# Software Requirements Specification

## For

# Travel Agency

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# 1. Introduction

## 1.1. Purpose

The purpose of this document is to collect, analyze, and define the high-level needs and features of the Tourists. It focuses on the capabilities needed by the stakeholders and the target users, and why these needs exist. The details of how the Travel Agency fulfills these needs are detailed in the use-case and supplementary specifications.

## 1.2. Document Conventions

This document was created based on the IEEE template for System Requirement Specification Documents

## 1.3. Intended Audience and Reading Suggestions

People go to new places and they feel uncomfortable with the hotel rooms ,vehicles for traveling in that place. People have to try the hotel rooms ,vehicles after going to that place which is a lot of time taking and people need to wait for the correct hotel they want. Many people adjust the hotel they visit because of impatience.For Travellers this website helps a lot, who can book vehicles to whichever place they want to go and book rooms without any difficulty in whichever place they want to stay.

## 1.4. Product Scope

This project is an implementation of a managing Tourism website which helps the customers to search the availability of various tourist places and prices of various hotel rooms in particular places, along with the different packages available with the reservations. This project also covers various features like online registration of the users, modifying the details of the website by the management staff or administrator of the website, by adding, deleting, or modifying the customer details or packages information. In general, this website would be designed to perform like any other Tourist management website available online.

# 2.Overall Description

## 2.1.Product Functions

**Register**: Customer has to make the booking by registering his/her name in Data-File along with basic details like duration of tourism with dates and no.of people

**Booking**: check the availability of rooms and vehicles and reserve them through payment.
**Vehicles**: Agency also makes the reservation for the vehicles registered with the agency
**Hotels**: Agency also makes the reservation for the Hotels registered with the agency.

**Billing**: Once the Customer makes the booking or reservation, Bill will be generated for him/her, and money has to be paid on the spot itself.

**Reporting**: Details about the locations, hotels in that location, and final report on the journey fare.

## 2.2.User Classes and Characteristics

**EXPERTISE :**
Users of this class are DataBase managers.They should be well educated and they will be managing databases of travellers list, available and booked rooms and vehicles.They work less frequently but they should have more experience.
**MANAGERS :**
Users of this class are managers of hotels and vehicles (buses, cars etc).They should be educated and they will be updating databases of travellers list, available and booked rooms and vehicles.They work frequently and they need not have more experience.
**CUSTOMERS:**
Users of this class are travellers.They should be educated enough so that they can use computers and they can book vehicles and rooms according to their choices .They need not have any experience.

## 2.3.Operating Environment

OPERATING SYSTEM: Windows 8 or more

Linux requirements: 64-bit Ubuntu 14.04+

PROCESSOR:

Windows requirements: Intel Pentium 4 or more

Linux requirements: Intel Pentium 4 or more

MEMORY: Minimum of 2GB is recommended

## 2.4. Design and Implementation Constraints

- Requires 2 GB on-board memory.
- Based completely on Windows or Linux functionality platforms. The software should be portable and must be inaccessible to unauthorized users.

## 2.5. User Documentation

2.6.1 User Manual The User Manual shall describe the use of the Website from the Travel's, Hotel Manager's, and Vehicle Owner's viewpoint. The User Manual shall include:
2.6.1.1 Minimum System Requirements
2.6.1.2 Logging in
2.6.1.3 Logging Out
2.6.1.4 All System Features
2.6.1.5 Customer Support Information

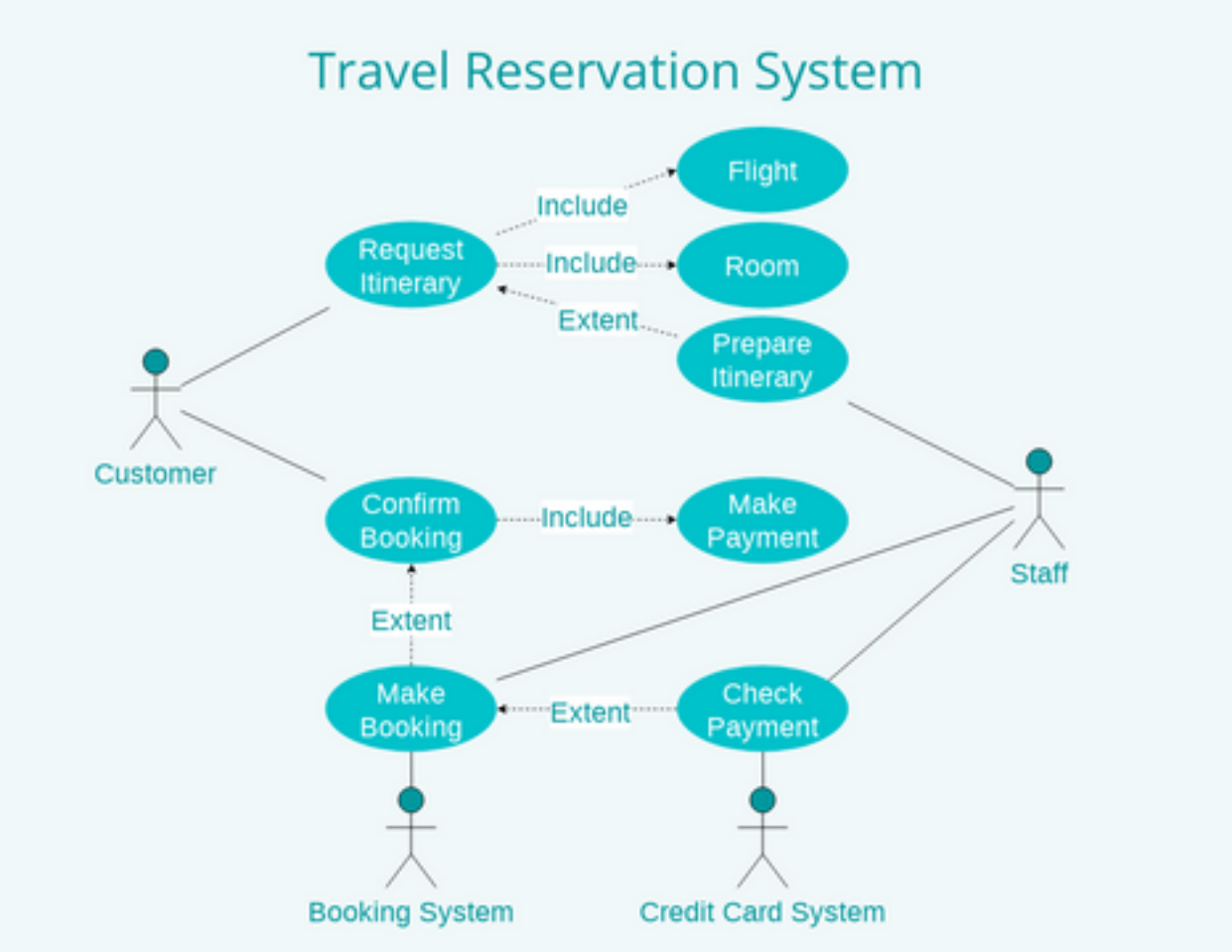
2.6.2 Online Help shall be available to the user on the website. In the Online help User, Manual softcopy is also present where each topic is explained clearly. FAQs are mentioned with answers.

2.6.3 Installation Guides, Configuration, and Read Me File The Installation/Configuration instructions and guidelines will be available along with the PC-version of the application.

## 2.6. Assumptions and Dependencies

1. In using the onscreen keyboard, it is assumed that the user is literate and can type.
2. The default language for this website be US English
3. It is also assumed that the all users have access of internet
4. The requirements for the user interface is developed under the assumption that user interface is a subsystem of existing larger system for hotel reservation management, which keeps and processes information about existing, booked and free rooms at the hotel, including the data about room type, number of total rooms at hotel, time of check outs and other factors that influence the room availability at any given time. Bus Agency and Vehicle Rental Agency which books the vehicle including the data about vehicle number ,number of vehicles , number of types of vehicles ,time and other factors that influence the vehicle availability at the given time.
5. The process and algorithm for calculating available rooms and vehicles are assumed to be given prior.

## 2.7.Use Case diagram



## 2.8.Class diagram

# 3. Requirements

## 3.1. User Interfaces

The interface actions and elements are consistent. When users press any button, the required actions are done by the system. The screen layout and color of the user interface are appealing. When users look at the screen, it will have a nice vision.

In web applications, every interface is user friendly and simple to use. Errors or to be done actions are specified to users clearly through messages as pop-ups.

Web application shall permit travelers for complete navigation, vehicle bookings, and destination places selection, and for vehicle owners and managers, it allows them to navigate easily to update the information using the keyboard alone or mouse and keyboard combinations.

## 3.2. Hardware Interfaces

The main interface would be a monitor, keyboard, and mouse. The hardware interface for the user would be any PC having the system requirements and having above 2GB HDD for loading an OS so that the application could interact with the system without any problem.

## 3.3. Software Interfaces

The application requires Java to be installed on the system, more specifically Java version 7 or 8 for its latest release.

| Software used | Description |
|---|---|
| Operating system | We have chosen Windows or Linux operating systems for its best support and user-friendliness. |
| | To save the records of bookings, available rooms, |

| | |
|---|---|
| Database | vehicles, users’ credentials we have chosen the SQL database. |
| Java | To implement the project we have chosen Java language for its more interactive support. |

## 3.4. Communications Interfaces

For communications sockets on TCP shall be used. A client program creates a socket on its end of the communication and attempts to connect that socket to a server. When the connection is made, the server creates a socket object at the end of the communication. The client and server can now communicate by writing to and reading from the socket.TCP is a two-way communication protocol, so data can be sent across both streams at the same time.

The webpage shall send an email message to confirm registration with the system.

The webpage shall send a confirmation mail before booking a hotel or vehicle while doing payment also it sends OTP to the registered number.

The webpage shall send a notification(e-mail) to the user to inform them of time approval or rejection.

The webpage shall send a notification to inform the user using calendar event invitations.

# 4. System Features

## 4.1. Signup/Login

### 4.1.1 Description and Priority

Allow users to login/signup the website and enable them to access the features of
the website.

Priority: High

### 4.1.2 Stimulus/Response Sequences

#### 4.1.2.1 Traveler Signup

**Input:** Enter username, new password, full name, IC Number, Date of birth, Gender, Full Address, Email, Contact, tick the agree on option, enter the captcha and click on the register

**Output:** If details are correct and not pre-registered display the “Successful message” on the screen. If not displays “Unsuccessful message”.

**Processing:** System validates details, checks in the database, and updates the database if the details are correct and not pre-registered.

4.1.2.2 Hotel Manager Signup

**Input:** Enter username, new password, the full name of Hotel, Address, Range of Cost of Rooms, Different types of Rooms, No. Of Rooms, Photos of the Hotel, Email, Contact, tick the agree on option, enter the captcha and click on the register

**Output:** If details are correct and not pre-registered display the "Successful message" on the screen. If not displays "Unsuccessful message".

**Processing:** System validates details, checks in the database, and updates the database if the details are correct and not pre-registered.

4.1.2.3 Vehicle Rental Manager Signup

**Input:** Enter username, new password, the full name of Company, Address, Range of Cost in Vehicles, Different types of Vehicles, No. Of Vehicle, Photos of the Vehicle, Email, Contact, tick the agree on option, enter the captcha and click on the register

**Output:** If details are correct and not pre-registered display the "Successful message" on the screen. If not displays "Unsuccessful message".

**Processing:** System validates details, checks in the database, and updates the database if the details are correct and not pre-registered.

4.1.2.4 Bus Agency Manager Signup

**Input:** Enter username, new password, the full name of the Agency, Address, Range of Cost, Different types of Packages, No. Of Buses, Photos of the Buses and Packages, Email, Contact, tick the agree on option, enter the captcha and click on the register

**Output:** If details are correct and not pre-registered display the "Successful message" on the screen. If not displays "Unsuccessful message".

**Processing:** System validates details, checks in the database, and updates the database if the details are correct and not pre-registered.

4.1.2.5 Login

Username exists and the password is correct
**Input:** Username, password, and type

**Output:** login to the website
**Processing:** Search for username in the user database and verify password in traveler/hotel manager/vehicle rental manager/bus agency manager/admin database based on the type

4.1.3 Functional Requirements

R1) Traveler Signup: Users/Travelers can create an account by filling in their details to book hotel rooms, vehicles, etc

R2) Hotel Manager Signup: Manager can create an account by filling in their details

R3) Vehicle Rental Manager Signup: Manager can create an account by filling in their details

R4) Bus Agency Manager Signup: Manager can create an account by filling in their details

R5) Login: The system allows the user to login if they enter the correct username and password in a given type of database.

## 4.2. Availability

4.2.1 Description and Priority

Allow users to check the availability of rooms, vehicles on the website and enable them to access the rooms, vehicles, buses

4.2.2 Stimulus/Response Sequences

4.2.2.1 Room Availability

**Input:** enter the room type, duration, date, number of adults and children

**Output:** Displays available room details

**Processing:** The system checks the room availability in the relevant database for each requirement

4.2.2.2 Vehicle Availability

**Input:** enter the vehicle type, duration, date, number of adults and children

**Output:** Displays available vehicles details

**Processing:** The system checks the availability of the vehicle in the relevant database for each requirement

4.2.2.3 Bus Availability

**Input:** enter the bus type, duration, date, places to visit, number of adults and children

**Output:** Displays available bus details

**Processing:** The system checks the availability of the bus in the relevant database for each requirement

4.2.3 Functional Requirements

R1) Room Availability: The system shows available rooms by searching in the database

R2) Vehicle Availability: The system shows available vehicles by searching in the database

R5) Bus Availability: The system shows available buses by searching in the database

## 4.3. Booking

4.3.1 Description and Priority

Allows the traveler to book the hotel room, vehicles on the website which are available on particular dates and timings

4.3.2 Stimulus/Response Sequences

4.3.2.1 Reservation

**Input:** click the required hotel room or vehicle which are available on required dates and timings

**Output:** displays the message " u have reserved your bookings" and reservation details.

4.3.2.2 Payment

**Input:** enter the booking number, reference number, date, method to choose the bank, enter the amount and click on submit

**Output:** If the payment is successful displays the "Successful" message and if not displays the "Unsuccessful" message

**Processing:** System validates details and updates the database

4.3.3 Functional Requirements

R1) Reservation: Traveler reserves the hotel room or vehicle which are available in required dates and timings

R2) Payment: Traveler does the payment which is reserved.

## 4.4. Update

4.4.1 Description and Priority

Allows the hotel manager or vehicle rental company manager to add room /vehicle or add a discount

4.4.2 Stimulus/Response Sequences

4.4.2.1 Add Room

**Input:** Hotel manager clicks on add room and enters the room type, cost, and room number

**Output:** Displays a "successful" message if the room number entered is not in the database

**Processing:** System validates new room information, creates new room, and updates the database

.

4.4.2.2 Add Vehicle/ Bus

**Input:** Vehicle Company Manager /Bus Agency Manager clicks on add vehicle or bus and enters the vehicle/bus type, cost, and vehicle/bus number

**Output:** Displays a “successful” message if the vehicle/bus number entered is not in the database

**Processing:** System validates new vehicle/room information, creates new vehicle/bus, and updates the database

4.4.2.3 Add Discount

**Input:** Hotel Manager**/**Vehicle Company Manager /Bus Agency Manager clicks on add discount and enters the room/vehicle/bus type, time duration, and the discount percentage

**Output:** Displays a “successful” message.

**Processing:** System validates room/vehicle/bus type, updates the database

4.4.3 Functional Requirements

R1) Add Room: Allows the Hotel Manager to add a room

R2) Add Vehicle/Bus: Allows the Vehicle Company Manager /Bus Agency Manager to add vehicle/bus

R3)Add Discount: Allows the Hotel Manager**/**Vehicle Company Manager /Bus Agency Manager to add a discount on some of rooms/vehicles/buses up to some period

## 4.5. Review

4.5.1 Description and Priority

Allows the traveler to give feedback on the room/vehicle/bus services.

4.5.2 Stimulus/Response Sequences

4.5.2.1 Feedback

**Input:** clicks the room/vehicle/bus which was traveled or stayed and click on the “Feedback” option and enter the feedback and submit.

**Output:** If feedback is sent display a “Successful” message if not display the “Unsuccessful” message**.**

**Processing:** System validates room/vehicle/bus number, updates the feedback in the database

4.5.3 Functional Requirements

R1) Feedback: Allows the traveler to give feedback on the room/vehicle/bus services.

# 5. Other Nonfunctional Requirements

## 5.1. Performance Requirements

The application shall be able to respond to the queries submitted by the customer without much delay. the application may not take much time to return the results.
It shall be able to display fixed minimum results at a time on each page when the customer looks up for any particular data.
All the users may not log in with high-speed internet so it will not consume more data.
When many users try to access it will be able to handle the traffic.

The average page load will be less than 0.5 seconds.

The slowest page-load cannot take more than 3 seconds.

The website will be available more than 99.5% of the time on average.

The website will be available more than 99.9% of the time during the hours of 8 am-6 pm IST.

All of the operations carried out in the system will respond within 5 seconds.

The system will be able to support 100 concurrent users.

The website will need about 5 GB of bandwidth per month.

## 5.2. Safety Requirements

If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage (typically tape) and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed-up log, up to the time of failure.

## 5.3. Security Requirements

Users shall require to log in before doing any operation on the website.

The webpage shall permit users who are not hotel managers or vehicle owners to view only their information, not the information of other users.

Network security will be provided by the use of firewalls.

All payment transactions that involve financial information and personally identifiable information are encrypted.

## 5.4. Software Quality Attributes

**Reliable**: The product will not crash under any circumstance such as a user entering invalid values, a user trying to find unusual data, etc. It should show appropriate messages for every user-generated message.

**Transparent**: the application will be able to automatically reconnect to the database if the connection fails.

**Scalable**: The system will be capable of supporting a large number of clients and servers.

**Portable**: The product will be portable to carry and will run on any machine provided it runs a Windows Operating System. And it will be supported by the maximum web-browsers.

## 5.5. Business Rules

Tourist :The one who uses the system to book the vehicles and rooms according to their comfort level.They have very limited access to the system.

Hotel Manager :The person who uses the system to update the database if any room was booked or vacated by users.They have a higher level of access than tourists.

Vehicle Rental Manager :The person who uses the system to update the database which indicates availability of vehicles. .They have a higher level of access than tourists.

Bus Agency Manager :The person who uses the system to update the database which indicates availability of buses. .They have a higher level of access than tourists.

DataBase Expertise : The person who uses the system to manage all the databases.They have prior access than the managers.

Organisation Head : The person who is responsible for creating this website.He will have total access to the website.