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# **Software Requirements Specification**

**for**

# **Restaurant Management System**

**Document Version <1.0>**

**Prepared by**

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## Revisions

Version	Primary Author(s)	Description of Version	Date Completed
1.0	Malcolm Madeira Gaurish Chandrashekar Kauthankar	Complete requirement for the Restaurant Management System software	09/03/18

# 1 Introduction

This document provides the complete Software Requirements Specifications (SRS) for a Restaurant Management System (namely RMS) that is meant to control the functioning of the activities of the restaurant in an organised manner. The restaurant Management system is a software which will be used to computerize the activities of the restaurant such as an online order request, Computerised bill generation, Employee and customer registration, Inventory, Employee payroll, Employee attendance and Employee grievance registration.

In the following sections, we specify the purpose of this document, its intended audience, and all sources used in the production of this document

## 1.1 Document Purpose

The purpose of this document is to specify and establish the functional and non-functional requirements associated with the Restaurant Management System software version 1.0. The restaurant Management System version 1.0 Software Requirement Specification will serve as the backbone for any other documents to be developed for this project in the future .Moreover it will provide the basis for the future software verification and testing by specifying the behaviour requirements of the system .

## 1.2 Product Scope

The Restaurant Management System shall be a computer program which will allow users to login the system through Local area network. The orders of the customers will be taken in an online manner through the waiters registered account. The bills of the orders will be generated automatically as the orders of the customers are registered previously and approved online by the kitchen staff on the availability of raw food materials from the online computerized inventory records .A registered customer can only manage the records of previous records of ordered items and bill transactions and personal data .Finally the Admin can manage all the activities and can add, delete and update records of each departments and can even register new employee accounts and delete as well .

The Restaurant Management System will benefit restaurants to manage all the activities in a computerized manner .There will be user friendly interface which will eliminate communication barrier while placing an order, All records will be centrally stored, accessed and manipulated using better security software ,The wastage of time while placing and approving order will be less compared to manual method which will save both time and money which will ultimately help in gaining trust of the customers .It will also help in reducing human error in bill generation and attendance of employee as the data is computed by the computer. There will be increased scalability of the Restaurant Management System

## 1.3 Intended Audience and Document Overview

This Software Requirement Specification (SRS) document is the result of interviews between the system architect and the client and represents the mutual agreement between these two parties to bind a contract. Therefore, this SRS document should be carefully read and approved by the client, the developer team, and the Quality Assurance (QA) team.

Section 2 of this document provides an overall description of the product by specifying product perspective, high level functionality of the product and other general, product by specifying product related requirements. Section 3 describes the specific requirements of the software including : External interfaces, Functional Requirements and Behaviour Requirements .This section will be the most interest to the project architects, developers and the QA team. Section 4 describes the non-functional requirements of the product and focuses on the different software attributes, such as maintainability, security, performance etc.

## 1.4 Definitions, Acronyms and Abbreviations

We will also use bold letter to emphasis main topics and for all the major functions of the system. Underline will represent hyperlink. Italic will represent acronyms and useful notes. We will use some acronyms through this document. Abbreviations and definition of some useful terms we will use are given below

This subsection presents definitions for the terms and acronyms used throughout this SRS as they relate to the subject RMS.

Term	Description
Item	Single serving of food/beverage
Order	Comprises one or more items
Meal	Comprises one or more orders (associated with one customer)
Customer	Restaurant patron that orders/pays for a meal
Staff	General restaurant employee
Waiter	Staff member whose primary job is to take orders/serve meals to customers
Chef	Staff member whose primary job is to prepare items
Supervisor	Staff member whose primary job is to manage restaurant operations
Table	Comprises one or more seats at which customers sit and place orders from
Account	Comprises all the meals from a table
Payment	Comprises the total cost of zero or more meals and zero or more tips
Server	Backend computer that hosts the restaurant menu and ordering system
Surface Computer	Built into tables to provide customers with menu/ordering functionality
Tablet	Wireless mobile computer to provide staff with customer serving functionality
Display	Touch screen to provide a means for chefs to interact with the system
Register System	Point of sale terminal for handling bill payments
Bankcard	Customer debit/credit card
Menu	Surface computer representation of the available items and other options

Table 1.3.1 System Terminology

Acronym	Description
SRS	Software Requirement Specification
RMS	Restaurant Management System
QA	Quality Assurance
UI	User Interface
DBMS	Database Management System
LAN	Local Area Network
IP	Internet Protocol
UDP	User Datagram Protocol
IEEE 802.11	Wireless Local Area Network Standard
WPA2-PSK	Wi-Fi Protected Access 2 with Pre-Shared Key

## 1.5 Document Conventions

### 1.5.1 Formatting Conventions

Several formatting conventions have been followed through the entire document:

1. All text contained in this document is 11pt Arial Font
2. Section titles are 18pt Arial font
3. Subsection titles are 14pt Arial font
4. Any further subsections breakdown is 12pt Arial font.
5. All sections and subsections are numbered using X.X.X...format where X represents numbers
6. *Introduced terms are in bolded Times New Roman italics*
7. *Any further repetition of these terms is in Times New Roman italics.*

### 1.5.2 Naming Conventions

The naming conventions are the means of making the SRS more understandable and easier to follow, they are also used to build a structure for the whole software system. The conventions are used for variables, function names, packages etc;

The following naming conventions have been used to define the different variables in this SRS document:

1. All constants are CAPITALIZED
2. All variables representing input are prefixed with i\_.
3. All variables representing output are prefixed with o\_.
4. Internal states are prefixed with s\_.
5. All system variables are prefixed with v\_.
6. All function names are prefixed with f\_.

## **1.6 References and Acknowledgments**

The following standards apply:

J-STD-016-1995	IEEE/EIA Standard for information Technology, Software Lifecycle processes, Software Development, Acquirer-Supplier Agreement
IEEE_STD-P1063	IEEE Standard for Software User Documentation

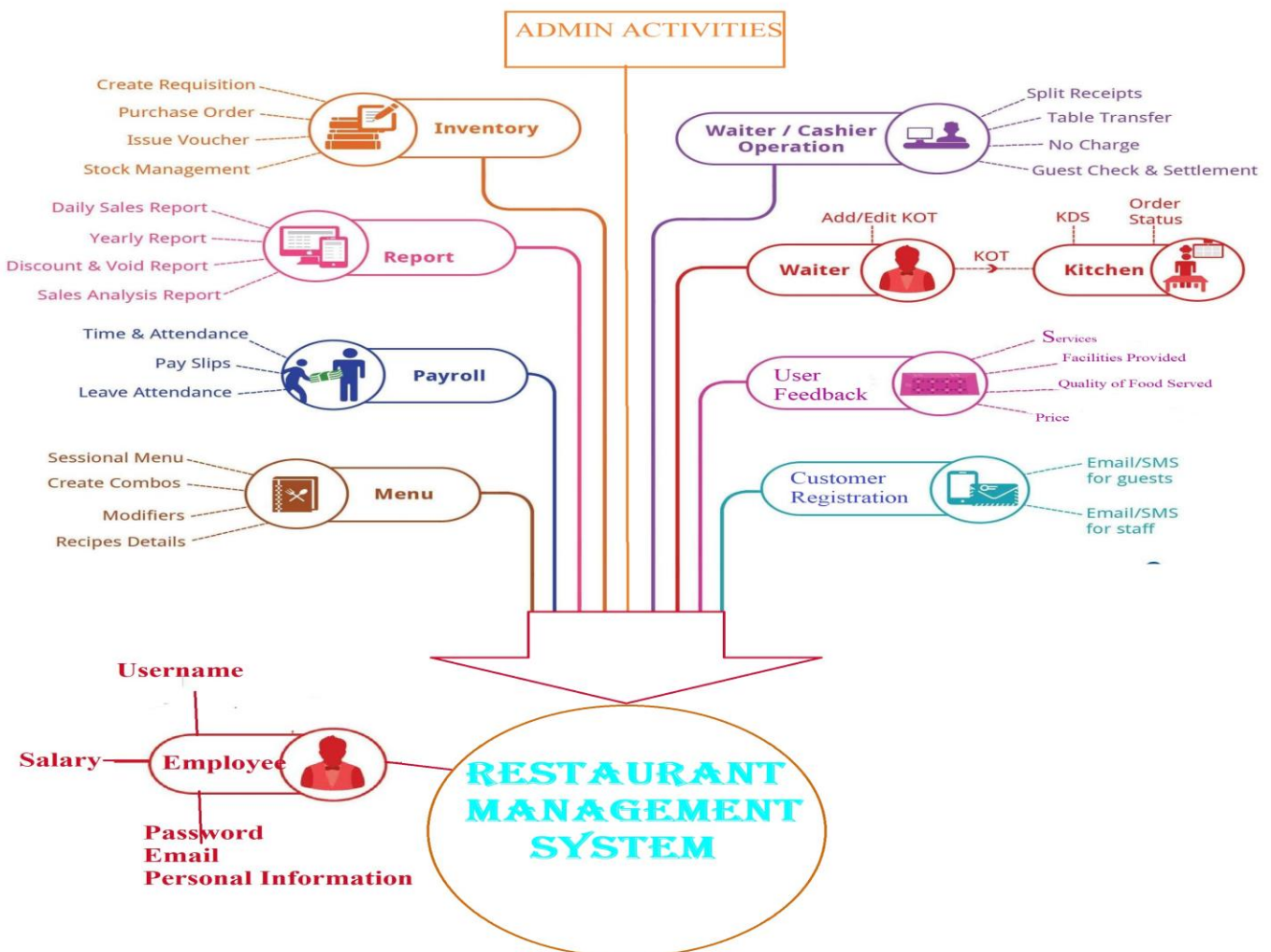
The following texts have been used in the process of developing this document:

- [1] J. Rumbaugh et al. Object Oriented Modelling & Design. Upper Saddle River, NJ: Prentice Hall, 1991.
- [2] C. Ghezzi et al. Fundamentals of Software Engineering. Upper Saddle River, NJ: Prentice Hall, 2003.

## 2 Overall Description

### 2.1 Product Perspective

The software described in this SRS is the software for a complete RMS system. The system merges various hardware and software elements and further interfaces with external systems. Thus, while the software covers the majority of the system's functionality, it relies on a number of external interfaces for persistence and unhandled tasks, as well as physically interfacing with humans.



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## **2.2 Product Functionality**

The main function of the Restaurant Management System are:

### **➤ New User Registration**

There are two types of user registrations customer registration and employee registration. The customer registration is used to just allocate a restaurant table and to maintain all its transaction history. The account registration is based on email ID and password given by the customer during registration. The customer will be able to use this portal to view its past transactions. The second type of user registration is for employees of the organization to avail the facilities of the RMS system .On successful registration of an employee a unique user ID and password is provided. One can use the credentials for any future transactions in Restaurant Management System (RMS).

### **➤ User Login**

There are three types of Login i.e Customer Login, Employee Login and ADMIN login. A registered customer of the Restaurant Management System can login to the system by providing his/her customer email ID and password as set by the customer while registration process, after successful login the customer account gets opened and on can only see the previous transactions and login records. A registered employee of the restaurant Management system can login using its employee ID and password as set by the employee during registration. If the username and password mismatches a login failure is displayed and the login dialog will appear again and also forgot password is provided after three consecutive login failures. The admin login has three inputs ID, email ID and password if failure occurs a security question is provided for login without password

### **➤ Order Request**

This will be used by waiters of the restaurant to note down the orders of the customers which will be automatically communicated to the kitchen staff along with the table number to which the order is linked so that the order can be delivered accurately to the ordered table. If an order is rejected for non-availability it is send to the waiter so that he can with consultation with the customer update the order and the order will be again approved by kitchen staff and an intimation will be sent to the waiter displaying that the order is approved and is in process.

### **➤ Kitchen Order approval**

Here the kitchen staff can use this portal for viewing and approving orders of customers sent through a waiter. The order ordered will be seen by the kitchen staff and order will be approved based on the availability of raw materials. Simultaneously many waiters can send their orders but only one order is approved at a time. Once the order is ready the waiter gets an intimation and he collects the order and gives it to the customer. the order is also linked to the customer's account with unique customer ID given to the customer during account registration, these order details is linked to the customer's account so it can be used by the payment or Bill generation department to issue bills based on your ordered items easily

➤ **Payment and Bill generation**

Here the restaurant employees generate the bill according to the order of the customer and a bill is generated and is linked to the customer's account and is also sent to the waiter so that it can be verified and can collect the money from the customer or issues them the bill to make the payment, the payment mode is in cash and if it is given at the payment counter and a receipt is generated and even mailed to the customer. This department of payment also maintain the salary transaction and payment of employees, the employees are paid according to their designation and salary is given as cash and the salary statement are linked to the employee's account

➤ **Inventory Management**

Here all the data is stored on how much quantity of food raw materials is stored for restaurant. It manages the items needed and which are less in storage so that they can be ordered or procured from the market in bulk beforehand. If the quantity of item riches less than 20 then it sends an intimation to the admin so that the item can be ordered from the market and even the kitchen staff can demand items which are required for cooking in the kitchen

➤ **Update**

The admin has the overall control of the Restaurant management system (RMS), He can update the details of the restaurant in each department, He can also update employee accounts and also customer accounts and can also delete the accounts if in case the customer is very old and has never visited the restaurant more than a year or an employee who has resigned from the restaurant organisation. The admin can update password of the Employees in case of passport lost or forgotten, the admin can update the records in the inventory but only he is unable to delete the employee grievances. Individually the customer can update his or her details and similarly the employees but they cannot delete their accounts

➤ **User feedback**

Here all the customers give feedback on the restaurant's service to the customer provided the customer is previously registered and has at least one order ordered and only one feedback can be provided after each order and this feedback is sent the admin and is also linked to the customer's account for which the customer can also update and delete their feedback

➤ **Employee attendance**

This employee attendance facility is maintained by the admin. He/she will maintain all the attendance records of the employee's. Everyday an employee has to login in their respective department this sends a message updating the attendance of the particular employee in the database which can be viewed only by the admin and is linked to the Employees account it also maintains the time at which employee has logged in and logged out of the restaurant management system

➤ **Employee Grievance**

If any employee has an issue regarding the functioning of the restaurant he or she may post their issue at the employee grievance, provided he or she has a valid employee

account registered at the Restaurant Management System (RMS) and only one grievance can be issued by an employee on a day and it cannot be updated once submitted to the admin but can only be viewed for checking the status if it has been seen or to check if the issue has been rectified by the admin

## **2.3 Users and Characteristics**

### **Unskilled user**

The users of the surface computers are walk-in customers and should therefore be assumed to have no relevant prior skills or education other than basic abilities to operate an automated system; no more complex than a parking meter or vending machine.

### **Partly skilled user**

The users of the tablets and displays are waiters and chefs respectively and they should be able to use the system and further be able to train others with minimal training themselves. They must be able to explain all elements of the user interfaces except the server. Supervisors also fall into the same category, though they will have to learn other sections of the system (refunds etc); these should not be of notably greater complexity than the standard functions. This class of user would be expected to have a junior high-school certificate education or equivalent.

### **Highly skilled user**

The initial installation and configuration of hardware and the constituent RMS system components (especially the server) is guaranteed to require someone with notable computer experience, including extensive experience with network and operating systems to complete it. The software should not be needlessly complex, but it is still expected not to be entirely 'plug and play'. This class of user is expected to have a high-school certificate or equivalent, as well as extensive computer experience.

## **2.4 Operating Environment**

The software shall operate on an Intel based architecture personal computer ( Pentium III or above ) , running Windows 98 or above. The computer station shall be connected to the Local Area

Network and the operating system shall support this network interface. Operating System Minimum Windows XP or Windows VISTA. Better environment Windows 7, 8, 8.1, 10. The programming language used will be c#.

## **2.5 Design and Implementation Constraints**

The RMS should be written in an object-oriented language with strong GUI links and a simple, accessible network API. The primary programming language will be C# and C++. The system must provide a capacity for parallel operation and system design should not introduce scalability issues with regard to the number of surface computers, tablets or displays connected at any one time. The end system should also allow for seamless recovery, without data loss, from individual device

failure. There must be a strong audit chain with all system actions logged, with that in mind, the most adaptable and portable technologies should be used for the implementation. The system has criticality in so far as it is a live system. If the system is down, then customers must not notice, or notice that the system recovers quickly (seconds). The system must be reliable enough to run crash and glitch free more or less indefinitely, or facilitate error recovery strong enough such that glitches are never revealed to its end-users. The system shall be a standalone application.

## **2.6 User Documentation**

At the present time no user documentation is available for this product. This document should serve as the basis for all user documentation to follow. Each step in the development of the product shall be documented and a detailed user manual shall be compiled during the development process

## **2.7 Assumptions and Dependencies**

The following is a list of assumed factors that could significantly affect the requirements stated in this document.

- The Windows OS and the minimum hardware must be in place.
- The workstation will run continuously, and shall be restarted only at predefined times known to the operator. A safety system should be purchased separately to handle power outage and fault-tolerant backup system.
- System time and calendar settings are accurate and up to date.
- The Customer portal should well maintained and in a good working condition.
- The Local Area Network is well maintained and is not connected to any outside networks such as, the internet. If connected, an adequate protection is guaranteed for the operator work-station, which will not allow outside sources to access the product.
- The implication is that the target hardware will provide a capacity for standalone program/application deployment and not require customised embedded firmware to be written
- It is further assumed that tablet PCs of sufficient processing capability and battery life will be utilised.

## 3 Specific Requirements

### 3.1 External Interface Requirements

#### 3.1.1 User Interfaces

There are three separate user interfaces used by the RMS software, each related to an interfaced physical hardware devices such as Monitor. These three user interfaces are the Surface Computer UI and Display UI.

##### **Surface computer UI**

The Surface Computer UI is the interface used by restaurant customers. This interface uses the surface computer paradigm. For the RMS, users can manipulate objects such as items of food, dietary requirements, tips and menus on the surface of their table. Such objects can be moved into static objects such as meals and payments to perform various functions. In addition to this object manipulation paradigm, a limited system menu is necessary. Users will summon their restaurant menu, using an easy touch gesture, a double-tap on the touch surface, and dismiss it with a similar gesture or by tapping a close button GUI element. The GUI will take a small percentage of the table's screen, so the UI will be clear and uncluttered.

##### **Display UI**

The Display UI provides kitchen staff with simple functionality related to ordered items. The UI will display the list of items in large, easy-to-read text, sorted by time of submission with additional information (such as dietary requirements and the destination table) displayed in tabulated format. Input is provided by fingertips, as opposed to a stylus

#### 3.1.2 Hardware Interfaces

There are three external hardware devices used by the RMS, each related to a user interface. These devices are the surface computers, the wireless tablets and the touch displays.

All three devices must be physically robust and immune to liquid damage and stains. The devices (with the possible exception of displays) must also have good industrial design aesthetics, as they are to be used in place of normal restaurant tables and notepads and will be in direct contact with customers. The devices behave as 'terminals' in the sense that they never have a full system image, do not store data and are not used for the core logic of the system. However, they should be fully capable computers that can use textual data from the server along with local UI/interpretation code to display UI elements and take input. All order and transaction records should be stored on the server, not these computers. The performance of dumb terminals over an area the size of a restaurant is likely to be unacceptable. In all three cases, the hardware device takes information from the RMOS and processes the information to display. It also provides user input information to the RMOS

### **3.1.3 Software Interfaces**

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

### **3.1.4 Communications Interfaces**

The RMS will interface with a Local Area Network (LAN) to maintain communication with all its devices. It should use a reliable-type IP protocol such as TCP/IP or reliable-UDP/IP for maximum compatibility and stability. All devices it will interface with should contain standard Ethernet compatible, software accessible LAN cards to maintain communication between the server and the surface computers, tablets, displays and the external payment system. Devices that are wireless should also use Ethernet compatible cards, using the IEEE 802.11b/g standard and having support for WPA2-PSK encryption. The use of IEEE 802.11n transmission standard hardware is also acceptable if all other local hardware is conformant to the same standard.

## **3.2 Functional Requirements**

The following section presents the complete set of functional and non-functional requirements identified for the subject RMOS. Functional requirements are listed first, according to their relationship to the overall system, customers, waiters, chefs and supervisors. The non-functional requirements that pertain to safety, security, the interface, human engineering, qualification, operation, maintenance and performance are subsequently presented. The functional requirements have been specified using a natural language description and as such, the reader is directed to

### **3.2.1 Functional Requirements**

This subsection presents the identified functional requirements for the subject RMOS. Initially, general requirements that pertain to the whole system are given. Where possible, subsequent requirements have been demarcated based on their relevance to the users of the system, that is, customers, waiters, chefs and supervisors.

### 3.2.3 General

Table 3.1.1 presents the identified functional general requirements that directly relate to the entire subject RMOS.

Requirement	Description
G01	A server shall host the RMOS and provide system data processing and storage capability.
G02	A surface computer shall provide a customer with all customer system functionality.
G03	A tablet shall provide a waiter/supervisor with all waiter/supervisor system functionality (according to access control).
G04	A display shall provide a chef with all chef system functionality.
G05	All system functionality shall be accessible through computers, tablets and displays.
G06	A tablet shall be capable of interfacing with a register to facilitate the accurate processing of a payment.

**Table 3.1.1 Functional General Requirements**

### 3.2.4 Customer

Table 3.1.2 presents the identified functional customer requirements that directly relate to the customers of the subject RMS.

Requirement	Description
C01	A customer shall be able to engage their menu by double tapping the activated surface computer in their table.
C02	A customer shall be able to dismiss their menu by double tapping its dismiss option.
C03	A customer shall be able to create an empty pending order through their engaged menu.
C04	A customer shall not be able to dismiss their engaged menu while there is a non-empty pending order associated with the engaged menu.
C05	A customer shall be able to navigate through the available items in their engaged menu.
C06	A customer shall be able to add an item to a pending order by dragging the item from the engaged menu onto the order.
C07	A customer shall be able to remove an item from a pending order by dragging the item off the order.

C08	A customer shall be able to add a wildcard special dietary requirement to an order in the case that their requirement is not represented by the system.
C09	A customer shall be able to place an order through their engaged menu if it is pending and not empty.
C10	A customer shall be able to cancel an order through their engaged menu if it is pending and not yet placed.
C11	A customer shall be able to call for waiter assistance through their engaged menu.
C12	A customer shall be able to engage bill mode to finalise payment through their engaged menu.
C12	When in billing mode, a surface computer shall display a representation of a cash payment for the whole table.
C13	When in billing mode, a surface computer shall display a representation of every meal ordered.

Table 3.1.2 Functional Customer Requirements

### 3.2.5 Waiter

Table 3.1.3 presents the identified functional waiter requirements that directly relate to the waiters (and supervisors) of the subject RMOS.

Requirement	Description
W01	A waiter shall be able to log into a tablet using their assigned username and password.
W02	A waiter shall be able to log out of a tablet.
W03	A waiter shall be able to activate a surface computer and consequently open its associated account through a tablet.
W04	A waiter shall be able to deactivate a surface computer and consequently close its associated account through a tablet.
W05	A waiter who activates a surface computer shall be assigned to the table that contains it.
W06	A waiter assigned to a table shall be alerted via their wireless tablet when: <ul style="list-style-type: none"> <li>• An order is placed from that table</li> <li>• An item ordered by that table is rejected by the kitchen</li> <li>• An item ordered by that table is ready to be served</li> <li>• The table has requested waiter assistance</li> </ul>
W07	A tablet shall allow a waiter to accept an order placed by a customer through a surface computer.



W08	A tablet shall allow a waiter to reject an order placed by a customer through a surface computer.
W09	A tablet shall allow a waiter to indicate the delivery of an item to its customer.
W10	A tablet shall allow a waiter to process a payment using cash.
W11	A tablet shall allow a waiter to process a payment and check payment.

**Table 3.1.3 Functional Waiter Requirements**

### 3.2.6 Chef

Table 3.1.4 presents the identified functional chef requirements that directly relate to the chefs (and supervisors) of the subject RMS.

Requirement	Description
K01	A chef shall be able to accept a customer's order item through a display.
K02	A chef shall be able to reject a customer's order item through a display.
K03	A chef shall be able to indicate that a customer's order item is ready to be served through a display.
K04	The chef shall be able to approve an order placed

**Table 3.1.4 Functional Chef Requirements**

### 3.2.7 Supervisor

Table 3.1.5 presents the identified functional supervisor requirements that directly relate to the supervisors of the subject RMS.

Requirement	Description
S01	A supervisor shall be able to do everything a waiter can.
S02	A supervisor shall be able to do everything a chef can.
S03	A supervisor shall be able to abort/purge a customer's meal from the active system with no expectation of payment.
S04	A supervisor shall be able to abort/purge a table's account/meals from the active system with no expectation of payment.
S05	A supervisor shall be able to issue a refund for one or more items to a customer.

**Table 3.1.5 Functional Supervisor Requirements**

## 4 Other Non-functional Requirements

### 4.1 Performance Requirements

This subsection presents the identified non-functional requirements for the subject RMS. The subcategories of non-functional requirements given are safety, security, interface, human engineering, qualification, operational and maintenance. The system shall respond to each user input within 2 seconds. In the programming phase the system shall allow the user to switch quickly between the different programs, which in turn, will require a fast access to the hard drive.

Table 3.2.4 presents the identified non-functional performance requirements that directly relate to the entire subject RMS.

Requirement	Description
P01	The server shall be capable of supporting no less than 200 concurrent connections from any combination of surface computers, tablets and displays.
P02	The server shall be capable of supporting an arbitrary number of surface computers, tablets and displays, that is, it shall provide no limit on how many devices are in the system.
P03	The server shall be capable of supporting an arbitrary number of active meals/orders, that is, no meals/orders shall be lost under any circumstances.
P04	The server shall be capable of supporting an arbitrary number of active customer payments, that is, no payments shall be lost under any circumstances.

Table 3.2.4 Non-Functional Performance Requirements

### 4.2 Safety and Security Requirements

Table 3.2.1 presents the identified non-functional safety requirements that directly relate to the entire subject RMS.

Requirement	Description
F01	The system shall log every state and state change of every surface computer, tablet and display to provision recovery from system failure.
F02	The system shall be capable of restoring itself to its previous state in the event of failure (e.g. a system crash or power loss).
F03	The system shall be able to display a menu at all times to facilitate manual order taking should the need arise.
F05	The system shall flag tablets that fail to send timely keep-alive messages as non-operational and disassociate the assigned waiter from the tablet.

**Table 3.2.1 Non-Functional Safety Requirements**

Table 3.2.2 presents the identified non-functional security requirements that directly relate to the entire subject RMS.

Requirement	Description
Y01	Wireless communication throughout the system will be encrypted using SSLv3 at the application layer and WPA2-PSK at the data link layer.
Y02	The WPA2-PSK password used for wireless communication must have a bits strength of at least 80 bits.
Y03	The WPA2-PSK password used for wireless communication must be changed every three months.
Y04	A waiter password used for tablet login must have a bit-strength of at least 64 bits.
Y05	A waiter password used for tablet login must be changed every three months.
Y06	A waiter shall only be able to log into one tablet at any given instance of time.
Y07	A waiter that attempts to log into a second tablet while already logged into another tablet shall be rejected and notified through both tablets.
Y08	The system shall provide two levels of access: <ul style="list-style-type: none"> <li>• A supervisor level for unrestricted access to system functionality</li> <li>• A waiter level for access to waiter functionality</li> </ul>
Y09	A surface computer shall not require a user to log in.
Y10	A tablet shall require a user to log in using a username and password.
Y11	A display shall not require a user to log in.

**Table 3.2.2 Non-Functional Security Requirements**

## 4.3 Software Quality Attributes

Listed below are some of the more important Software Quality Attributes, which have been identified as essential to this project.

### 4.3.1 Reliability

The system shall never crash, or hang, other than as the result of an operating system error. The system shall provide graceful degradation in the face of network delays.

### **4.3.2 Maintainability**

All code shall be fully documented. Each function shall be commented with pre- and post-conditions. All program files shall include comments concerning authorship and date of last change. Finally, the code shall be modular to permit future modifications.

### **4.3.3 Usability**

No specific training should be necessary on the part of the Operators. The user interface shall be easy to understand and the operator should be able to start working with the software immediately.

### **4.3.4 Portability**

The software shall be designed to run on a Microsoft Windows platform. It shall be portable in a sense that will allow it to be used on any Windows version, up to and including Windows XP.

## **5 Other Requirements**

### **5.1 Licensing Requirements**

Not Applicable

### **5.2 Legal, Copyright, and Other Notices**

All right reserved by our team.

### **5.3 Applicable Standards**

It should be as per the industry standard

## Appendix A – Data Dictionary

### 1. Category Details

Column Name	Type	Description
Category_ID	Numeric(2,0)	ID of the category (Primary Key)
Category_Description	Varchar (20)	Foods of Category (Not NULL)

### 2. Food Item Details

Column Name	Type	Description
FoodItem_Id	numeric (5, 0)	Id of the FoodItem (Primary Key)
FoodItem_Name	Varchar (30)	Name of FoodItem. (Not null)
Category_Id	numeric (5,0)	Id of the Category. (Not null)
Rate	numeric (2)	Rate of Item (Not null)
Offer	Varchar (20)	Offer (Not null)
Notes	Varchar (50)	Any Notes
Type_of_food	Varchar (50)	Type of Food

### 3. Item Master

Column Name	Type	Description
Item_ID	Numeric (3,0)	Id of the Item. (Primary key)
Item_Name	Varchar (20)	One food item may contain many items (Not null)

### 4. Employee Details

Column Name	Type	Description
Emp_Id	numeric (2, 0)	Id of the Employee. (Primary Key)
Name	Varchar (20)	Name of the Employee. (Not null)
Designation	Varchar (15)	Employee Designation. (Not null)
Work_Type	Varchar (10)	Type of Employee Work. (Part time or Full time) (Not Null)
Address	Varchar (50)	Address of Employee
Area	Varchar (10)	Employee Area (Not null)
City	Varchar (10)	Employee City (Not null)
State	Varchar (10)	Employee state (Not null)
PinCode	Varchar (6)	Employee's City Pin code (Not null)
Phone_No	Varchar (12)	Phone no of the Employee
Salary	numeric (5, 0)	Salary of the Employee. (Not null)

**5. Table\_master**

Column Name	Type	Description
Table Id	numeric (2,0)	Id of the Table Master (Primary key)
TableCapacity	Varchar (30)	Capacity of customer in one table (Not Null)
Emp Id	numeric (2,0)	Id of the Employee (Foreign key)

**6. Customer Information**

Column Name	Type	Description
Customer Id	numeric (5, 0)	Id of the Customer. (Primary Key)
Name	Varchar (20)	Name of the Customer. (Not null)
Address	Varchar (50)	Address of Customer.
Area	Varchar (10)	Customer Area
City	Varchar (10)	Customer City
State	Varchar (10)	Customer state
PinCode	Varchar (6)	Customer's City Pin code
Phone No	Varchar (12)	Phone no of the Customer
Email ID	Varchar (30)	Customer's Email Id. (Not null)

**7. Order Details**

Column Name	Type	Description
Order Id	Numeric (5,0)	Id of the Order. (Primary key)
Orderdate	Datetime	Date of the Order (Not null)
Table Id	Numeric (2,0)	Id of the Table Master (Foreign key)
Emp Id	Numeric (2,0)	Id of the Employee (Foreign key)

**8. Order Item**

Column Name	Type	Description
OrderItem Id	Numeric (5,0)	Id of the Order Items (Primary Key)
Order Id	Numeric (5,0)	Id of the Order. (Foreign key)
FoodItem Id	Numeric (3,0)	Id of the Food Items (Not Null)
Quantity	Numeric (3,0)	Quantity of the Order Items (Not Null)
Rate Per Items	numeric (2)	Rate of the Order Items (Not Null)
Amount	numeric (5)	Amount (Not Null)

**9. Sales bill**

Column Name	Type	Description
Salesbill No	Numeric (5,0)	Id of the Sales bill. (Primary key)
Salesbilldate	Varchar (15)	Date of the Sales bill (Not null)
Order Id	Datetime	Id of the Order (Foreign key)
Customer Id	Numeric (5,0)	Id of the Customer (Foreign key)
Amount	Numeric (5)	Total amount (Not Null)
Tax	Numeric (3)	Tax Not (null)
Discount	Numeric (3)	Discount (Not null)
Net Amount	Numeric (5)	Net amount (Not null)

**10. Bill Food Items**

Column Name	Type	Description
Billitems Id	Numeric (5,0)	Id of the Bill Item (primary key)
Salesbill No	Numeric (5,0)	Id of the Sales bill (Foreign key)
Fooditem Id	Numeric (5,0)	Id of the Food Item (Foreign key)
Quantity	Numeric (3,0)	Quantity of the Bill Items (Not null)
Rate Per Items	numeric (2)	Rate of the Bill Items (Not null)
Amount	numeric (5)	Amount (Not null)

**11. Payment Collection**

Column Name	Type	Description
Payment Id	Numeric (5,0)	Id of the Payment (primary key)
Order Id	Numeric (5,0)	Id of the Order (Foreign key)
Customer Id	Numeric (5,0)	Id of the Customer (Foreign key)
Paid Amount	numeric (6)	amount (Not null)
Paid Mode	Varchar (10)	Cash ,Credit or Check (Not Null)

**12. FoodItem\_Item**

Column Name	Type	Description
FoodItem Id	numeric (5,0)	Id of the Food Item (Composite key)
Item Id	numeric (5,0)	Id of the Item. (Composite key)

**13. Login Details**

Column Name	Type	Description
Login Id	Numeric (2, 0)	Id of the User (Primary Key)
Login Name	Varchar (10)	Name of the User. (Not null)
Login Password	Varchar (15)	Password Of the User (Not null)
Login Type	Varchar (15)	Type of the login (admin or and user)
Created Date	Datetime	Date of the Created login (Not null)
Allowed Login	Varchar (5)	Allowing login or not (Not null)



## Appendix B - Group Log

### Time Estimation/Expenditure Comparison

The differences between the submitted SRS plan and the actual process undertaken have been summarised below.

- a) Preparation of SRS Plan
- b) Proof reading of the SRS Plan
- c) Research
- d) 'Requirements Elicitation' meeting
- e) Complete analysis/use case modelling
- f) Review requirements
- g) Complete first draft
- h) Proof read first draft
- i) Complete final report draft

Tables B 1.1-3 presented below highlight the aforementioned time discrepancies. Early completion dates and shorter time expenditures are highlighted in green; late completion dates and extra time expenditures are highlighted in red.

Plan Writing				
Task	Predicted Completion	Actual Completion	Predicted Time Expended	Actual Time Expended
SRS plan first draft	08/02/18	08/02/18	1.5 hours (meeting)	1.5 hours (meeting)
SRS plan final draft	09/02/18	09/02/18	1.5 hours (MW)	1 hour (MW)
SRS plan proof read	10/02/18	11/02/18	0.5 hours (all)	0.5 hours (TH) 0 hours (DK) 0.5 hours (JT) 0 hours (MW)
SRS plan edited and submitted	12/02/18	13/02/18	0.5 hours (MW)	0.5 hours (MW)

**Table B 1.1 Plan Writing Time Data Listing**

**Table B 1.2 Preliminary Documentation Time Data Listing****Preliminary Documentation**

Task	Predicted Completion	Actual Completion	Predicted Time Expended	Actual Time Expended
Background Research	14/02/18	14/02/18	6 hours (all)	2 hours (TH) 1 hour (DK) 3 hours (JT) 2 hours (MW)
Requirements Elicitation	15/02/18	22/02/18	5 hours (meeting)	6 hours (meeting)
Complete analysis/use case modelling	17/02/18	20/02/18	4 hours (all)	1 hour (TH) 0 hours (DK) 4 hours (JT) 12 hours (MW)
Complete other diagrams	21/02/18	26/02/18	10 hours (all)	2 hours (TH) 0 hours (DK) 2 hours (JT) 8 hours (MW)
Review requirements	22/02/18	22/02/18	3 hours (meeting)	3 hours (TH) 3 hours (DK) 5 hours (JT) 5 hours (MW)

**Final Documentation**

Task	Predicted Completion	Actual Completion	Predicted Time Expended	Actual Time Expended
Report first draft	25/02/08	24/02/18	4 hours (all)	6 hours (TH) 4 hours (DK) 15 hours (JT) 15 hours (MW)
Report proof read	26/02/18	26/02/18	2 hours (all)	10 hours (TH) 0 hours (DK) 4 hours (JT) 0 hours (MW)
Report final draft	27/02/18	28/02/18	2 hours (MW)	10 hours (TH) 0 hours (DK) 12 hours (JT) 0 hours (MW)
Report submitted	28/02/18	28/02/18	0.5 hours (MW)	0.5 hour (TH) 0.25 hours (JT)

**Table B 1.3 Final Documentation Time Data Listing**