurant. With minor changes in the software, it can be used for any restaurant.

6. Other Requirements

Nothing in specific