# Software Requirements Specification

**for**

# <Restaurant Reservation System>

**Version 1.0 approved**

**Prepared by**

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# Revision History

| Name | Date | Reason For Changes | Version |
|---|---|---|---|
| | | | |
| | | | |

# 1. Introduction

## 1.1. Purpose

This SRS documentation is the software requirements that is specified for Restaurant Booking Management (Version 1.0). This purpose of this documentation is to develop a web-based system to manage the table reservation of a restaurant. Above all, we intended to develop this RRS project is because the current reservation process in a restaurant usually by phone calling or walk-in reservation which can have a high risk in getting a redundant reservation cause by human error. Some famous restaurant usually full-house and sometimes it can disappoint the customers that already go to the restaurant to have their meal. In addition, there also some customers who used to queue in order for them to get their table. This manual process really time consuming and not efficient for the management of the restaurant.

## 1.2. Document Conventions

This document uses the following conventions:

| | |
|---|---|
| SRS | Software Requirement Specification |
| RRS | Restaurant Reservation System |

## 1.3. Intended Audience and Reading Suggestions

This document's intended audience and their responsibilities pertaining to this document includes but is not limited to the following:

1. Business Owner – To provide guidance, make decisions on operational, tactical and strategic business rules, and approve the design specification;
2. System Vendors (Team RRS) - To enhance and implement the RRS according to the requirements needed.

## 1.4. Product Scope

The overall purpose of this RRS is to ensure the optimal, convenient and efficient table reservation system for both customers and restaurateur. This RRS project is a web-based application for a restaurant. RRS allows customers to reserve their table based on their specific date and time which they can also update the reservation. From this RRS, the customers can view the menu available in the restaurant. In the RRS, both customers and restaurateur can view reservation in order to ease the reservation that already been made by the customers. Both customers and restaurateur can also cancel the reservation that has been made. On top of that, we hope to develop a system that is a better user experience for all of the end-users of this system.

## 1.5. References

i. Hasan, Syed.(2014). DOCUMENTATION OF ONLINE BOOKING SYSTEM

# 2. Overall Description

## 2.1. User Classes and Characteristics

The users of the RRS project are the customers who want to make an online reservation for a restaurant as well as the restaurateur who owns and manages the restaurant.

**Restaurateur**: The restaurateur is the owner of the restaurant or the restaurant manager that has already registered and agree for the restaurant to be featured in the restaurant reservation system. The restaurateur plays a crucial role in the system. A restaurateur will sign in to the system to use the restaurant reservation system. The restaurateur also can view the reservation made by customers as well as canceling the reservation.

**Customer:** The customers are all the people that wanted to reserve table at the specific restaurant but did not want to order through walk-in and physically queuing up at the restaurant. So, they decided to reserve the restaurant online using the reservation system. The customer can login into the Restaurant Reservation System (RRS) and start making a reservation. Customer can also update their reservation in the system if there are some changes in information such as date and time.

## 2.2. Operating Environment

The software will operate with the following software components and applications:

**Hardware**

RAM: Minimum of 256 Mb

**Software**

Operating System: Windows XP or above, Mac OS
Browser: Internet Explorer, Mozilla Firefox, Google Chrome or Safari
Database: MySQL Database
Backend: Java, JavaScript
Front End: HTML, CSS, Prime Faces Components

## 2.3. Design and Implementation Constraints

During the design of this work, some of the constraints that have been identified are such as:

1. The system has a dependency on the database and the restaurant existing traditional system.
2. Internet connection is a constraint for this system because the system is available from the cloud, therefore, customer needs to have a good network connection to connect to our web interface
3. The system is designed in one screen where the user can only execute one task at a time.
4. The GPS installed for customers via the system for location purposes.
5. Implementation of the database using a centralized database management system.

## 2.4. Assumptions and Dependencies

- The customer and restaurateur of the system is assumed to have their ID and password for login purposes. If the user does not have their unique ID and password, they are not allowed to make reservations.

- The Restaurant Reservation System (RRS)should be able to back up the reservations and restaurant data to avoid data loss. If the company does not have backup storage, an assumption is made that the local server will not have downtime and data loss.

- Assuming all the customer and restaurateur for the Restaurant Reservation System (RRS) have basic knowledge about computer and knows how to operate the system smoothly.

# 3. External Interface Requirements

## 3.1. User Interfaces

Since the system is used by different users which are customer and restaurateur, the category of user interfaces (UI) is depending on the functions the user is authorized to perform.

Customer can register at the register page of the system and fill out all the related information. Both customer and restaurateur need to sign in to use the functionality of the system. After sign in, customer will be redirected to homepage that has variety registered restaurant. Through this homepage interface, all basic user's functions are shown but can be accessed after login and based on user access authorization. Customer can only make reservations once they have already login. Customer also can view reservation that has been made. There are other functionalities that customer can perform whish are update and cancel. Customer can update the several information such as date and time. Customer also can cancel the reservation. Customer can view menu by clicking the menu tab provided. Restaurateur can see all the reservation that has been made by the customer at the view reservation page in the restaurateur side. Restaurateur also can cancel the reservation that has been made by the customer. The Restaurant Reservation System (RRS) is an independent system that doesn't utilize an outer system. Be that as it may, the system will require database the executives programming like MySQL to deal with the way toward putting away the data information, and web server programming that arranges the dispersion of clients in the nearby system.

## 3.2. Hardware Interfaces

Just like any other system, The Restaurant Reservation System (RRS) requires a basic computer that consists of CPU, monitor, keyboard, and mouse or laptop, and smartphones for input and output. Besides, for the direction, the system is connected with GPS or Maps device in every organization vehicle to get the transportation details. The map allows customers to locate the restaurant and navigate there easily. The least amount of space needed by the hard disk is 80 GB and a minimum of 2 GB RAM space to run the booking process.

## 3.3. Software Interfaces

The system will require software Prime Faces for its more interactive support to program and create The Restaurant Reservation System. We have chosen the Windows operating system for its best support and user-friendliness. The system also requires software like MySQL, XAMPP to manage the database of the system. Reservation process of the system that organizes the distribution of users in the local network and able to do this online booking. Users can also use internet browsers such as Google Chrome and Mozilla Firefox to book the restaurant.

## 3.4. Communications Interfaces

The system communication interface completely depends on server software to ensure correct send and retrieves data from the database. Other than that, it is an online protocol to connect between GPS and the system. Besides, emails also will be used as the communication platform between the customer and restaurateur. RRS also supports all types of web browsers. We are using simple electronic forms for the reservation forms, ticket booking, for instance.

# 4. System Features

## 4.1 Description and Priority

This RRS maintains information of reservation of selected restaurant, date and time, updating and canceling the reservation. Of course, this project has a high priority because it is very time-consuming to reserve a table at a restaurant by walk-in without prior reservations.

## 4.2 Stimulus/Response Sequences

- Select date and time for reservation
- View menu available at the restaurant
- Make a reservation on the particular date and time
- Cancel an existing reservation

## 4.3 Use Case Name and Identifier

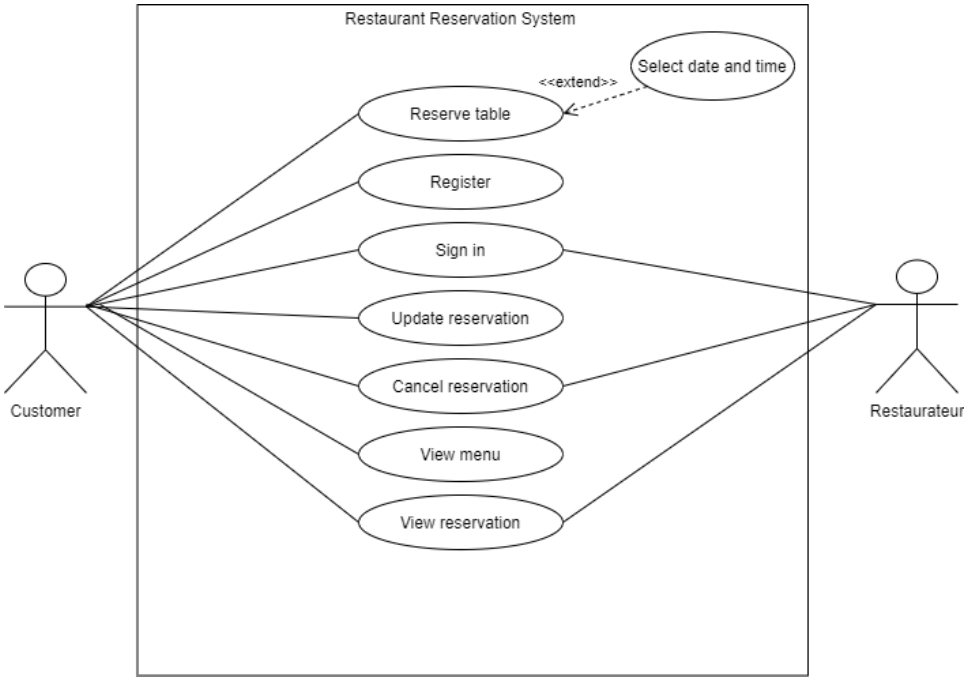


*Diagram 4.3: Use case of RRS*

### 4.3.1 Register (UC1)

| |
|---|
| **Objective –** New customer has to register in the system in order to reserve table and use the system |
| **Priority –** High |
| **Actor –** Customer |
| **Flow of Events**<br>1. **Basic Flow**<br>1.1 Customer click the 'Sign Up' button<br>1.2 Customer fill out the information in the registration form such as name, email, phone number and password<br>1.3 Customer click 'sign up now' button<br>1.4 Data will be saved into the database |
| **Alternative Flow**<br>1.2a - If the customer attempt to proceed to registration without confirming his or her email, the registration will be denied<br>1.3a - If the customer does not fill all the information required, an error message will be displayed |
| **Precondition –** Customer must be new member and click the 'Sign Up' button |
| **Post condition –** Customer successfully registered the system |
| **Notes –** None |

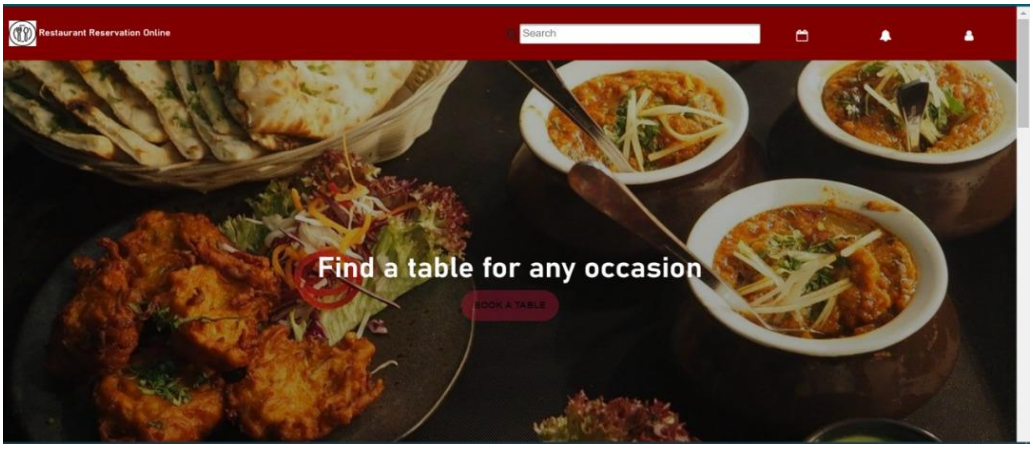


*Diagram 4.3.1.1: Homepage of the RRS*

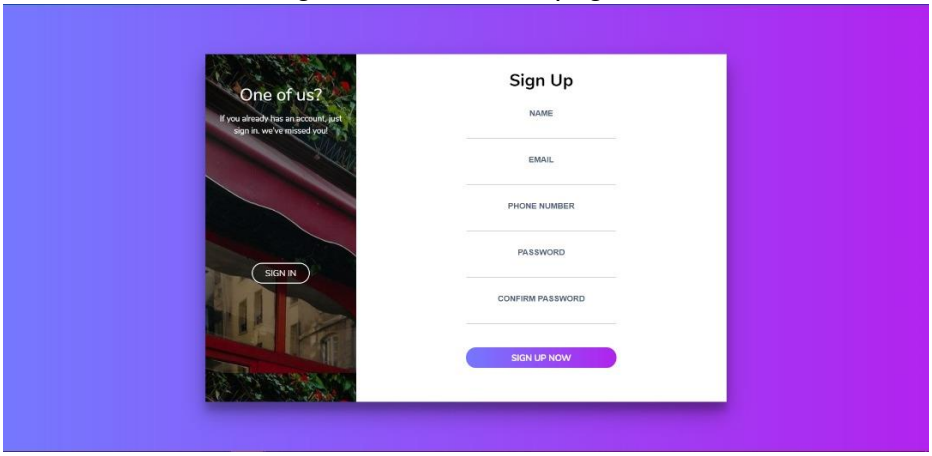


*Diagram 4.3.1.2: Interface for the customer to register the system*

### 4.3.2 Sign in (UC2)

| |
|---|
| **Objective –** Authorized customer and restaurateur sign in into the system using their email address and password |
| **Priority –** High |
| **Actor –** Customer and restaurateur |
| **Flow of Events**<br>**1. Basic Flow**<br>1.1 Customer and restaurateur enter their registered email address and password<br>1.2 Customer and restaurateur choose to sign in as customer or restaurateur at the drop-down list provided<br>1.3 Customer and restaurateur click 'Sign In' |
| **Alternative Flow**<br>1.1a - If the user entered a wrong email and password, he or she must re-enter the correct registered email and password. The user will be given only 3 times attempt |
| **Precondition –** Customer and restaurateur have registered into the system |
| **Post condition –** Customer and restaurateur successfully sign in into the system |
| **Notes –** None |

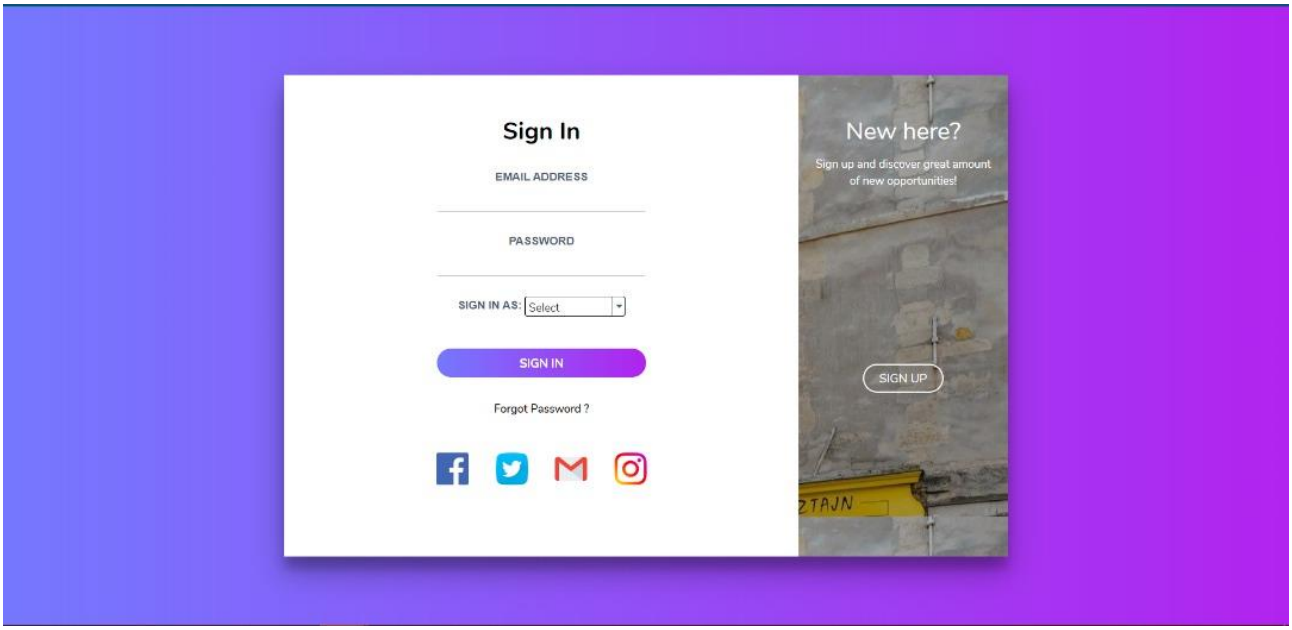


*Diagram 4.3.2.1: Interface for the customer and restaurateur to sign in into the system*

### 4.3.3 Reserve Table (UC3)

| |
|---|
| **Objective -** Authorized customer can reserve table and this use case extends the date and time selection |
| **Priority –** High |
| **Actor –** Customer |
| **Flow of Events**<br>**1. Basic Flow**<br>1.1 Customer chooses number of pax<br>1.2 Customer chooses date for the reservation<br>1.3 Customer chooses time for the reservation<br>1.4 Customer click 'Reserve' button<br>1.5 Data will be saved in database |
| **Alternative Flow -** None |
| **Precondition-** Customer successfully sign in into the system |
| **Post condition –** Customer successfully reserve their table |
| **Notes –** None |

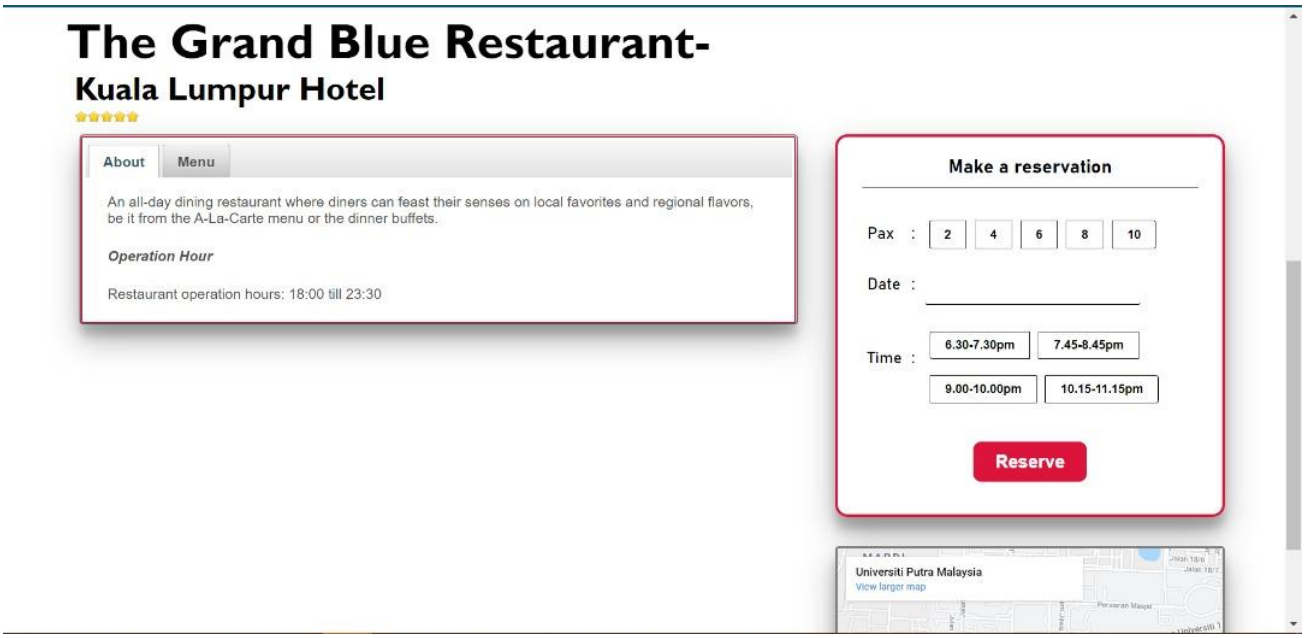


*Diagram 4.3.3.1: Interface for the customer to reserve the table*

### 4.3.4 Update Reservation (UC4)

| |
|---|
| **Objective –** Authorized customer can update their reservation if there are any changes that they wanted to do |
| **Priority –** Medium |
| **Actor –** Customer |
| **Flow of Events**<br>**1. Basic Flow**<br>1.1 Customer makes the changes to his or her reservation information<br>1.2 Customer clicks 'Update' button<br>1.3 Data will be saved and updated in database |
| **Alternative Flow -** None |
| **Precondition -** Customer has reserved the table and choose the 'Update' in the drop down list provided |
| **Post condition –** Customer successfully update the reservation information |
| **Notes –** None |

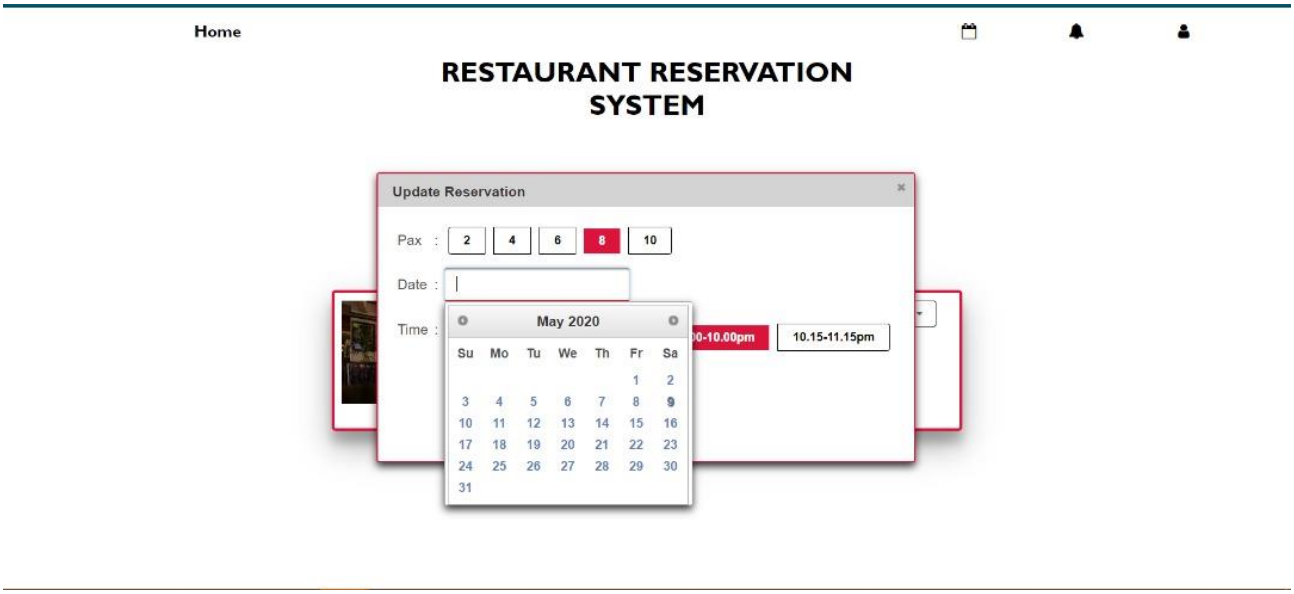


*Diagram 4.3.4.2: Interface for the customer to update the reservation*

### 4.3.5 Cancel Reservation (UC5)

| |
|---|
| **Objective –** Authorized customer and restaurateur can cancel the reservation that has been made |
| **Priority –** Medium |
| **Actor –** Customer and restaurateur |
| **Flow of Events**<br>**1. Basic Flow**<br>1.1 Customer or restaurateur choose to cancel the reservation<br>1.2 Customer and restaurateur is prompt to choose whether to confirm cancelation or |
| **Alternative Flow**<br>1.1a - Customer could not cancel the reservation 2 hours before the reservation time that has been made. An error message will be displayed. |
| **Precondition -** Customer has reserved the table and already at the view reservation interface |
| **Post condition –** Customer successfully cancel the reservation |
| **Notes –** None |

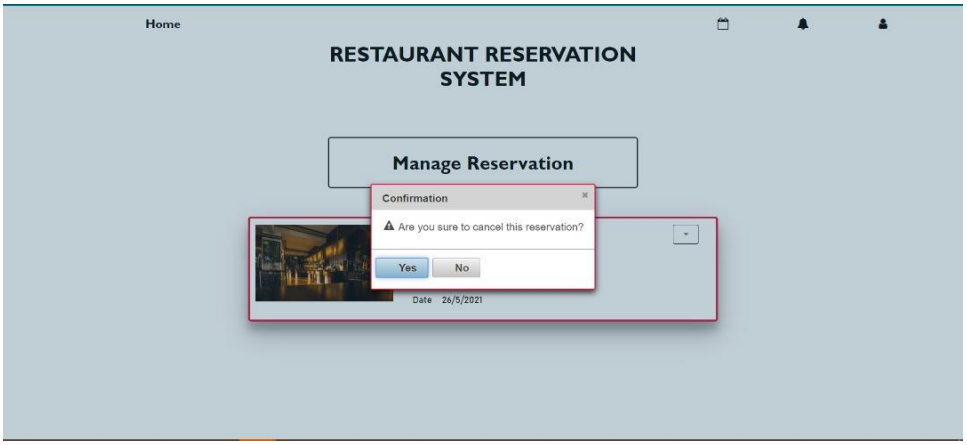


*Diagram 4.3.5.1: Interface for the customer to cancel reservation*

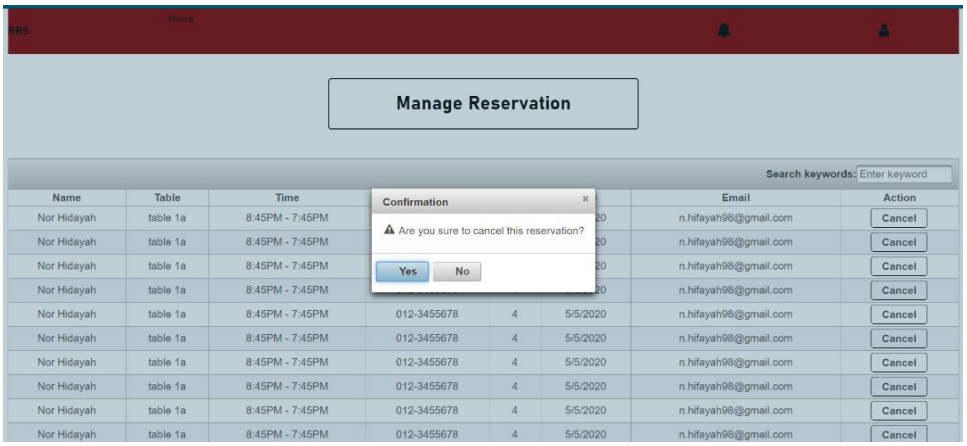


*Diagram 4.3.5.2: Interface for the restaurateur to cancel the reservation*

### 4.3.6 View Menu (UC6)

| |
|---|
| **Objective –** Authorized customer can view menus offer at the selected restaurant |
| **Priority –** Medium |
| **Actor –** Customer |
| **Flow of Events**<br>**1. Basic Flow**<br>1.1 Customer chooses the 'Menu' tab and food category will be shown<br>1.2 Customer clicks the 'Beverages' tab to view the list of beverages offered<br>1.3 Customer clicks the 'Menu List and Price' tab to view the price list of the menu |
| **Alternative Flow -** None |
| **Precondition -** Customer choose the restaurant that they wanted to reserve |
| **Post condition –** None |
| **Notes –** None |

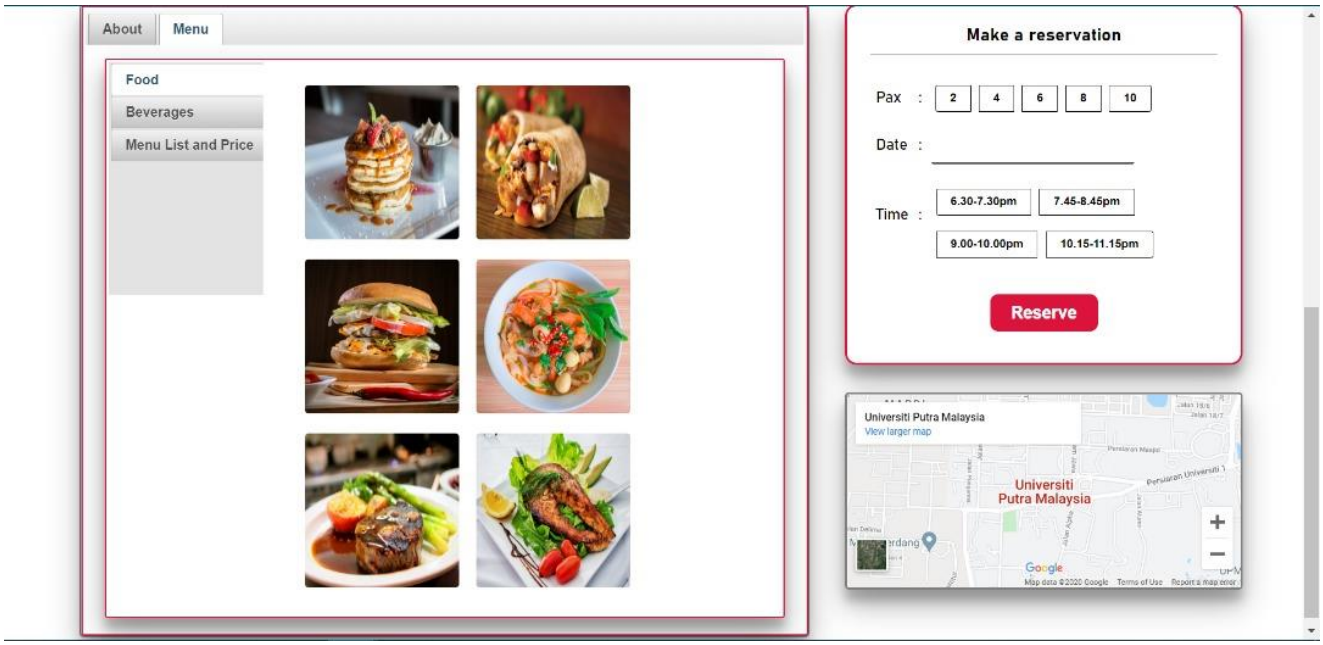


*Diagram 4.3.6.1: Interface for the customer to view menu*

### 4.3.7 View Reservation (UC7)

| |
|---|
| **Objective –** Authorized customer and restaurateur can view the reservation that has been made |
| **Priority –** Medium |
| **Actor –** Customer and restaurateur |
| **Flow of Events**<br>**1. Basic Flow**<br>1.1 Customer and restaurateur click the Calendar icon in the homepage<br>1.2 Customer and restaurateur will be redirected into 'view reservation' page |
| **Alternative Flow -** None |
| **Precondition -** Customer has reserved the table |
| **Post condition –** View reservation page will display all the reservations that have been made |
| **Notes –** None |


*Diagram 4.3.7.1: Interface for the customer to view the reservation*

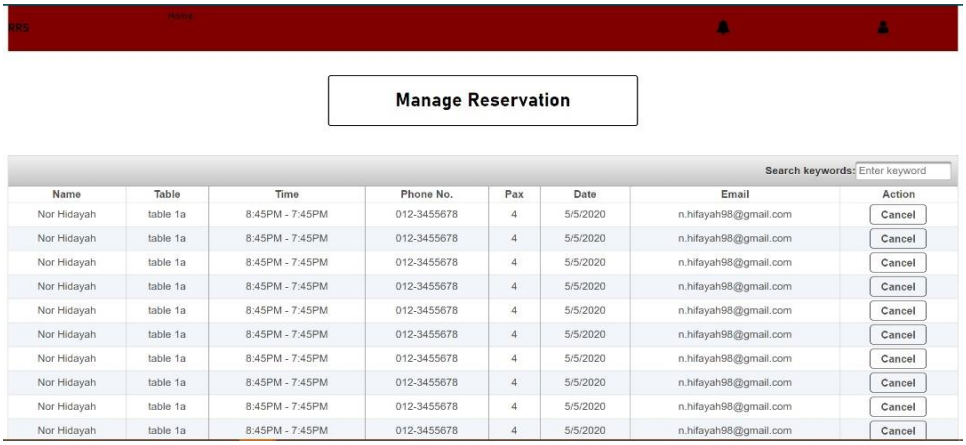


*Diagram 4.3.7.2: Interface for the restaurateur to view all of the reservations*

# 5. Other Nonfunctional Requirements

## 5.1. Performance Requirements

5.1.1 RRS shall be interactive and the delays involved must be low. So, in every action response of the system towards the user's actions, there are no immediate delays. For example, opening table availability, popping error messages and saving the reservation, there shall be delay that is below 2 seconds.

## 5.2. Safety Requirements

5.2.1 RRS shall not cause any damage to the user's device or its internal components upon completing their task in the system.

## 5.3. Security Requirements

5.3.1 The table reservation in the RRS shall be securely transmitted to server without any changes;

5.3.2 All the data in the RRS shall be secured and it shall be maintained in configuration management tools; and

5.3.3 RRS shall use HTTPs because this protocol may assure the security of this system.

## 5.4. Software Quality Attributes

### 5.4.1 Availability

1. RRS shall be available 24 hours for all of the users; and
2. The maintenance period shall be pre-scheduled and short. The users shall be reminded of the unavailability period in advance.

### 5.4.2 Usability

1. RRS shall be usable by all range of age of the customers. The interfaces shall be very simple yet interactive and clear for the users to navigate from the first-time users access the system they shall not facing any problems since the icons and buttons are familiar and easy.

# 6. Other Requirements

6.1 Legal requirement