Software Requirements Specification

For

Resort Property Management System, Release 1.0

Prepared by

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Revision History

Primary Author(s)	Date	Description of Version	Completed Version
Shreya Shetty, Shruti Shetty	00/00/00	Information about the revision. This table does not need to be filled in whenever a document is touched, only when the version is being upgraded.	Draft Type and Number

1. Introduction

1.1 Purpose

This SRS describes the software functional and nonfunctional requirements for release 1.0 of the Resort Property Management System (RPMS) and provides the foundation for the project..The Resort Property Management System is designed to provide vacation rental managers with the ability to control their company's rental business. All aspects of short-term rental management are considered including reservations, accounting, maintenance, housekeeping, booking, and more. The clear understanding of the system and its functionality will allow for the correct software to be developed for the end user and will be used for the development of the future stages of the project. From this SRS, the Resort Property Management System can be designed, constructed, and finally tested.

1.2 Document Conventions

The document is prepared using Google Documents and has used the font type 'Times New Roman'. The fixed font size that has been used to type this document is 12pt with 1 line spacing. The bold property has been used to set the headings of the document. Standard IEEE template is used to organize the appearance of the document and its flow.

1.3 Intended Audience and Reading Suggestions

The intended audience of this document would be owner and specific employees like Manager and Receptionist of the Resort and project team with the objective to refer and analyze the information. The SRS document can be used in any case regarding the requirements of the project and the solutions that have been taken.

This proposed system can be used by any naive users and it does not require any educational level, experience or technical expertise in the computer field but it will be of good use if the user has the good knowledge of how to operate a computer.

1.4 Project Scope and Product Features

The Resort Property Management System will permit employees to manage the daily administrative tasks of the resort and ensure smooth functioning of the resort. The system will be able to handle many services to take care of all customers in a quick manner. As a solution to the large amount of file handling happening at the resort, this software will be used to overcome those drawbacks.

The main objectives of the project are:

1. To build a resort management system that consists of all the features and functions required for effectively managing a chain of resorts.
2. To have an online presence that makes the reservation process easier and delivers outstanding customer service so that visitors returning to the area will choose that location again.

3. Managing daily operations and administrative tasks for achieving customer satisfaction that will help us to provide reliable and quality service time.
4. The Reservation System is to keep track of room and hall reservation and check availability. The Room Management System is for managing all room types room services. The Inventory Control System will keep track of all inventories of the hotel and guest details will be handled by guest management. Administration department will monitor all.
5. The three End Users are Owner, Manager and Receptionist. Owner can access all system functionalities without any restrictions. Managers can access all system functionalities with limited restrictions. Receptionists can only access the Reservation management section. To keep restrictions for each End User level Resort Property Management System can create different Login functions.

1.5   References

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2. Overall Description

2.1 Product Perspective

The Resort Property Management System is a system with all the features and functions required for effectively and efficiently managing the chain of resorts. This system will have a user friendly and attractive interface and will be presented in a simple and easy way. This system will give better options for the problem of handling large scale physical file systems, for the manual errors occurring in calculations. This system will ease the job of employees, make the transactions error-free and will be able to handle customers in a more convenient and quick manner.

2.2 Product Functions

1. Make Reservations
2. Search Rooms (available room details)
3. Manage Restaurant, Spa and other activities
4. Add Payment
5. Issue Bills
6. Registration, login and logout
7. Manage Guest (Add, Update Guest)
8. Manage Room Details (Add, Update, Delete)
9. Manage Staff (Add, Update, Delete, View)
10. Manage Inventory (Add, Edit, Delete)
11. Set Rates
12. Retrieve Reports (Staff payment, Income)
13. Manage Users (Add, Update, Delete)
14. Taking Backups
15. E-mail notifications
16. Guest Experience Management

2.3 User Classes and Characteristics

There are 3 user levels in the Resort Property Management System:-

Owner: They will have access to all the functionalities and is responsible for the overall working of the system. Owner has the privilege of monitoring and authorization of all the tasks handled by the system and only he has the right to add the property. Owner of the company as well as the system can access the administration panel which is considered the core of the system. As the main authorized person of the company, the owner gets the ability to manage the other users including their user levels and privileges. Taking backups of the system and restoring the system can also be done by the Owner. Meanwhile he/she will be able to take all the kinds of reports available in the system. As the owner of the system and the company he/she has the power to set

room rates as well. Only the owner has the right to delete a staff member from the system database.

Manager: Manager also has most of the privileges mentioned above except the payment handling. The manager's role is to reduce the workload of the owner and handle important tasks which cannot be assigned to the receptionist. Manager has the authority to take all the reports available in the system except the reports related to financial stuff, hotel income. Manager has other abilities that the receptionist, user level has. Such as, adding new staff members to the system, modifying them but cannot remove them. He can add new guests to the system, modifying them and removing them from the system and the same is applicable for inventory and room management.

Receptionist: The role of the receptionist will be to attain the goals of bookings and to ensure that all guests are treated with a high standard of customer service. Receptionist has the least accessibility to the system functions. Receptionists can perform limited functions such as registering new guests to the system, making reservations, sending email reminders to clients for reservation confirmation.

2.4   Operating Environment

OE-1: **Operating System:** Windows 7+, Ubuntu, Mac
OE-2: **Front end:** HTML, CSS, JAVASCRIPT, Bootstrap
OE-3: **Backend:** MySQL
OE-4: **Server:** XAMPP
OE-5: **Browser:** Any Browser
OE-6: Monitor with minimum resolution of 1024x768, keyboard, and mouse
OE-7: A Laser printer will need to be used to print these reports and notes.

2.5   Design and Implementation Constraints

CO-1: Memory: Device should have 2GB internal hard drive. Software and databases cannot exceed this amount.
CO-2: A stable internet connection is required to use the system..
CO-3: Software does not require any specific Operating System.
CO-4: Users should have the correct username and password to use their accounts for their respective tasks.
CO-5: The database should be password protected and only the owner can access the whole system.

2.6   User Documentation

UD-1: For each type of user, the system shall provide a manual with a clear idea in interacting with the system according to their respective roles.
UD-2: The system shall allow the new employees to practice making updates in the inventory and other functionalities without disturbing the actual database.

2.7 Assumptions and Dependencies

AS-1: The resorts are open for bookings on all days of the year.

AS-2: Since the application is a web based application there is a need for the internet browser and that the users shall possess stable internet connectivity.

AS-3: The users should have some basic understanding of computers.

AS-4: The users should be able to understand and comprehend the English language.

AS-5: The system's response to database software should be quick.

AS-6: Each user must have a valid user id and password.

DE-1: The product does require a back-end database server MySQL for storing username and password for different users of the system.

3. System Features

3.1 ER Diagram
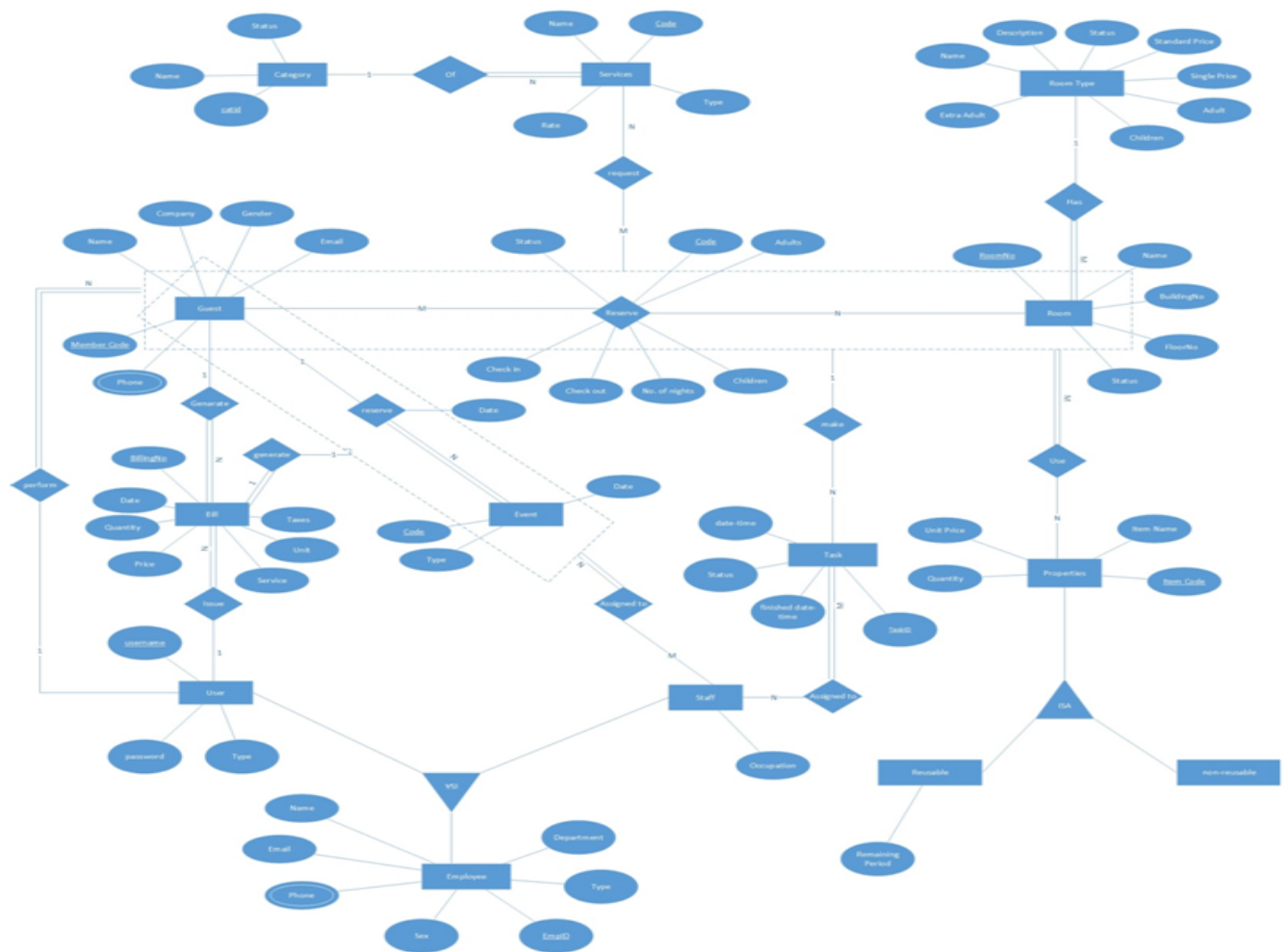
3.2   Functional Requirements

Function 1	**Making a new Reservations**
Input	Code, Number of children, Number of adults, check-in date, check out date, status, Number of nights
Output	Database Record, Database successfully updated message
Processing	Validate the given details and record the information into the database.

Function 2	**Add Guest**
Input	Member code, Phone number, Company, Name, E-mail, Gender, Address
Output	Database Record, Database successfully updated message
Processing	Validate the given details and record the information in to the database.

Function 3	**Add staff member**
Input	Code, Employee Name, Employee Address, NIC, Salary, Name Age, Occupation, E-mail
Output	Database Record, Database successfully updated message
Processing	Validate the given details and record the information into the database.

Function 4	**Search Rooms**
Input	Period, Check-in, Check-out, Guest
Output	Display a message with available room details
Processing	Validate the given details and check for the available rooms in a given time period and return it's availability.

Function 5	**Add Payments**
Input	Total, pay time, Credit card details
Output	Database Record, Database successfully updated message
Processing	Validate the given details and record the information in to the database.

Function 6	**Issue Bill**
Input	Billing no, Quantity, Price, Taxes, Date, Services, Unit
Output	Printed version of the bill
Processing	Validate the given details and total cost is calculated according to the Services gained by the customer.

Function 7	**Set Rates**
Input	Check-in, Check-out, Day, No.of guests, First night price, Extension price
Output	Database Record, Database successfully updated message
Processing	Validate the given details and record the information in to the database.

Function 8	**Taking Backups**
Input	Location to save the backup file
Output	Display a message showing backup successfully created
Processing	Validate the user given location to save the backup file. Save the backup file to the user specified location

4. External Interface Requirements

4.1 User Interfaces

This software needs the following user interfaces:

UI-1: User friendly Dashboard of the system

UI-2: Login Page:
- a. User: Different types of owner(Admin), manager, and receptionist
- b. Properties:
  - i. This window has two fields of email and password, and a button of login..
  - ii. If he/she doesn't remember the password, there's the option of forgot password.

UI-3: Adding new guest to the system Page:
- a. User: Receptionist
- b. Properties:
  - i. This window is used for registering as a new guest in the online Resort Property Management System.
  - ii. This window has various text fields to take information about the guest:
    1. Guest information (Name, Address, Country)
    2. Contact information (Email, Mobile)
    3. Other information (ID, Number of Adults/children, Membership status)
    4. Stay information (Number of Rooms, Arrival date, Departure date, room type)

UI-4: Make a New Reservation Page
- a. User: Receptionist
- b. Properties:
  - i. This window is used for making or modifying a new reservation for the guests.
  - ii. This window has various text fields to take information about the:
    1. Common information (Status, Booking Time, User Name)
    2. Guest Information (Name, company, email, phone, address, country)
    3. Payment information
    4. Service information
    5. Billing information (Address, City, State, Country, Pincode)
    6. Room information (Check-in date, Check-out date, Number of Adults/Children, Room Number)

UI-5: Views, modify or delete Reservations Page:
- a. User: Receptionist.
- b. Properties:
  - i. The window shows all the reservations in that particular property.
  - ii. The User can view, remove or update the reservations of guests.

UI-6: Property Management Page:
- a. User: Owner
- b. Properties:

      i.   This window is used for adding/deleting a property.

      ii.   The user can also make changes to room availability and reservations of a particular property.

UI-7:   Stock management Page:
  a. User: Manager
  b. Properties:
      i. This window is used for adding/modifying a stock.
      ii. Making a new order (Item, Unit Price, Quantity, Amount)

UI-8:   Staff management Page:
  a. User: Manager, Owner
  b. Properties:
      i. This window is used for viewing/ modifying details of a staff member.
      ii. Only the Owner can delete a staff member from the database.

UI-9:   Adding a new staff member Page:
  a. User: Manager, Owner
  b. Properties: This window is used for registering a new staff member.
  c. This window has various text fields to take information about the staff:
      i. Staff information (ID, Name, Address, City, Country, Gender)
      ii. Contact information (Email, Mobile)
      iii. Staff Type
      iv. Days he/she Works On

UI-10: Admin Homepage:
  a. User: The Owner
  b. Properties:
      i. The Dashboard of the Admin consists of lists of reservations, restaurant, Spa and other activities, housekeeping details, staff details, property details.
      ii. They can make changes in different properties and their reservations.
      iii. They can view all the information about the guest, staff and the property.

UI-11: Customer Relations Management Page:
  a. User: Receptionist.
  b. Properties:
      i. The window shows all details about the customer experience.
      ii. The user can view the membership status of guests and add experience of guests.

4.2 Hardware Interfaces

A specific computer must match with the below mentioned requirements in order to gain the maximum benefits from the system in an efficient manner.

HI-1:   Hardware Requirement: Dual Core 2nd generation

HI-2:   System Configuration: RAM > 512 MB

HI-3:   The System must run over the internet, all the hardware shall require to connect to the internet will be hardware interface for the system, like Modem, WAN – LAN, Ethernet Cross-Cable.

HI-4:   Reservation alerts will be sent to one of the members of the staff as an e-mail notification. So there is a need for broadband internet connection. Clients should be able to keep a stable internet connection. A laser printer will be needed when printing bills and several reports.

4.3   Software Interfaces

SI-1:   The computer this software is going to be installed needs to have either a Windows Operating System equal or above, Windows 7, or a Linux system or a Mac Operating System.

SI-2:   There should be a virtual server i.e. XAMPP on the computer as we need Apache and MySQL in XAMPP for running the website on localhost.

SI-3:   MySQL is used to create a Database for storing all the contents.

SI-4:   The tables are formed for storing the information of admin, reservations, restaurant, spa and other activities, housekeeping, customers details, logs etc.

4.4   Communications Interfaces

CI-1.   When a reservation is reserved, an email notification will be sent to both the staff's email account and guest's account.

CI-2.   Guests will be notified during the check-out date.

CI-3.   To achieve that functionality, it requires having a stable internet connection. A broadband connection with the client's computer shall provide the efficient service.

5.   Other Non-functional Requirements

5.1   Performance Requirements

PE-1:   The data in the database should be updated in less than 3 seconds.

PE-2:   The load time of UI should be within 2 seconds

PE-3:   The query results should return in less than 5 seconds.

PE-4:   The log in information shall be verified within 4 seconds.

5.2   Safety Requirements

SA1:   The system shall maintain backups to maintain the system's database security.

SA2:   Incase of system error, the system shall recover within an hour.

5.3   Security Requirements

SE-1:   The systems shall use encryption to avoid bots from booking

SE-2:   The system shall permit only the registered resort employees to update the inventory list

SE-3:   All data must be stored, protected and there should be no leakage of customers' private data.

SE-4:   All the payment transactions should be secure and customer should not experience

   any kind fraud
  SE-5: System will have different types of users and every user as access constraints

5.4 Software Quality Attributes

1. Availability: The system shall be functional during normal resort operating hours
2. Correctness: The system shall fulfill all the requirements of the resorts management system
3. Efficiency: The system shall make use of enough resources to achieve the desired result
4. Flexibility: The system shall add new features to the system and handle them conveniently.
5. Integrity: The System should focus on securing all the customer information and avoid data losses
6. Maintainability: The shall be in ease with which the system is maintained and restored to its operational status after performing repairs within given time.
7. Portability: The Resort Property Management System shall run on any operating system.
8. Reliability: The system shall perform all the intended tasks and functions within the specified time
9. Reusability: The system shall use available components in other systems as well.
10. Usability: The system should be user friendly and the interface should be engaging to make the user experience pleasant and satisfying
11. Robustness: The system shall have the strength to handle system functions accurately and cope with unexpected errors.

5.5 Business Rules

Resort Property Management System will perform under three users which are Owner, Manager and Receptionist. In this system, responsibility and privileges are decreased in the order of owner, manager and receptionist. The role of manager is needed to make the owner free from regular interference with the system. So, most of the privileges that the owner has are given to the manager, except the ones that are critical and important. Some features like that are, taking backup, restoring of the system and handling financial details, hotel income reports of the system. Receptionist is given with the most frequently used features of the system which has less responsibility than the other two users.

6. Other Requirements

Once the system is completely developed, a few sessions will be required to make the users understand about the functionality of the system and some time to adapt to the system. After those sessions, it's required that a member from the development team should spend some time in the system background. That time period will be used in identifying new bugs that could not be reached in the earlier phases of the development process. Clients should have a valid e-mail account in order to receive reservation email notifications.

Appendix A: Glossary

Check-out - settle one's hotel bill before leaving
Check-in - the process whereby a guest announces their arrival at the hotel
Activities - An entertainment organizer in a hotel, resort.
HTML - HyperText Markup Language, used in creating front-end
CSS - Cascading Style Sheets, used in designing front-end
Interface - The place at which independent and often unrelated systems meet and act on or communicate with each other the man-machine interface
MySQL is an open-source relational database management system