

Travel Agency System Requirements Specification

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Executive Summary

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.

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.

Product Context

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

- **Third-party travel Application** (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).

User Characteristics

Customers

- **Types:** Students, faculty, business professionals, and tourists
- **Experience:** Varies between experienced and non-experienced tourists
- **Technical Expertise:** Only basic internet and navigation skills needed
- **General Characteristics:**
 - ◆ Travel Enthusiastic
 - ◆ Organized

Travel Agents

- **Types:** Customer service representatives, travel consultants, tour operators.
- **Experience:** Trained professionals familiar with travel regulations.
- **Technical Expertise:** Basic technical knowledge
- **General Characteristics:**
 - ◆ Great communication skills
 - ◆ Must have knowledge in all touristic guide assets

Security

- **Types:** All members of the security staff
- **Experience:** Trained professionals that follow a certain protocol
- **Technical Expertise:** Basic technical knowledge
- **General Characteristics:**
 - ◆ Cold-blooded
 - ◆ Disciplined

Guardian

- **Types:** Teacher, Parent, Guardian
- **Experience:** None needed
- **Technical Expertise:** Basic technical knowledge
- **General Characteristics:**
 - ◆ Trusted

Field Agent

- **Types:** Local, International
- **Experience:** Trained professionals familiar with the requirements an option needs to have
- **Technical Expertise:** Basic technical knowledge
- **General Characteristics:**
 - ◆ Knowledge in all touristic areas
 - ◆ Disciplined

Assumptions

- User has an electronic device.
- Stable internet from our users.
- Enough cloud storage.

Constraints and Dependencies

Requirements

Product Requirements

Functional Requirements

Req. Grouping	Req#	Requirement	Comments	Priority	Date Rvwd	SME Reviewed / Approved
Homepage	REQ-1:	Display_trips	The system shall display all trips reserved with the agency and keep track of the dates.	2	3/10/2025	
	REQ-2:	Gift_Card	Users should be able send each other gift cards through the software.	3	3/10/2025	
	REQ-3:	Calculate_discount	The system shall offer the most loyal clients discounts according to the number of trips booked with the agency.	3	3/10/2025	
	REQ-4:	Live_Assistance	The operator agent will receive notifications every time a customer needs assistance and be able to communicate in real time.	3	3/17/2025	
	REQ-5:	Contact_Security	Guardian must be able to contact security if the tracker is turned off or in case of security risks with the child.	3	3/10/2025	
	REQ-6:	Track_Now	Enables the specified client's guardian to track the client during their trip.	2	3/10/2025	
Manager	REQ-7:	Manage_Employees	The manager is able to create and delete accounts for the employees.	1	3/17/2025	

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Req. Grouping	Req#	Requirement	Comments	Priority	Date Rvwd	SME Reviewed / Approved
	REQ-8:	Gather_Statistics	The manager can see the expenses and the profits in any specified time range.	1	3/17/2025	
Post-Tour	REQ-9:	App_Feedback	After the trip, the user should give a small feedback for the app so that improvement is made when needed.	3	3/10/2025	
	REQ-10:	Review	After the trip finishes, the user can leave a review under each of the categories.	3	3/10/2025	
	REQ-11:	App_Feedback	After the trip, the user should give a small feedback for the app so that improvement is made when needed.	3	3/10/2025	
	REQ-12:	ToDo_List	After the tour is fully booked a to-do list will be displayed until the date of the trip.	2	3/10/2025	
	REQ-13:	Post travel packages	Agent must be able to add new options to the software regarding all touristic aspects (transportation, accommodation, guide)	1	3/10/2025	
Pre-tour	REQ-14:	Transportation	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.	3	10/03/2025	
	REQ-15:	Reserve_hotel	The system shall display the most suitable hotel according to customer needs.	2	10/03/2025	

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Req. Grouping	Req#	Requirement	Comments	Priority	Date Rvwd	SME Reviewed / Approved
	REQ-16:	Book tours	The system should display three personalized tours based on the input of the user and the user shall be able to book the chosen tour tickets within the system.	1	10/03/2025	
	REQ-17:	Payment_Plans	There will be different payment plans so the users can pay in installments.	3	3/10/2025	
	REQ-18:	Email_Receipt	Generate receipt and send confirmation email.	3	3/10/2025	
	REQ-19:	Description_per_step	During every booking process, the client has the option to add more details about their preferences.	2	3/10/2025	
	REQ-20:	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.	2	3/10/2025	
Registration and login	REQ-21:	User_register	The system must be able to store clients data into a long time database in order to keep track of client's history. The user shall be able to register an account or log into an existing one through other accounts such as Google.	1	10/03/2025	
	REQ-22:	User_Login	The user can log in because the system must store customer accounts and credentials.	1	03/10/2025	
Live ChatBox	REQ-23:	Live_ChatBox	Live assistants shall be notified in real time if a customer is in need of assistance and be able to assist him in the chat box provided.	1	03/17/2025	

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Req. Grouping	Req#	Requirement	Comments	Priority	Date Rvwd	SME Reviewed / Approved
Tour	REQ-24:	Weather_Alert	Users will be alerted in real-time for rough weather conditions.	3	3/10/2025	
	REQ-25:	Cancellation and Refund	In case of cancellations on our side, everything will be refunded to the customer.	3	3/10/2025	
	REQ-26:	Map_Display	Once the trip has started, the map of the city will be shown where all tour's points are shown.	2	3/10/2025	
travel agent	REQ-27:	Cancel_And_Refund_Customer_Trip	The agent should be able to cancel the customer booking upon authorization from the client.	1	3/17/2025	
	REQ-28:	Package_management	The agent must be able to edit and add new package options.	3	3/10/2025	
	REQ-29:	Modify_Customer_Trip	The agent should be able to modify the booking upon customer request, or when the customer doesn't know how to.	1	3/17/2025	
all staff	REQ-30:	View_Posted_Tours	Anyone that is logged in as a part of the staff can access any details about .	1	3/17/2025 ARTYU'5	
security	REQ-31:	Contact_Guardian	Security shall be able to contact the guardian in real time in order to handle any security situations of the customer.	1	3/17/2025	
	REQ-32:	Access_All_CustomerData	The security must be able to see the live location of the customer, all booking information of that trip, contact of the hotel, contact of the local police	1	3/17/2025	

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.	1	10/03/2025	
	REQ-2:	Two-factor_Authentication	System will require a double confirmation from the user to protect from data theft.	1	10/03/2025	
	REQ-3:	Fraud_Detection	System must flag suspicious transactions to prevent fraud.	1	10/03/2025	
	REQ-4:	Safety_of_client	System client GPS tracking feature must be accessible at all times.	1	10/03/2025	
	REQ-5:	Payment_Security_Compliance	The system must process credit card payments through secured gateways.	1	10/03/2025	t
Performance	REQ-6:	Responsiveness	System should respond and handle user requests quickly.	1	10/03/2025	
	REQ-7:	Completion_time	Form completion time(e.g., for booking) should be easy and quick.	1	10/03/2025	

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	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_requirement	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 contract before going on the trip.	1	10/03/2025	
	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	1	10/03/2025	


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			users with disabilities, including TTS and zooming options.			
	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 experience for employees and customers.	1	10/03/2025	
	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	

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	REQ-22:	Suggestions	The system should suggest correct values for input.	3	10/03/2025	
	REQ-23:	Internet_site	The system shall be linked to the internet		17/03/2025	
	REQ-24:	Online Payment Methods	Visa Card, Paypal, Apple Pay	1	10/03/2025	

User Hierarchy

LEGEND		
1.	Client	
2.	Manager	
3.	Travel Agent	
4.	Security Agent	
5.	Live Assistant	
6.	All Staff	

We have color-coded the functional requirement with the user hierarchy in the table above.

Product Requirements

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.

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.

Availability

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

→ Scalability

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.

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

External Requirements

- Legal and Regulatory Requirements
- Ethical Requirements

Diagrams

General Use Case Diagram (first draft)

