Travel Agency System Requirements Specification

Version 3.0

March 10th, 2025

Table of Contents

1. Executive Summary

1.1 Project Overview

Our project aims at all travel agency companies together with their clients. We want to create a safe and useful tool with an easy to use interface. It will contain all the necessary features to make a smooth travel experience and a great business asset. The details are explained below.

2. Product/Service Description

We aim to create a simple and useful software that will be time efficient for both the customer and the travel agency. We need to create an online software system that will work 24 hours. The system must be accessible only to customers over 18 years old so for this there will be a passport or ID verification.

After verifying that the user is over 18 years old, he/she will be able to create an account. This account will keep track of the history with the agency and after reaching a certain amount of contracts they will receive a 10% discount for their future purchases.

The system will be organized as a step by step process. Firstly they will decide the preferred destination, then a means of transport and lastly a hotel or airbnb. The customer will have an optional feature where they can create their personalized tour guide. By only choosing 3 preferred types of activities and a budget limitation, three personalized tours will be organized for them. This tour will need only two components, the information put by the field agent into the servers and artificial intelligence. It will not only include the tourist spots and restaurants but also the way of going from one place to another starting from the hotel. After choosing the preferred one, the individual must directly book all the needed tickets.

If a customer has a question regarding something specific that is not included on the system, they can directly contact one of the agents in the message button and within a range of 5-10 minutes, one of the agents will reply.

Lastly, a feature that we are implementing on the system is the "track location" feature. This feature will allow one member of the family to be able to keep direct track of the traveler in real time. This will be done for security reasons and to keep parents unconcerned regarding their child's safety in case of school trips. The data will be deleted automatically one week after the individual is returned back home.

2.1 Product Context

The Travel Agency Information System is a self-contained solution, but includes multiple external services, includes:

- ➔ **Third-party travel Application Programming Interface** (airlines, hotels, car rentals, tours, etc)
- ➔ **Payment gateways** (online transactions and invoicing).
- ➔ **Customer Relationship Management systems** (handling customer profiles and inquiries).
- ➔ **Marketing platforms** (promotions and personalized recommendations).
- ➔ **Local and international travel regulatory systems** (compliance and visa processing).

2.2   User Characteristics

Customers

➔ **Types**: Students, faculty, staff, business professionals, and tourists.
➔ **Experience**: Varies between advanced tech users to basic tech experience familiarity
➔ **Technical Expertise**: Must know basic internet principles (how to navigate the internet)
➔ **General Characteristics**:
  ◆ Prefer mobile friendly and self service platforms.
  ◆ Expect real time updates and automated notifications.

Travel Agents & Staff

➔ **Types**: Customer service representatives, travel consultants, tour operators.
➔ **Experience**: Trained professionals familiar with travel regulations.
➔ **Technical Expertise**: Moderate knowledge to high, with CRM (Customer Relationship Management) and booking system knowledge.
➔ **General Characteristics**:
  ◆ Require a dashboard for managing bookings and customer inquiries.
  ◆ Requires reporting tools for business insights.

Administrators & Managers

➔ **Types**: System administrators, financial managers, compliance officers.
➔ **Experience**: Advanced experience in managing databases and financial transactions.
➔ **Technical Expertise**: Advanced knowledge in system management and cybersecurity.
➔ **General Characteristics**:
  ◆ Require access to audit logs, user management, and financial reports.
  ◆ Acquire security compliance tools and data backup functionalities.

2.3   Assumptions

The following assumptions are:

➔ **Cloud based systems for access** (Online system access, which helps reduce specific hardware requirements)
➔ **Stable internet from our users**
➔ **Multiple currency payment suppor**t (which will include more payment options)

2.4   Constraints and Dependencies

3. Requirements

3.1   Functional Requirements

Req#	Requirement	Comments	Priority	Date Rvwd	SME Reviewed / Approved
REQ-1: Client_register	The system must be able to store clients data into a long time database in order to keep track of client's history.	Simple register form	1	10/03/2025	
REQ-2: Calculate_transport	The system shall determine the shortest route according to user input destinations (for example: from airport to hotel). After determining the route it shall calculate costs according to the means of transportation.	The option that will be presented to the customer should fulfill the budget entered.	3	10/03/2025	
REQ-3: Reserve_hotel	The system shall display the most suitable hotel according to customer needs.	The option that will be presented to the customer should fulfill the budget entered.	2	10/03/2025	
REQ-4: Display_trips	The system shall display all trips reserved with the agency and keep track of the dates.	Simple and consistent design. Not interactive with the user.	2	10/03/2025	
REQ-5: Check_Location	The system should display the current location of the tourist to the trusted guardian.	For safety and protection reasons.	3	10/03/2025	
REQ-6: Display_tours	The system should display three personalized tours based on the input of the user.	The tours should vary in nature and cost.	1	10/03/2025	
REQ-7: Book_tour	The system shall be able to book the chosen tour tickets within the system.	Software should be connected to tour ticketing systems.	1	10/03/2025	

Req#	Requirement	Comments	Priority	Date Rvwd	SME Reviewed / Approved
REQ-8: Internet_Site	The system shall be linked to the internet	The only way to make the system dynamic and responsive.	1	10/03/2025	
REQ-9: Customer_login	The system must store customer accounts and credentials.	Simple login form	1	10/03/2025	
REQ-10: Agent_login	The system must store agents' accounts and credentials.	Simple login form	1	10/03/2025	
REQ-11: Calculate_discount	The system shall offer the most loyal clients discounts according to the number of trips booked with the agency.	This is a reward feature for loyal customers and also a business strategy to make them pay more.	3	10/03/2025	
REQ-12: Package_management	The system shall give suggestions to the user on what items are necessary for their travel experience.	Further to the tour, additional experiences may be added.	3	10/03/2025	
REQ-13: Track_Now	Enable guardian to track child with both parties' consent taken before the trip has started	For school trips (parent can be guardian) or elderly trips (child can be guardian)	2	10/03/2025	
REQ-14: Contact_Agent	Customer must be able to contact an agent if faced with a specific question	Agent should give private advice and suggestions for tours	2	10/03/2025	
REQ-15: Contact_Security	Guardian must be able to contact security if the tracker is turned off or in case of security risks with the child.	Security is responsible to follow up on the case and if considered with high risk, police should be notified.	3	10/03/2025	
REQ-16: Gift_Card	Users should be able send each other gift cards through the software.		3	10/03/2025	
REQ-17: Review	After the trip finishes, the user can leave a review under each of the categories.		3	10/03/2025	

Req#	Requirement	Comments	Priority	Date Rvwd	SME Reviewed / Approved
REQ-18: Refund	In case of plane cancellation all options that can be refunded should be.			10/03/2025	
REQ-19: Cancelation	In case of reasonable explanation, the tour can be cancelled without any fines			10/03/2025	
REQ-20: Online Payment Methods	Visa Card, Paypal, Apple Pay			10/03/2025	
REQ-21: Map Display	Once the trip has started, the map of the city will be shown where all tour points are shown.			10/03/2025	
REQ-22: App_Feedback	After the trip, the user should give a small feedback for the app so that improvement is made when needed.		3	10/03/2025	
REQ-23: Waitlist	The client is automatically waitlisted if their booking request is fully booked.		2	10/03/2025	
REQ-24: Wheelchair Assistance	The client can require wheelchair assistance during their travels.			10/03/2025	
REQ-25: Description_per_step	During every booking process, the client has the option to add more details about their preferences.		2	10/03/2025	
REQ-26: Payement_Plans	There will be different payment plans so the users can pay in installments.			10/03/2025	
REQ-27: Email_Receipt	Generate receipt and send email.			10/03/2025	
REQ-28: ToDo_List	After the tour is fully booked a to-do list will be displayed until the date of the trip.	The todo list will remind the client about bringing their passport, visa or other documentations, luggage, phone, charger etc.		10/03/2025	

Req#	Requirement	Comments	Priority	Date Rvwd	SME Reviewed / Approved
REQ-29: **Car Rental**	If the customer does not want to travel by bus or taxi once he has arrived, they can choose to rent a car.			10/03/2025	
REQ-30: Weather_Alert	Users will be alerted in real-time for rough weather conditions.			10/03/2025	

3.2   Non-Functional Requirements

Category	Req#	Requirement	Comments	Priority	Date Reviewed	SME Reviewed / Approved
Security	**REQ-1:** Data_Encryption	The system should be secure and protect user data, including financial information.	The system will ask the user to provide a strong password, otherwise it will not be accepted.	1	10/03/2025	
	REQ-2: Two-factor_Authentic ation	System will require a double confirmation from the user to protect from data theft.	The system will be accessible only after the user has provided two or more pieces of evidence to the authentication mechanism.	1	10/03/2025	
	REQ-3: Fraud_Detection	System must flag suspicious transactions to prevent fraud.	In case of a suspicious activity from the user the system will automatically pend payment	1	10/03/2025	
	REQ-4: Safety_of_client	System client GPS tracking feature must be accessible at all times.	The location of the client will be known at all times for security reasons.	1	10/03/2025	
	REQ-5: Payment_Security_C ompliance	The system must process	The user credential will	1	10/03/2025	

		credit card payments through secured gateways.	be secure.			
Performance	**REQ-6:** Responsiveness	System should respond and handle user requests quickly.	Clients will not wait a long time to get	1	10/03/2025	
	REQ-7: Completion_time	Form completion time(e.g., for booking) should be easy and quick.	The system should work well and fast, without any difficulties.	1	10/03/2025	
	REQ-8: Scalability	System should handle high volume of users and transactions and accommodate future growth.		1	10/03/2025	
Compliance and legal	**REQ-9:** Age_requirenment	System must validate that the individual that is trying to create an account in the system must be over 18 years old.		1	10/03/2025	
	REQ-10: Data_deletion	Personal user data should be deleted after one year(except for financial transactions).		2	10/03/2025	
	REQ-11: Tracker_consent	Guarded individuals and guardians must sign a consent		1	10/03/2025	

		contract before going on the trip.				
	REQ-12: Personal_privacy	System deletes customer data related to trips one week after the trip has finished in order to guarantee privacy.		1	10/03/2025	
	REQ-13: Design	The design has to be simple and intuitive, following a systematic aesthetic.		2	10/03/2025	
	REQ-14: Accessibility	The system should be accessible to users with disabilities, including TTS and zooming options.		1	10/03/2025	
	REQ-15: Maintainability	The system should be easy to maintain and modify.		1	10/03/2025	
	REQ-16: Compatibility	The system should function on various operating systems and devices.		1	10/03/2025	
Usability	**REQ-17:** Interface	The software should be easy to use, efficient and should provide a good user		1	10/03/2025	

		experience for employees and customers.				
	REQ-18: Navigation	Should be easy to navigate for both first-time and frequent users.		1	10/03/2025	
	REQ-19: Keyboard-accessible	All buttons should be accessible from the keyboard.		2	10/03/2025	
	REQ-20: Shortcut_keys	The system should support shortcut keys for frequent actions.		3	10/03/2025	
	REQ-21: Autocorrection	The system should autocorrect and handle input mishaps(e.g., case sensitivity)		2	10/03/2025	
	REQ-22: Suggestions	The system should suggest correct values for input.		3	10/03/2025	

3.2.1 Product Requirements

Every functional and nonfunctional requirement, along with the requirements mentioned below, can be put under the product requirements category.

3.2.1.1   Usability Requirements

➔ Simple navigation: Booking a trip will be a simple step by step process.
➔ Forms that are easy to use: Information entry forms for reservations and travel should be straightforward.
➔ Accessibility: System must be easy to use and offer accessibility features (such as color filters for users who are colorblind) for people with impairments.

3.2.1.2   Performance Requirements

➔ Response time: The system ought to be quick to process transactions and provide search results.
➔ Scalability: The system must be able to effectively manage a large number of users and transactions. It ought to be built to handle future increases in usage.

3.2.1.3   Availability

➔ General availability requirements related to uptime
➔ Disaster recovery:
    ◆ Daily backup
➔ Monitoring and alerts
➔ Scalability

3.2.1.4   Security

➔ Data security: All user data, including financial data, must be safeguarded by the system. Credit card numbers and passwords are encrypted as part of this.
➔ User authentication: To avoid unwanted access, secure login procedures have to be put in place.
➔ System authorization: Access controls ought to be enforced by the system according to user roles and permissions.

3.2.2   Organizational Requirements

➔ Data Protection & Privacy
    ◆ Compliance with Data Protection Laws
    ◆ Right to Access and Erasure
    ◆ Secure Payment Processing
➔ Business Licensing
    ◆ Validation of Business License
➔ Consumer Rights
    ◆ Terms and Conditions
    ◆ Refund and Cancellation
➔ Employee Regulations
    ◆ Employee Records and Contracts
➔ Accessibility Laws
    ◆ Website Accessibility
    ◆ Non-Discriminatory Booking

3.2.3   External Requirements

➔ Legal and Regulatory Requirements
➔ Ethical Requirements