# Software Requirements and Design Document

# for

# Travel Ease

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**Organization**

**VALIT**

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# 1. Introduction

## 1.1 Purpose

The Tourism Management System provides a platform for booking and managing tourism-related activities. This document specifies the functional and non-functional requirements for the system's design and development.

## 1.2 Product Scope

The software aims to streamline the management of tourism services, offering functionality such as booking tours, generating reports, and providing custom tour packages.

## 1.3 Title

TravelEase

## 1.4 Objectives

To create an integrated platform for tourism services, enabling efficiency and convenience for users through seamless booking, payment, and support functionalities.

## 1.5 Problem Statement

Traditional tourism management systems often lack cohesion and integration, leading to inefficiencies. The Tourism Management System addresses this by providing a unified platform that minimizes manual intervention and enhances user experience.

# 2. Overall Description

## 2.1 Product Perspective

This system is a self-contained solution for managing tourism operations. It integrates with payment gateways, provides real-time updates, and ensures compatibility with existing infrastructure.

## 2.2 Product Functions

Major functionalities include:  
- Booking tours and custom packages  
- Managing user accounts and preferences   
- Generating comprehensive reports for administrators  
- Providing ratings and feedback mechanisms

## 2.3 List of Use Cases

Refer to the attached use case document for detailed descriptions.

1. Register
2. Login
3. View Booking
4. Book a Tour
5. Obtain Customer Support
6. Cancel Booking
7. Give Rating
8. View Available Tours
9. Request a Custom Tour
10. Respond to Queries
11. Manage Transport Providers
12. Manage Tours
13. View Stats

## 2.4 Extended Use Cases

**View Bookings**

|  |  |
| --- | --- |
| **Use Case Name** | View Bookings |
| **Level** | User Goal |
| **Scope** | Tourism Management System |
| **Primary Actor** | Tourist |
| **Stakeholders and Interest** | * Tourist: Wants to view details of their past and upcoming bookings. * System: Must provide accurate booking information. |
| **Preconditions** | The tourist is logged into the system and has existing bookings. |
| **Postconditions** | * Success: Tourist sees a list of all past and future bookings with relevant details. * Failure: Tourist is notified that no bookings are available. |
| **Main Success Scenario** | |
| **Actor Action (Or Intention)** | **System Responsibility** |
| Tourist logs into the system. |  |
| Tourist navigates to the “View Bookings” tab. |  |
|  | The system retrieves and displays a list of all bookings related to the user. |
| Tourist views all the bookings and can choose a certain action he wants to perform. |  |
| **Extensions** | If no bookings exist, the system displays a message saying "No bookings found." |

**Book Tour:**

|  |  |
| --- | --- |
| **Use Case Name** | Book a Tour |
| **Level** | User Goal |
| **Scope** | Tourism Management System |
| **Primary Actor** | Tourist |
| **Stakeholders and Interest** | * Tourist: Wants to book a tour based on their preferences. * System: Must accurately confirm bookings. |
| **Preconditions** | The tourist is logged in and has chosen a tour package. |
| **Postconditions** | * Success: The tour is booked, and confirmation is sent to the tourist. * Failure: The system displays an error message if booking cannot be completed. |
| **Main Success Scenario** | |
| **Actor Action (Or Intention)** | **System Responsibility** |
| Tourist navigates to the all-tour tab. |  |
|  | System retrieves all the tours from the database and show it in the tab view. |
| Tourist view all the tours and choose a specific tour. |  |
|  | System retrieves the description for the tour selected and show on the tab. |
| Tourist view all the description for the tour. |  |
| Tourist proceeds to book the tour. |  |
|  | System shows the payment tab to pay the amount for the booking. |
| Tourist enter card details and select make payment option. |  |
|  | System confirms the payment and add the tour booking in the booking tab. |
| **Extensions** | If the tour is fully booked, the system notifies the tourist and suggests alternative options. |

**Cancel Tour Booking**

|  |  |
| --- | --- |
| **Use Case Name** | Cancel Tour Booking |
| **Level** | User Goal |
| **Scope** | Tourism Management System |
| **Primary Actor** | Tourist |
| **Stakeholders and Interest** | * Tourist: Wants to cancel a previously booked tour. * System: Ensures cancellation is processed and any applicable refunds are issued. |
| **Preconditions** | The tourist has a valid booking. |
| **Postconditions** | * Success: The booking is canceled, and a refund is initiated if applicable. * Failure: The system notifies the tourist if cancellation is not possible. |
| **Main Success Scenario** | |
| **Actor Action (Or Intention)** | **System Responsibility** |
| Tourist navigates to the all booking tab. |  |
|  | System shows all the booking related to the specific Tourist |
| Tourist selects the cancel booking button for a specific booking. |  |
|  | The system processes the cancellation refund the payment to the user. |
|  | The payment is added to the wallet of the tourist. |
| **Extensions** | If the cancellation window has passed, the system informs the tourist that cancellation is not possible. |

**Make Payment**

|  |  |
| --- | --- |
| **Use Case Name** | Make Payment |
| **Level** | User Goal |
| **Scope** | Tourism Management System |
| **Primary Actor** | Tourist |
| **Stakeholders and Interest** | * Tourist: Wants to complete payment for a booked tour. * Payment Processor: Ensures secure handling of the transaction. |
| **Preconditions** | The tourist has a pending booking that requires payment. |
| **Postconditions** | * Success: Payment is processed, and booking is confirmed. * Failure: Payment is not processed, and the tourist is notified. |
| **Main Success Scenario** | |
| **Actor Action (Or Intention)** | **System Responsibility** |
| Tourist selects a payment for a tour. |  |
|  | System shows the form to enter payment details |
| Tourist enters payment details. |  |
| Tourist select the make payment button. |  |
|  | The system processes the payment. |
|  | A confirmation is sent to the tourist, and the booking is finalized. |
| **Extensions** | If payment fails, the system provides an error message and prompts the user to retry. |

**Give Rating**

|  |  |
| --- | --- |
| **Use Case Name** | Give Feedback |
| **Level** | User Goal |
| **Scope** | Tourism Management System |
| **Primary Actor** | Tourist |
| **Stakeholders and Interest** | * Tourist: Wants to provide feedback about a completed tour. * System: Records feedback for future analysis. |
| **Preconditions** | The tourist has completed a tour and is logged in |
| **Postconditions** | * Success: Feedback is recorded successfully. * Failure: Tourist is notified if the feedback submission fails. |
| **Main Success Scenario** | |
| **Actor Action (Or Intention)** | **System Responsibility** |
| Tourist navigates to the All booking tab. |  |
|  | System shows the all booking related to the specific tourist. |
| Tourist view all the booking and select give rating for the tour that is completed. |  |
|  | System shows the form to give rating. |
| Tourist fill the from and proceed to submit the form. |  |
|  | System records the feedback and save it in the database. |
| **Extensions** | If feedback fails to submit, the system displays an error and prompts the user to retry. |

**View Available Tours**

|  |  |
| --- | --- |
| **Use Case Name** | View Available Tours |
| **Level** | User Goal |
| **Scope** | Tourism Management System |
| **Primary Actor** | Tourist |
| **Stakeholders and Interest** | * Tourist: Wants to browse available tours and make decisions. * System: Displays up-to-date tour packages. |
| **Preconditions** | Tours are available in the system. |
| **Postconditions** | * Success: A list of available tours is displayed. * Failure: The system notifies the tourist if no tours are available. |
| **Main Success Scenario** | |
| **Actor Action (Or Intention)** | **System Responsibility** |
| Tourist navigates to the “View Available Tours” section. |  |
|  | The system displays a list of available tours with details. |
| **Extensions** | If no tours are available, the system displays a message saying "No tours available at this time." |

**Refund Payment**

|  |  |
| --- | --- |
| **Use Case Name** | Refund Payment |
| **Level** | User Goal |
| **Scope** | Payment System |
| **Primary Actor** | Tourist |
| **Stakeholders and Interest** | * Tourist: Wants a refund for a canceled booking. * Payment Processor: Ensures secure handling of the refund transaction. |
| **Preconditions** | The tourist has canceled a booking that qualifies for a refund. |
| **Postconditions** | * Success: Refund is processed, and confirmation is sent. * Failure: The system notifies the tourist if the refund cannot be processed. |
| **Main Success Scenario** | |
| **Actor Action (Or Intention)** | **System Responsibility** |
| Tourist select the all booking tab. |  |
|  | System shows the all booking related to the specific tourist. |
| Tourist view all the booking and select cancel booking for a tour. |  |
|  | System confirms the cancel booking and update the wallet of the customer with refunded amount. |
| Extensions | If the refund fails, the system displays an error message and prompts the user to contact support. |

**Generate Reports**

|  |  |
| --- | --- |
| **Use Case Name** | Generate Reports |
| **Level** | Admin Goal |
| **Scope** | Tourism Management System |
| **Primary Actor** | Administrator |
| **Stakeholders and Interest** | * Administrator: Needs insights on bookings, revenue, and performance. * System: Generates accurate and up-to-date reports. |
| **Preconditions** | The system contains data on bookings, payments, and tours |
| **Postconditions** | * Success: Reports are generated and available for review. * Failure: The system notifies the administrator if reports cannot be generated. |
| **Main Success Scenario** | |
| **Actor Action (Or Intention)** | **System Responsibility** |
| Admin selects a dashboard tab |  |
|  | The system generates the requested report. |
| Admin reviews the generated report. |  |
| **Extensions** | If no data is available for the report, the system displays a message indicating no data is found. |

**Manage Transport Provider**

|  |  |
| --- | --- |
| **Use Case Name** | Manage Transport Provider |
| **Level** | Admin Goal |
| **Scope** | Tourism Management System |
| **Primary Actor** | Administrator, Transport Provider |
| **Stakeholders and Interest** | * Administrator: Ensures transport services are available and managed efficiently. * Transport Provider: Provides services as part of the tour package. * System: Tracks and updates transport provider information. |
| **Preconditions** | Transport providers are registered in the system. |
| **Postconditions** | * Success: Transport provider information is updated or maintained. * Failure: The system notifies the administrator of any issues. |
| **Main Success Scenario** | |
| **Actor Action (Or Intention)** | **System Responsibility** |
| Admin open the transport provider tab |  |
|  | System show tab where there are options to Add, Remove, Delete, edit a transport provider. |
| The admin selects the specific task he wants to perform. |  |
|  | The system shows the form/tab to make the change. |
| Admin enter the new data he wants to enter |  |
|  | The system validates the input and checks for completeness. |
|  | System makes the change in the database and proceed to show the changes |
| **Extensions** | If the provider is not found, the system displays an error and prompts for a retry. |

**Request Custom Tour Package**

|  |  |
| --- | --- |
| **Use Case Name** | Request Custom Tour Package |
| **Level** | Customer Goal |
| **Scope** | Tourism Management System |
| **Primary Actor** | Customer |
| **Stakeholders and Interest** | * System Administrator: May need to oversee the system's performance and ensure custom requests are handled properly. * Customer: Wants a personalized travel experience that fits their specific preferences, such as destinations, activities, budget, and dates. |
| **Preconditions** | * The user must be logged into their account. * The system should have a predefined interface for submitting custom requests. |
| **Postconditions** | * The custom tour request is successfully submitted. * The admin operator may follow up with a detailed proposal, and the request is stored in the system for future reference. |
| **Main Success Scenario** | |
| **Actor Action (Or Intention)** | **System Responsibility** |
| The user navigates to the "Request Custom Tour" section from their dashboard or the main menu. |  |
|  | The system presents a form where the user can specify their desired tour details |
| The user fills out the form and submits the request. |  |
|  | System confirm the request and save it in the database for the admin to respond. |
| **Extensions** | If the user provides incomplete or invalid information  1. The system highlights the errors and prompts the user to correct them. |

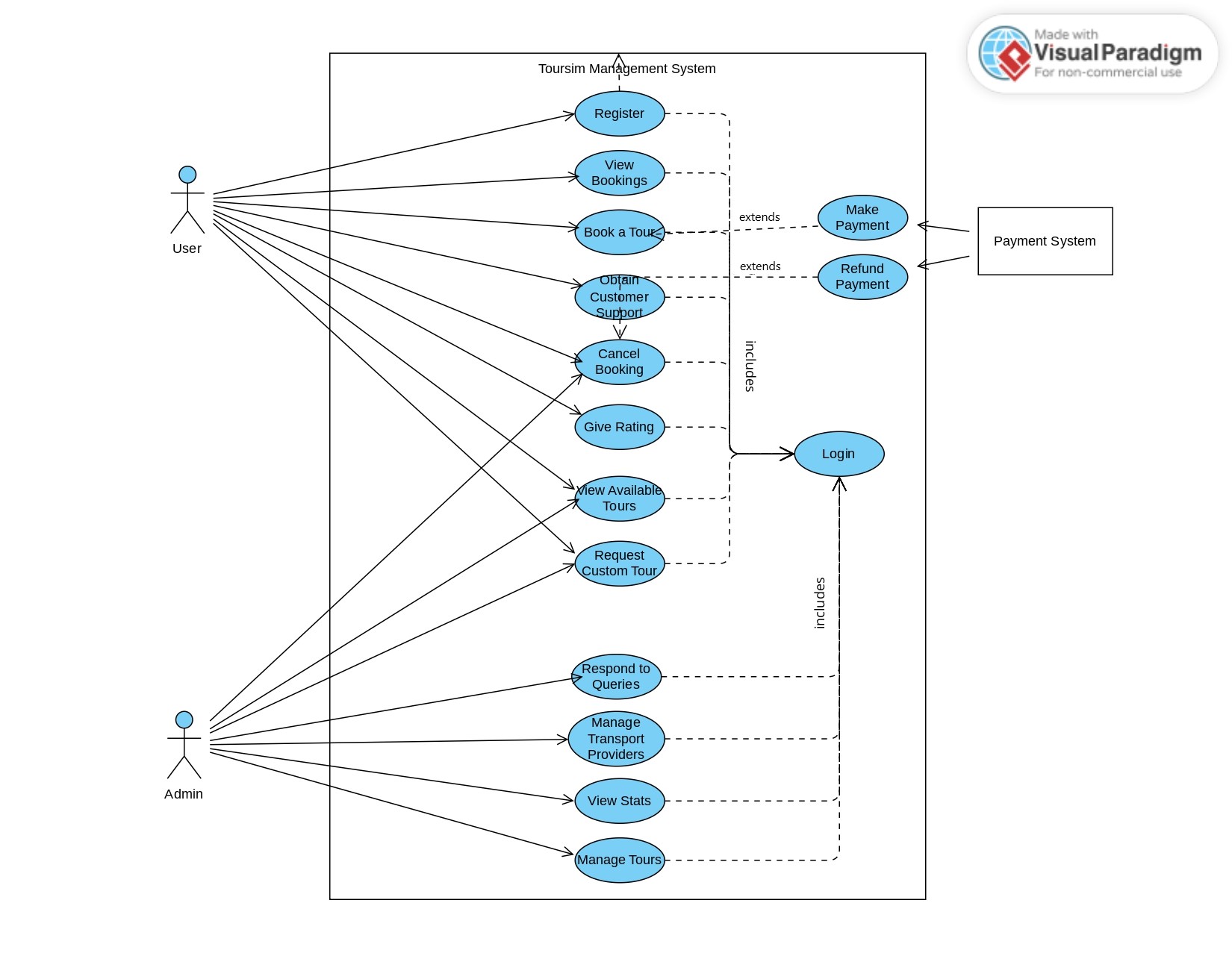
**Manage Tours**

|  |  |
| --- | --- |
| **Use Case Name** | Manage Tours |
| **Level** | Admin Goal |
| **Scope** | Tourism Management System |
| **Primary Actor** | Admin |
| **Stakeholders and Interest** | * Customer: Wants to view available tours and book them, trusting that the information is accurate and up-to-date. * Transport Provider: Who want to know the location of all next added or existing tour so he can manage transport facility |
| **Preconditions** | * The admin must be logged into the system with the necessary permissions to manage tours. * The system must already have a list of tour packages that the admin can manage. |
| **Postconditions** | * The tour is successfully created, updated, or removed. * Changes are reflected immediately and visible to tourists. |
| **Main Success Scenario** | |
| **Actor Action (Or Intention)** | **System Responsibility** |
| The admin navigates to the "Manage Tours" section from their dashboard. |  |
|  | System show tab where there are options to Add, Remove, Delete, edit tour. |
| The admin selects the specific task he wants to perform. |  |
|  | The System shows the required tab to perform the task. |
| The admin submits the change. |  |
|  | The system validates the input and checks for completeness. |
|  | System makes the change in the database and proceed to show the changes |
| **Extensions** | If the user provides incomplete or invalid information  1. The system highlights the errors and prompts the user to correct them. |

**Obtain Customer Support**

|  |  |
| --- | --- |
| **Use Case Name** | Obtain Customer Support |
| **Level** | User Goal |
| **Scope** | Tourism Management System |
| **Primary Actor** | Tourist |
| **Stakeholders and Interest** | * Tourist: Wants assistance for booking or related issues. * System: Must facilitate efficient communication with the support team. |
| **Preconditions** | The tourist is logged in and has access to customer support. |
| **Postconditions** | * Success: Tourist receives the required support. * Failure: Support is unavailable, and the system notifies the tourist. |
| **Main Success Scenario** | |
| **Actor Action (Or Intention)** | **System Responsibility** |
| Tourist navigates to the “Customer Support” section. |  |
|  | The system presents a contact form to enter the message. |
| Tourist enter the title and description to the query. |  |
| Tourist selects the submit query button to submit the customer support message. |  |
|  | System validates the message and store it in the database for admin to respond to the query. |
| **Extensions** | If no agents are available, the system logs the query and informs the tourist of the expected response time. |

## 2.5 Use Case Diagram



# 3. Other Nonfunctional Requirements

## 3.1 Performance Requirements

The system should handle multiple users with a quick response time for all key operations.

## 3.2 Safety Requirements

The software ensure that all information related to user if safe.

## 3.3 Security Requirements

The system should employ user authentication and role-based access controls to safeguard sensitive information.

## 3.4 Software Quality Attributes

Key attributes include:  
- Reliability: Ensures consistent uptime and error-free operations  
- Maintainability: Easy to update and extend functionality  
- Usability: Intuitive interfaces for all user roles

## 3.5 Business Rules

Administrative users can manage tours, while regular users are restricted to booking and feedback functions.

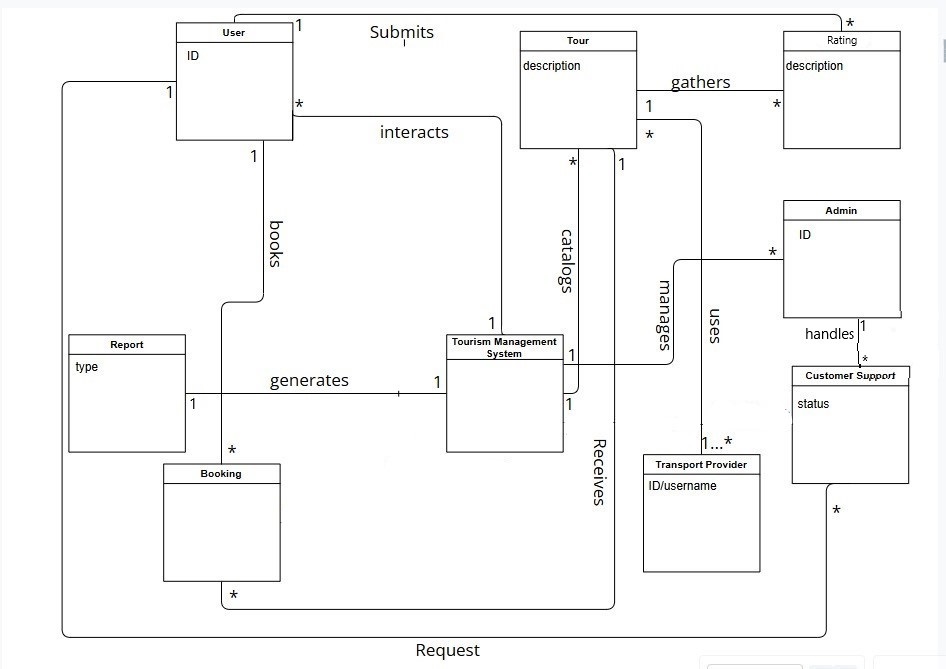
## 3.6 Operating Environment

The software will operate on local-based servers with a standard Windows OS and compatibility with modern desktops.

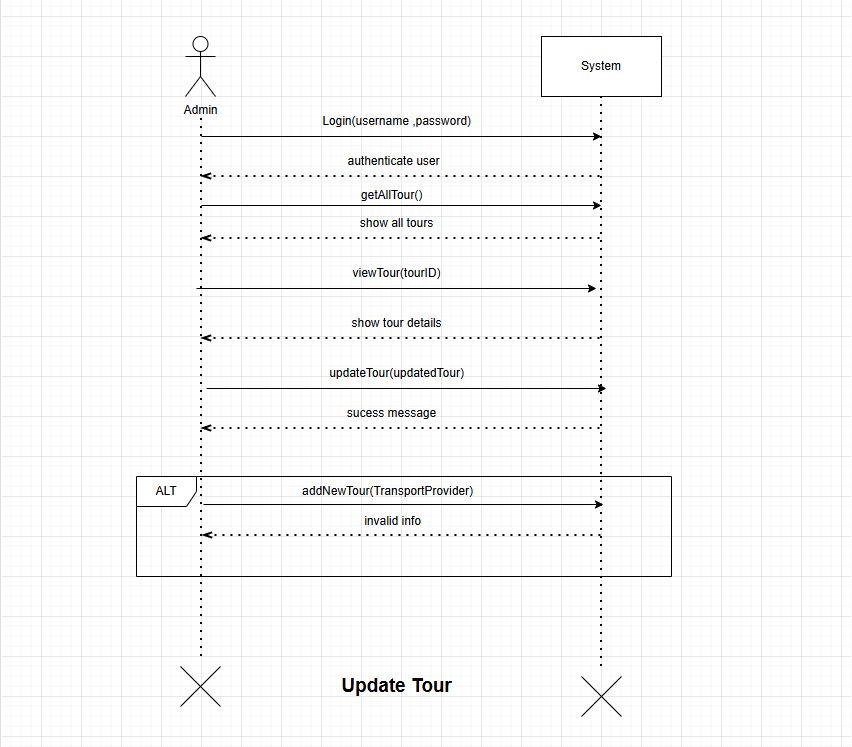
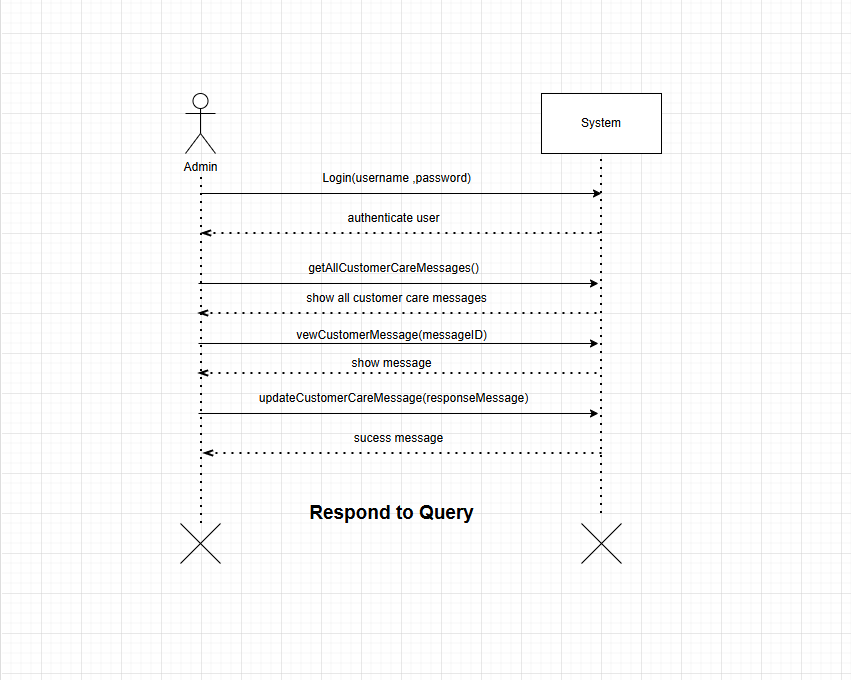
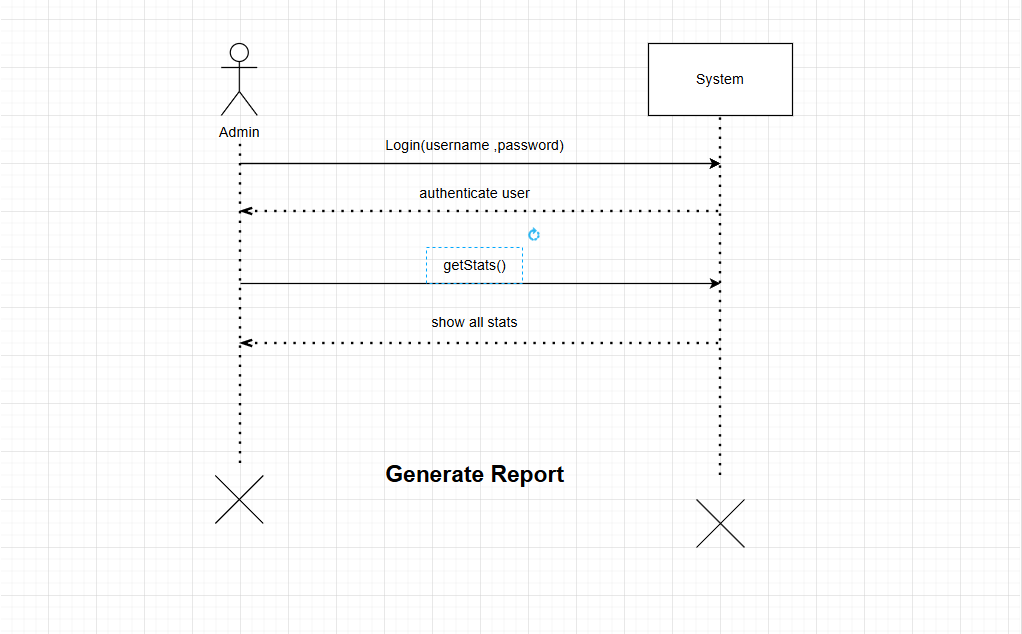
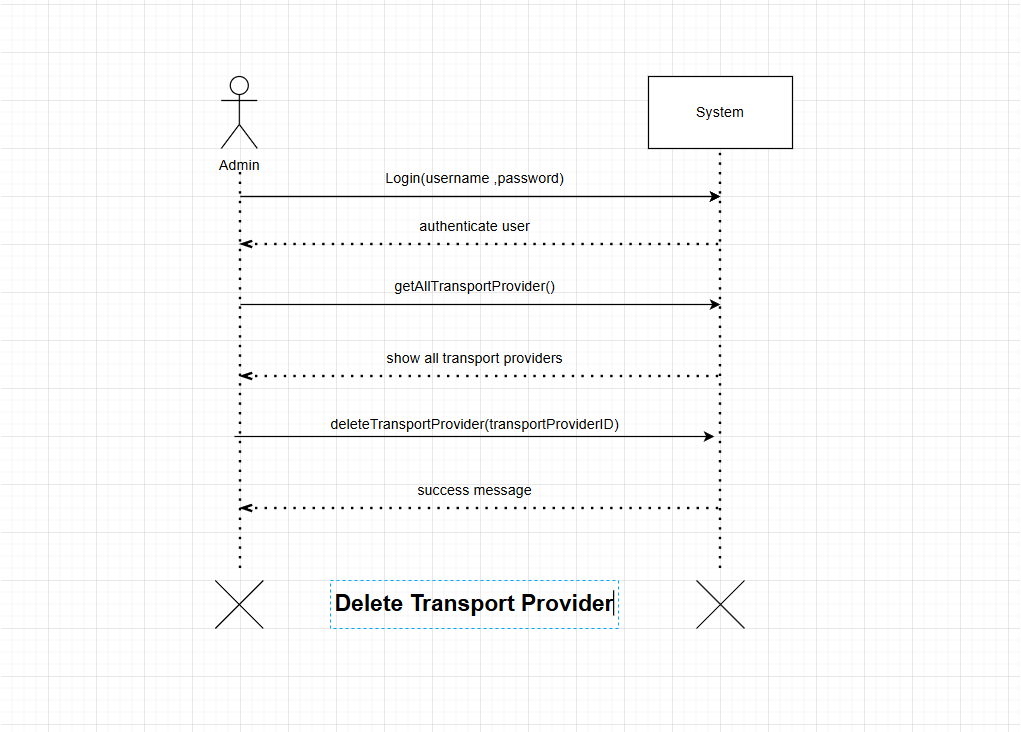
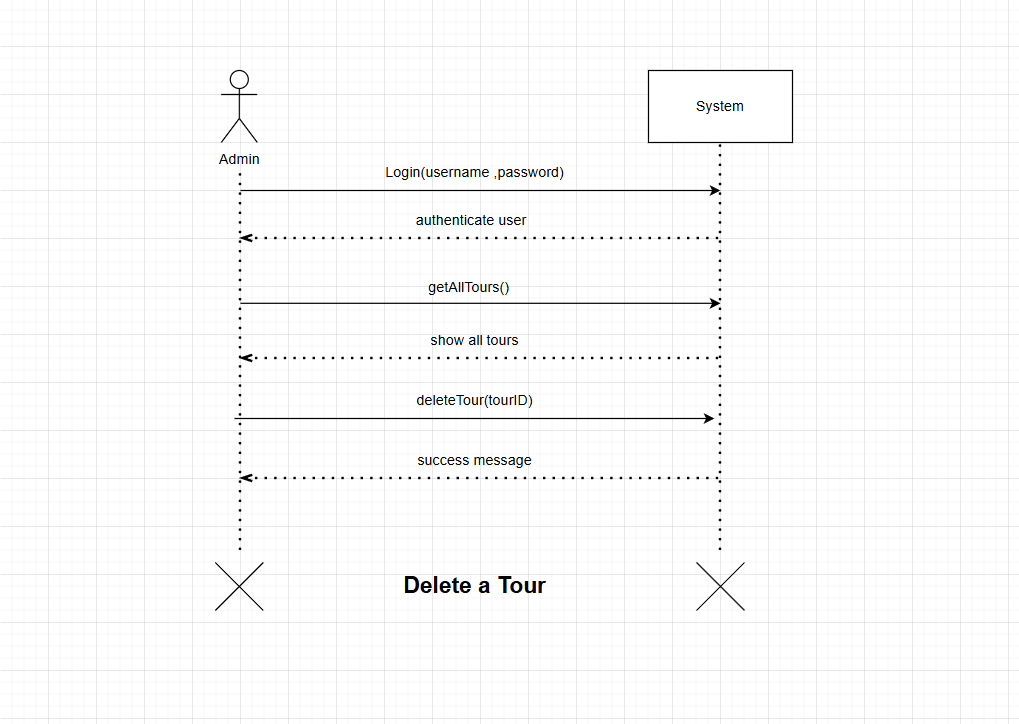
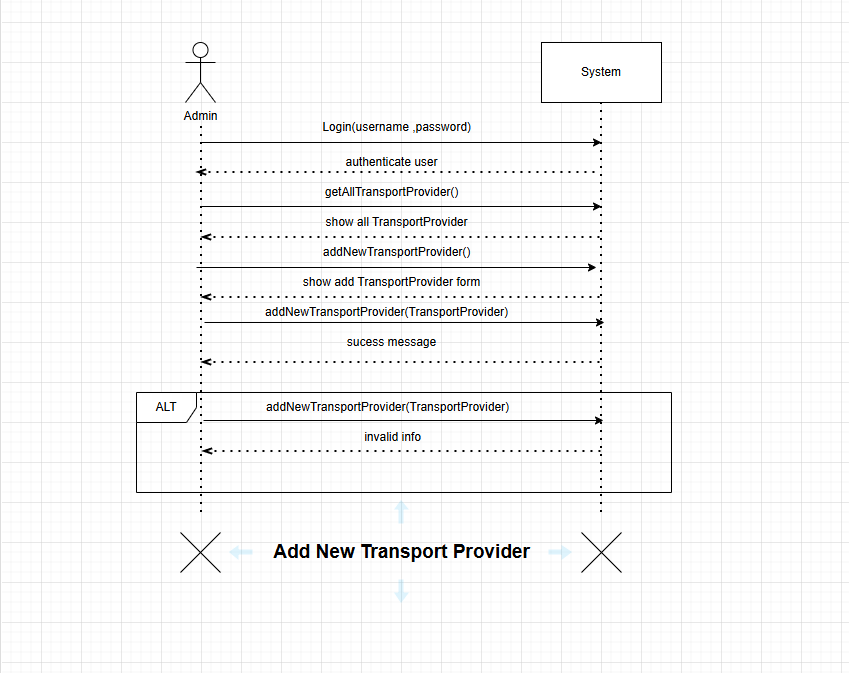
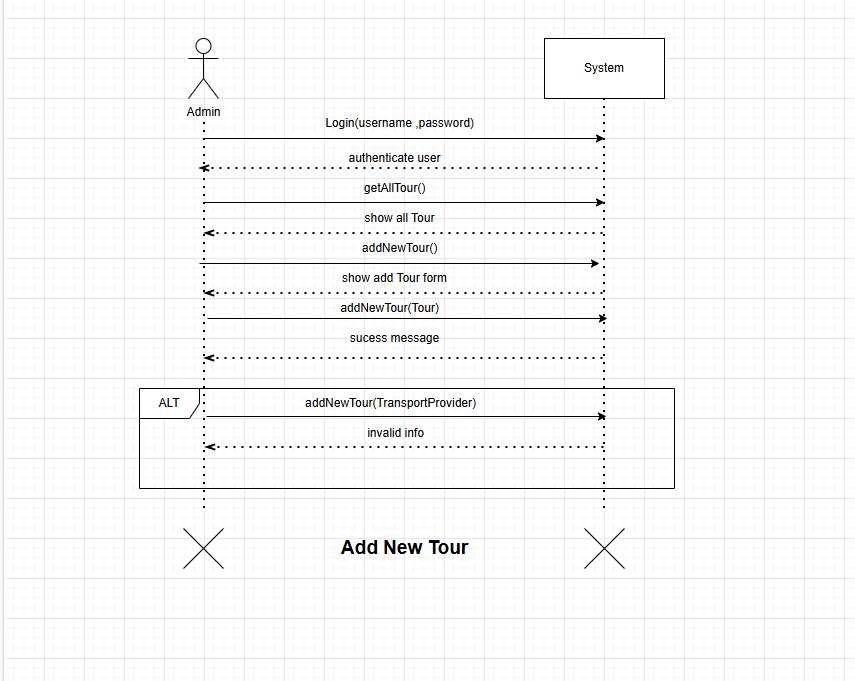
## 3.7 User Interfaces

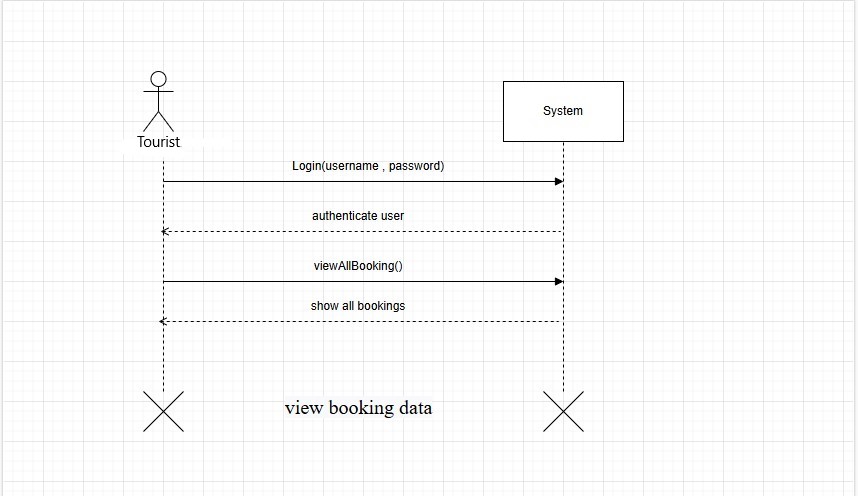
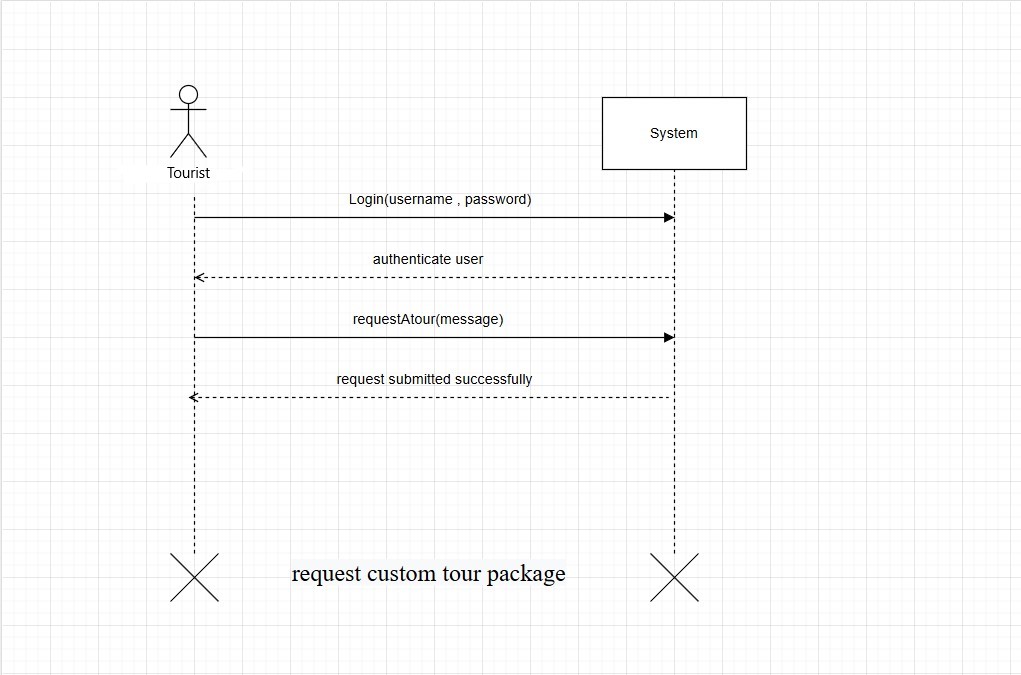
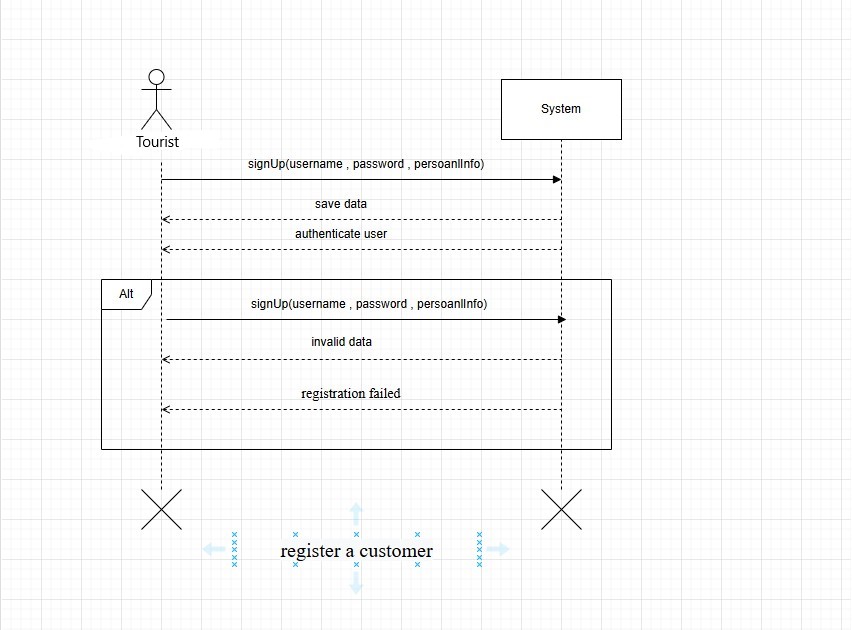
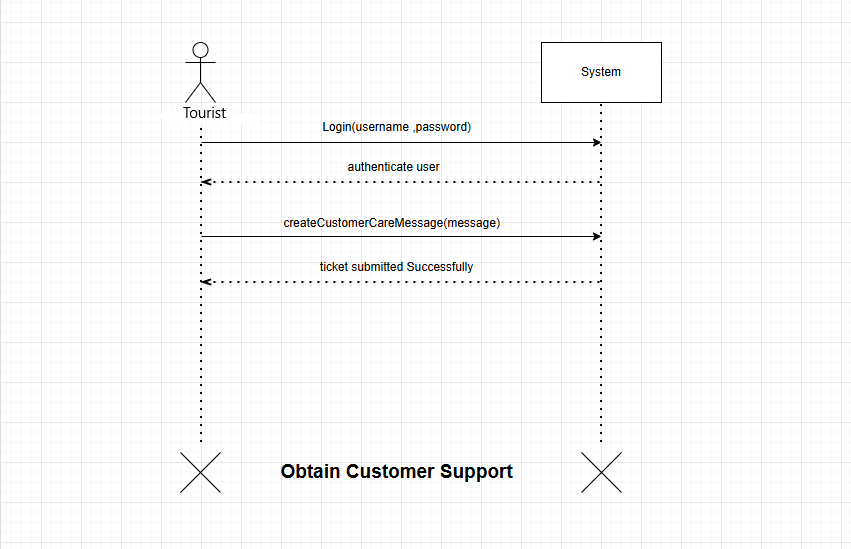
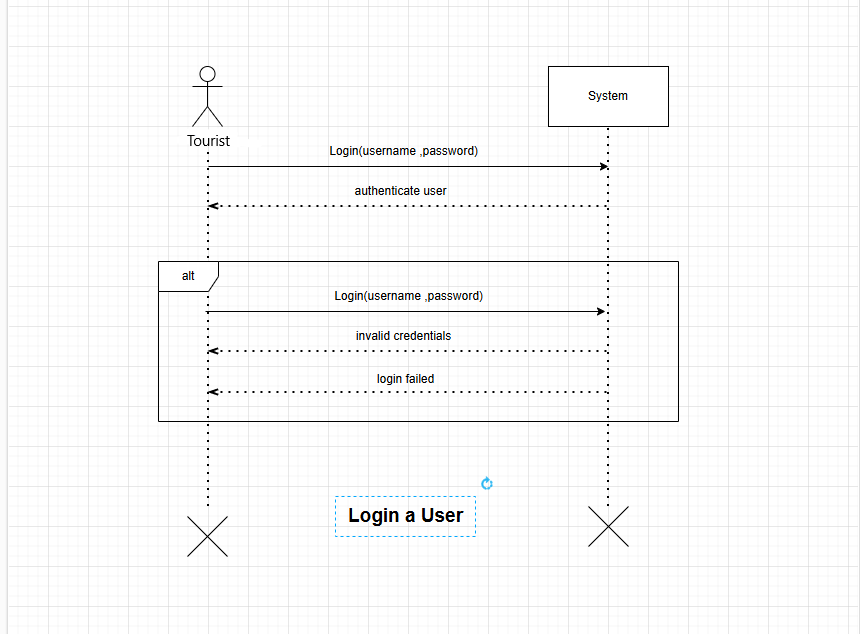
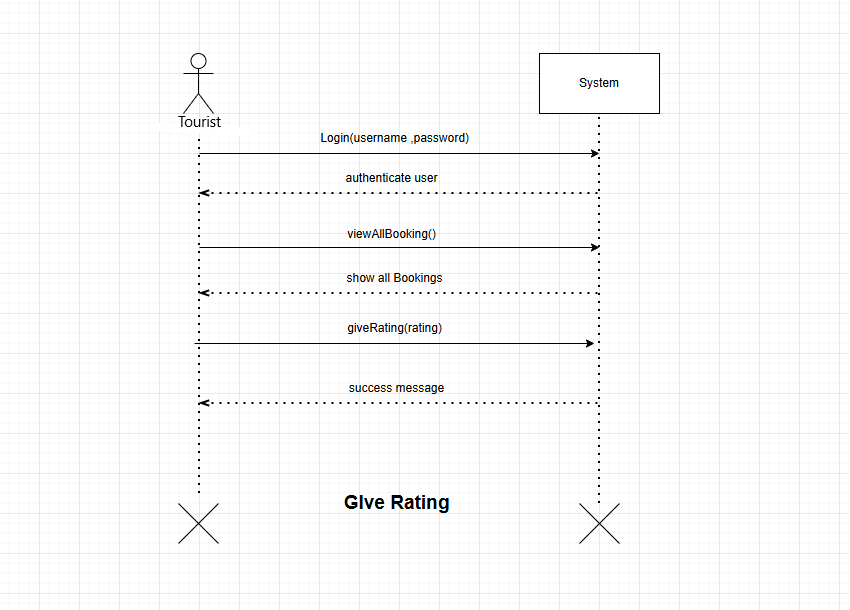
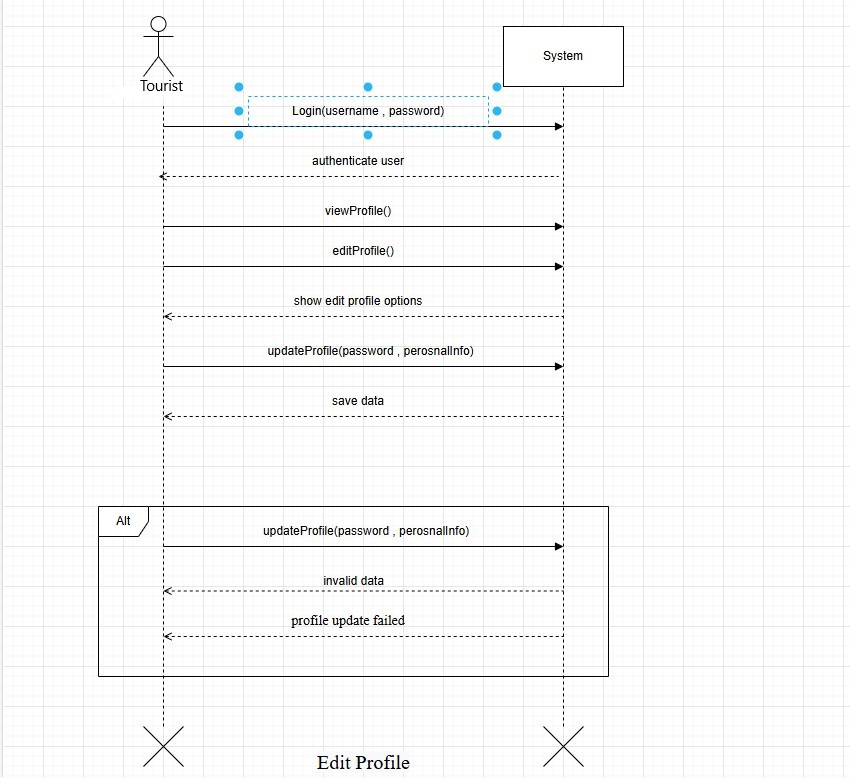
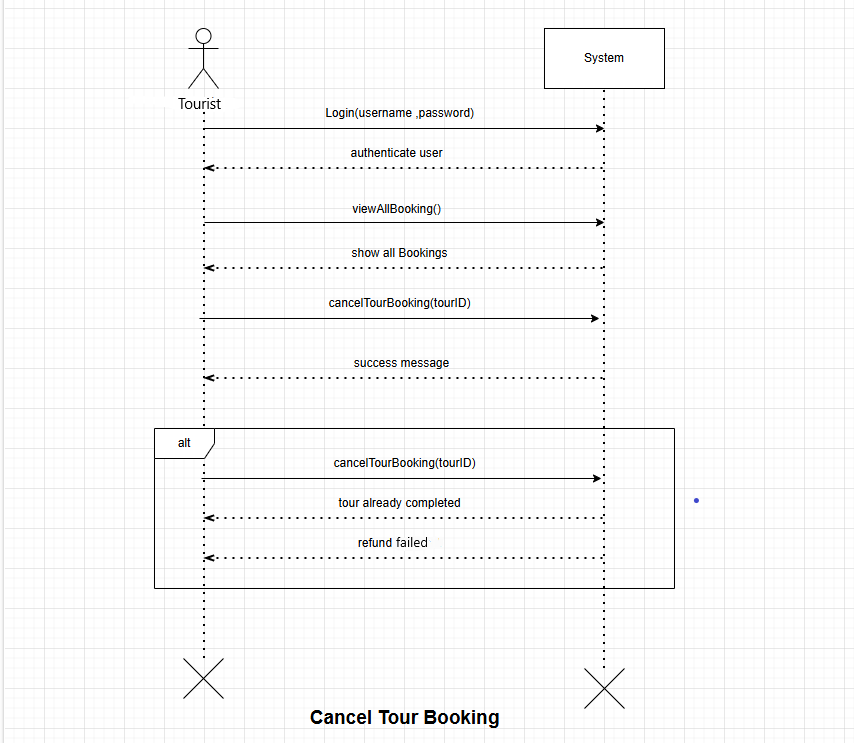
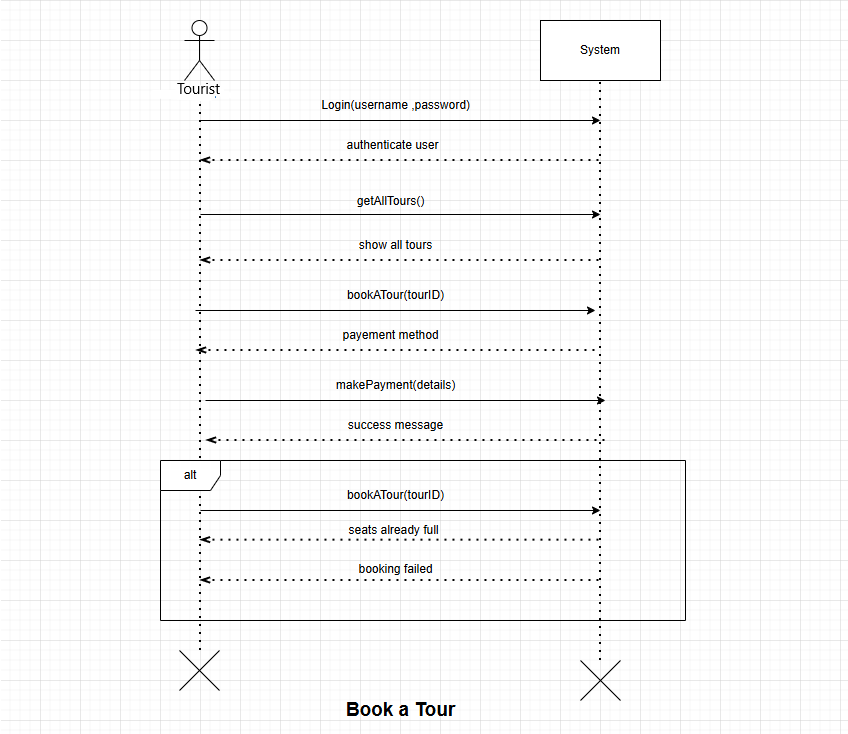
The user interface will feature a responsive design compatible with only desktop devices, adhering to modern UI/UX standards.

# Domain Model

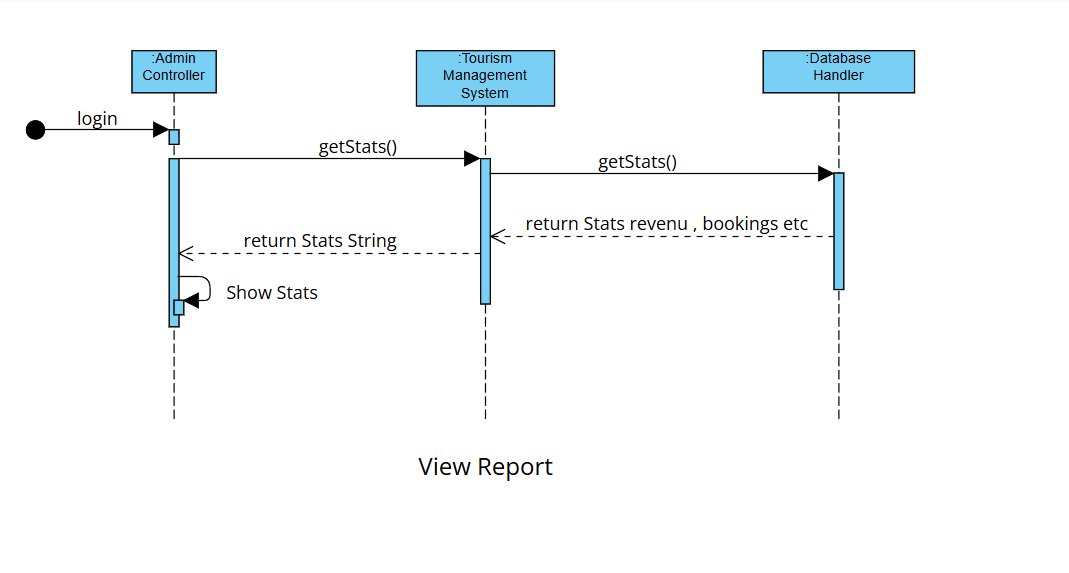
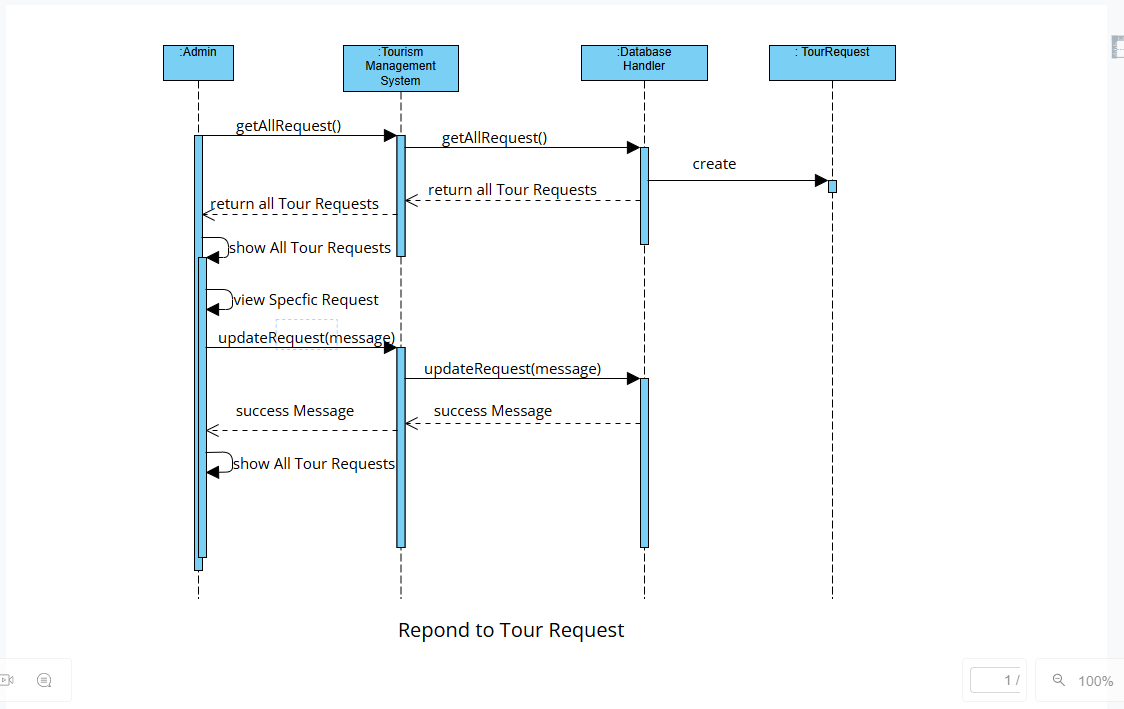
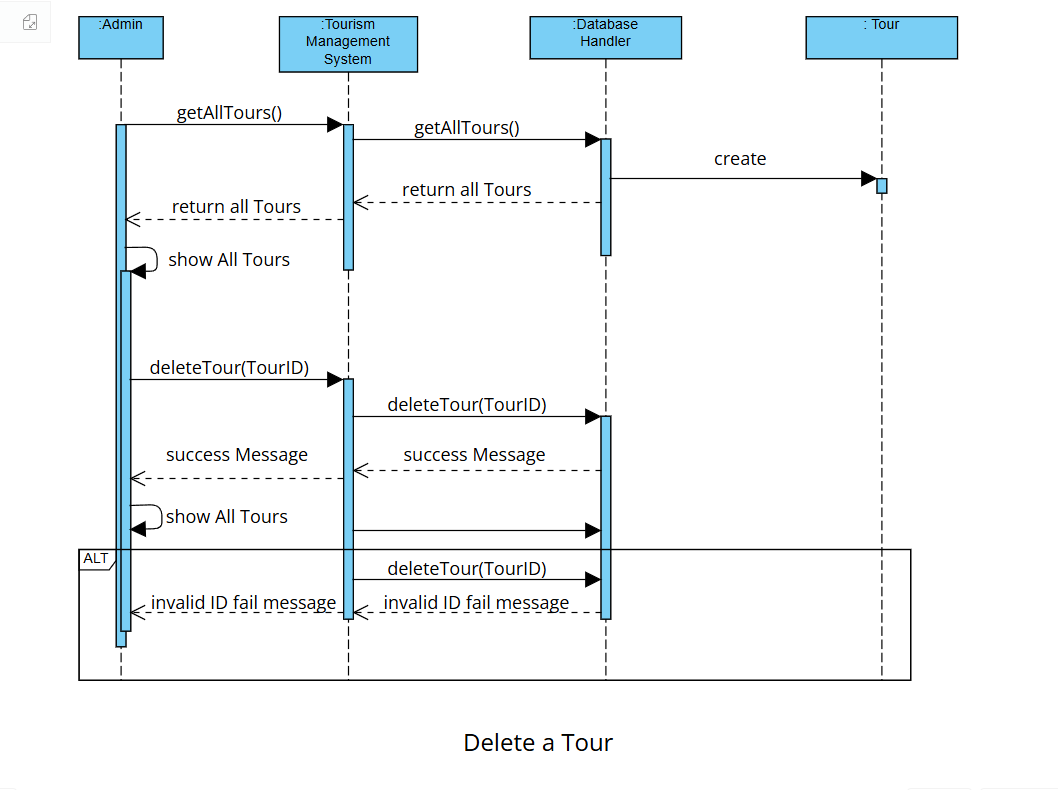
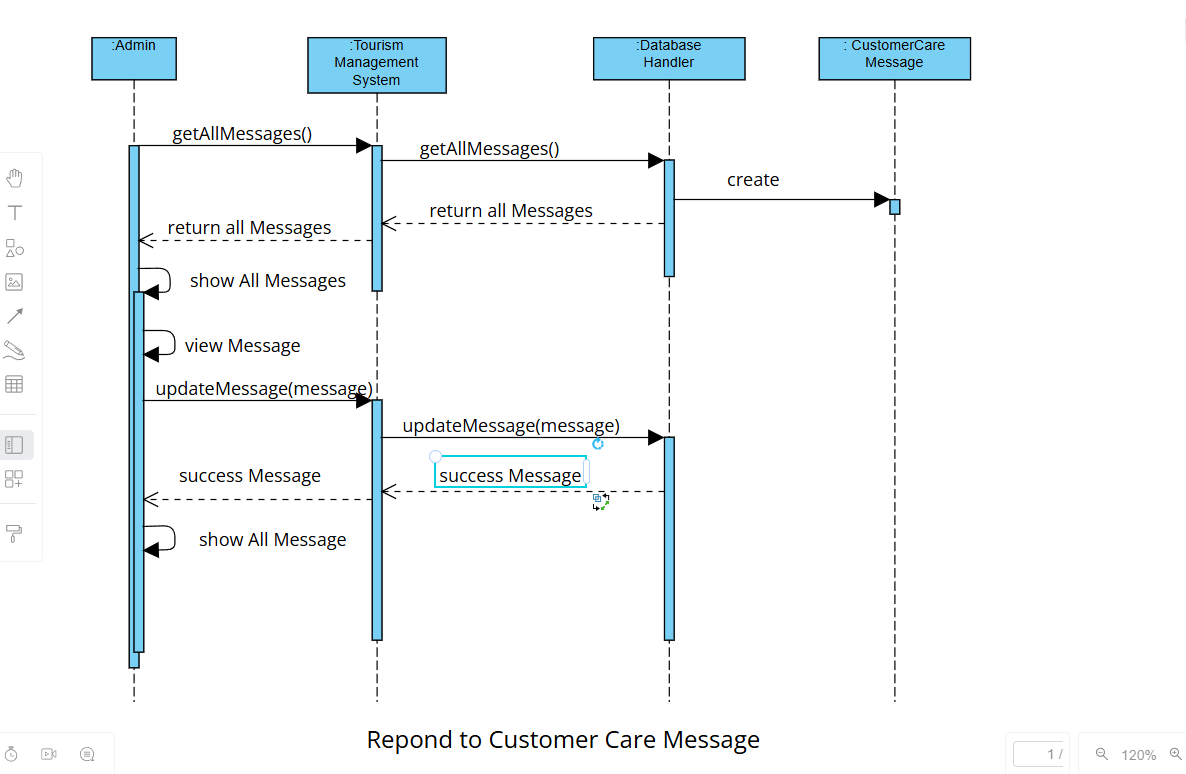
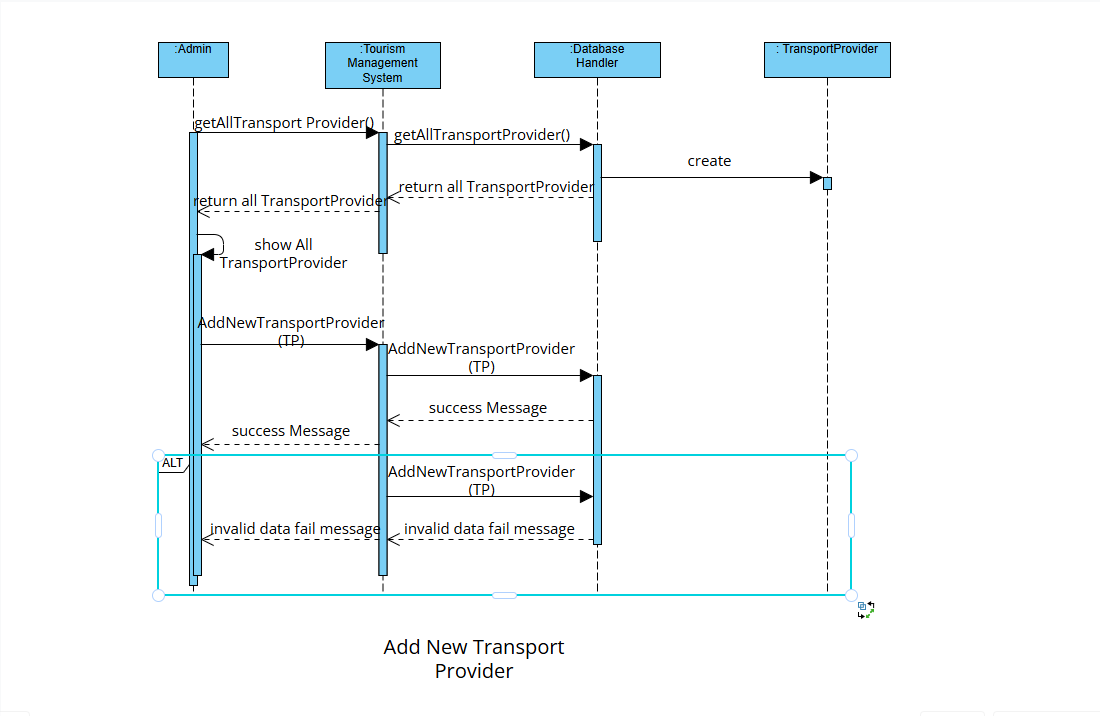
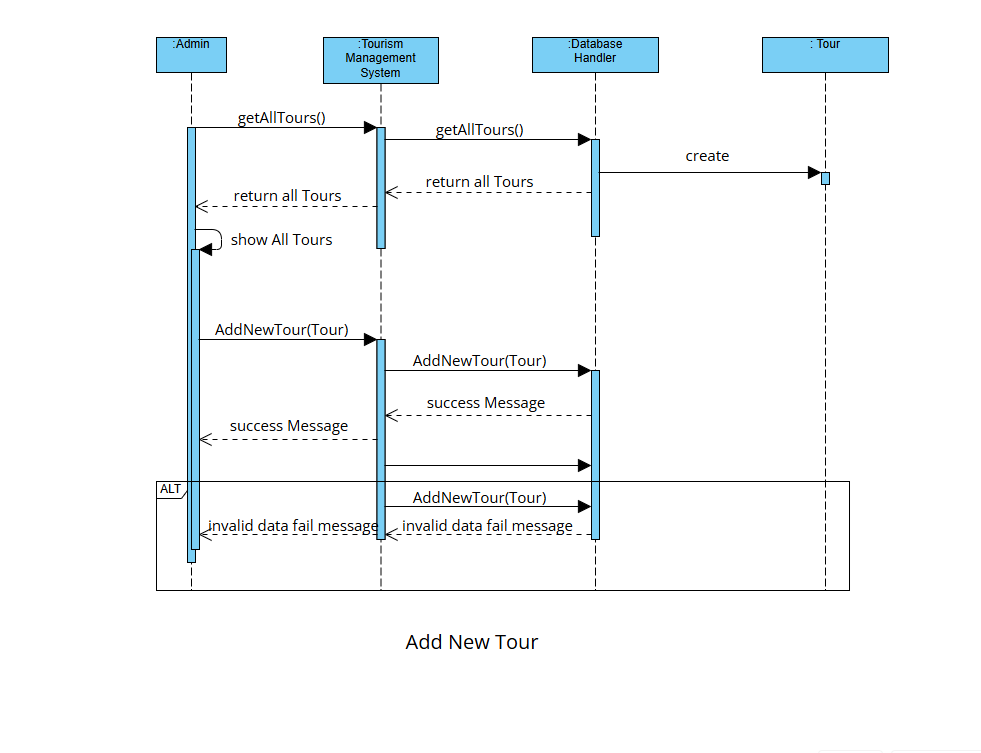


# System Sequence Diagram

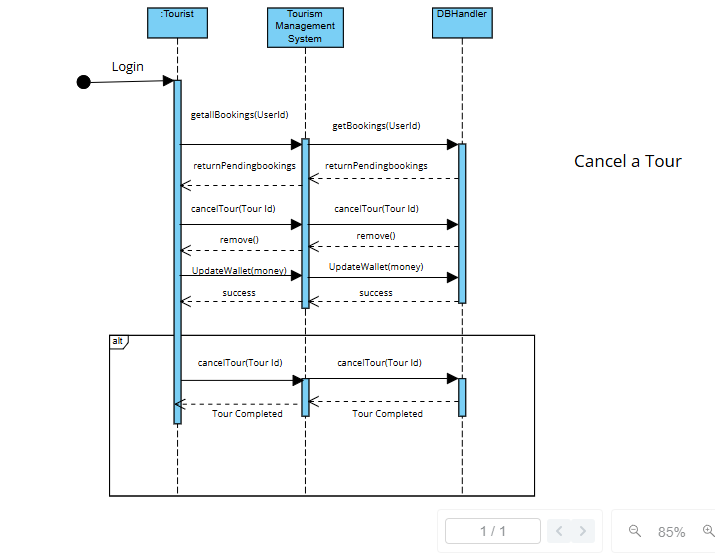
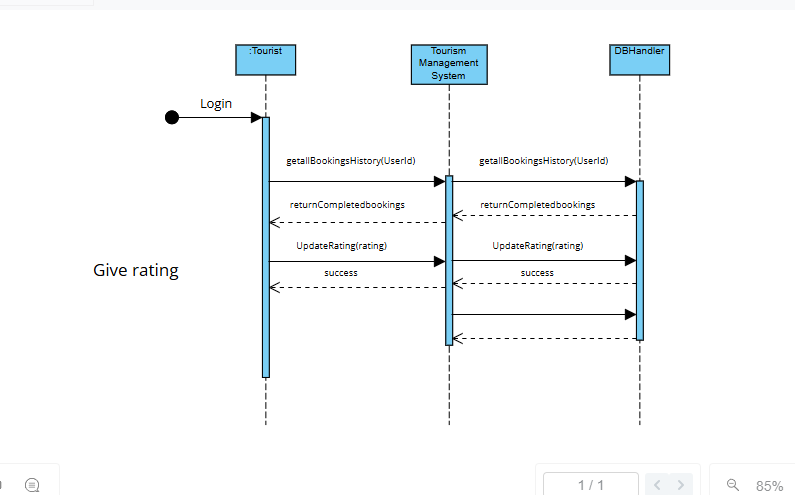
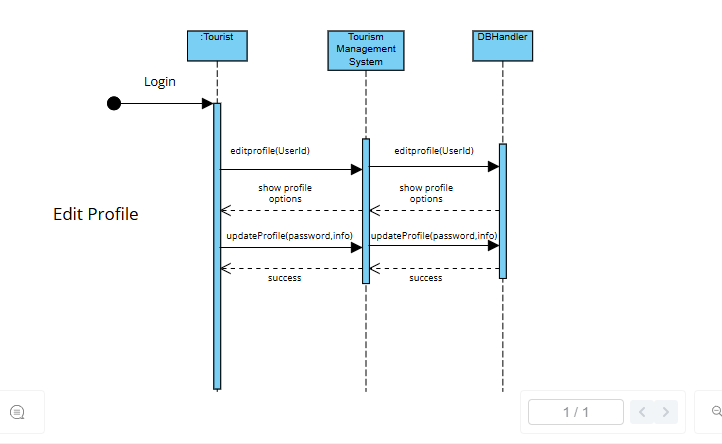
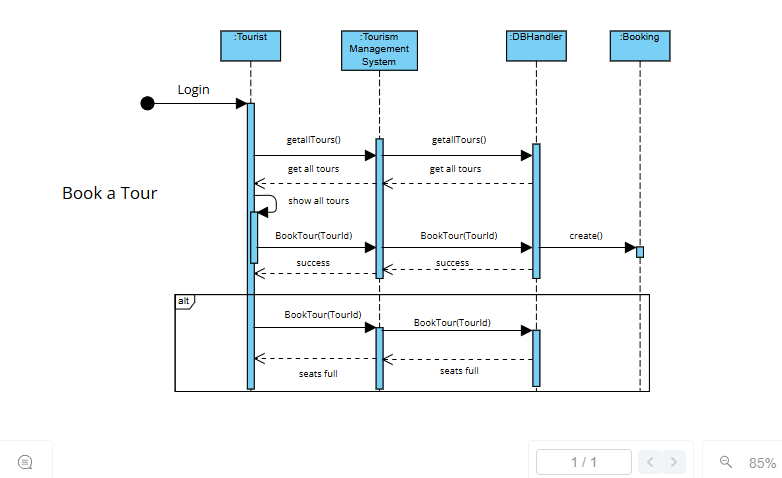
**Admin System Sequence Diagrams**

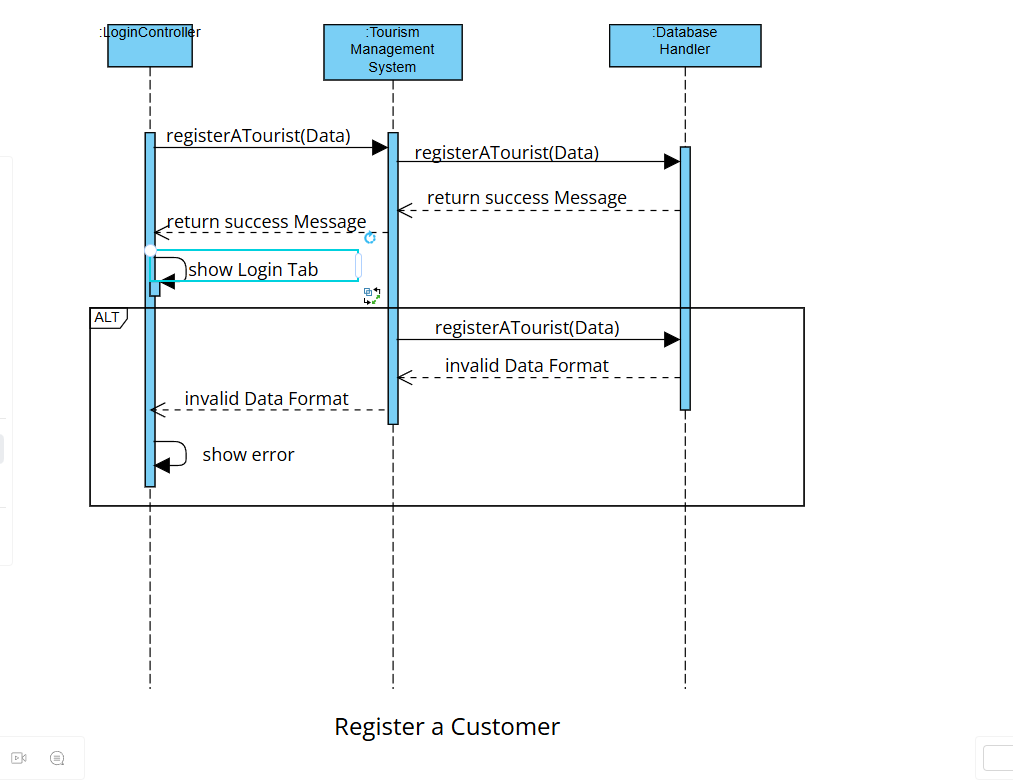
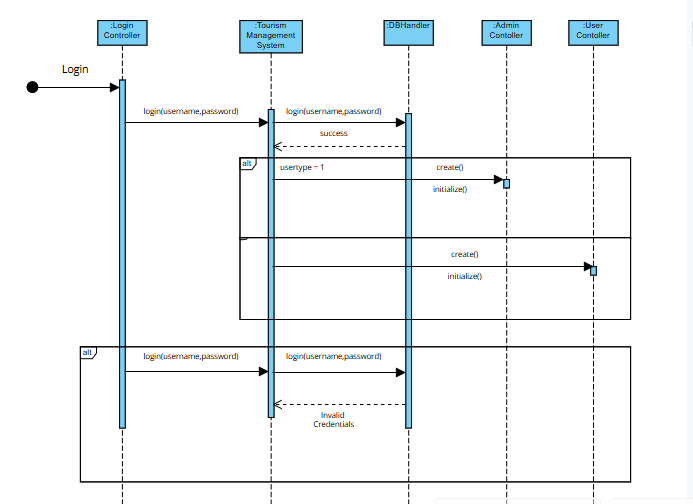
**Tourist System Sequence Diagrams** 

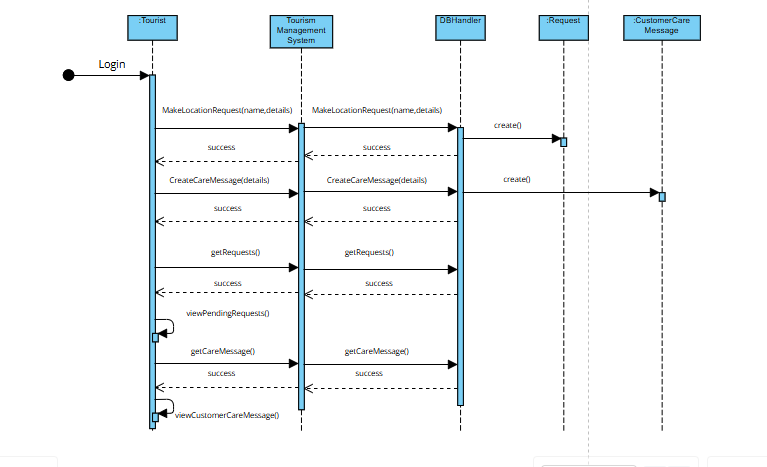
# 6. Sequence Diagrams

**Admin Sequence Diagrams**

**Tourist Sequence Diagrams**

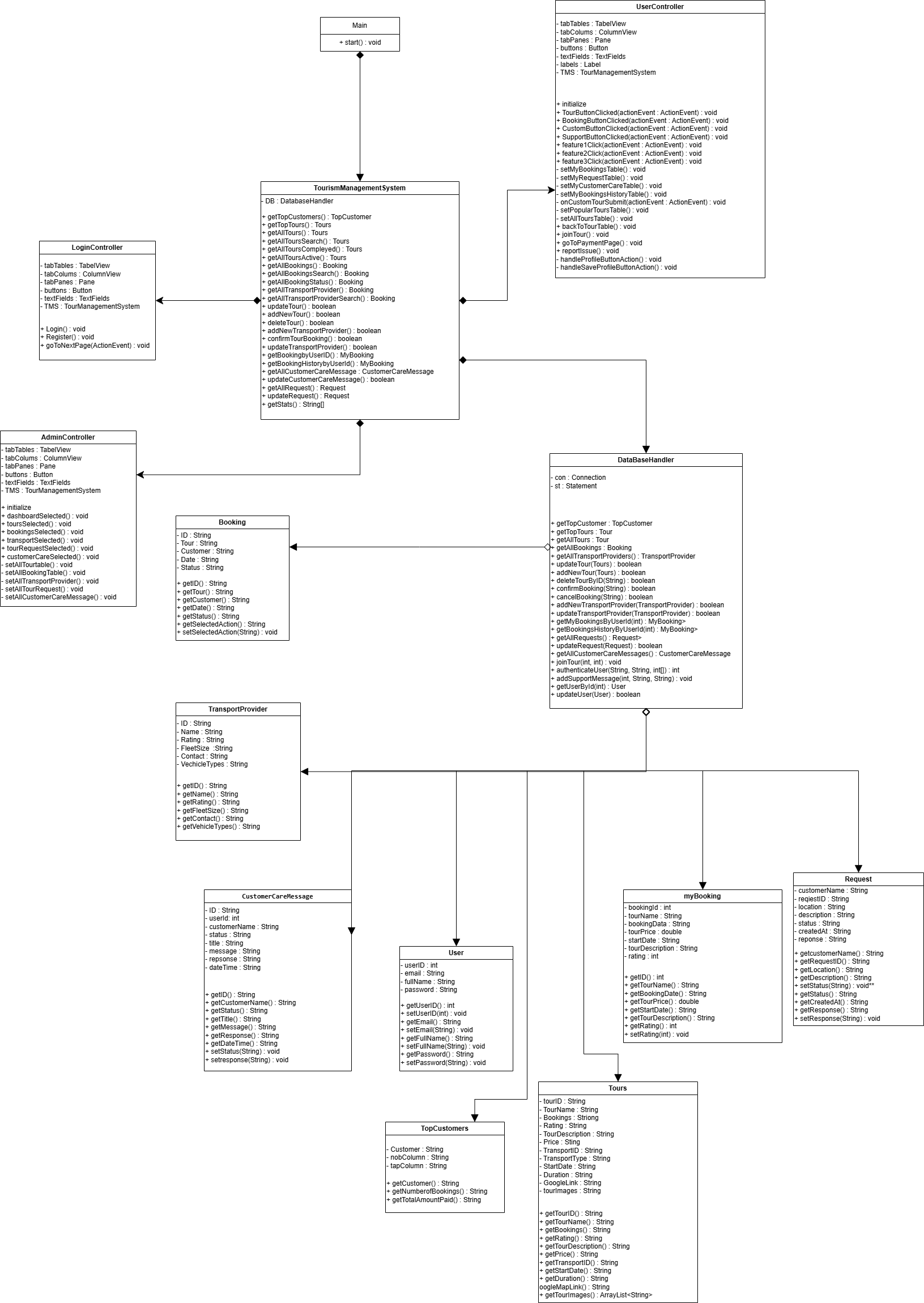






Customer Care Message + New Tour Location Request

1. **Class Diagram**



1. **Package Diagram**

**A blue screen with white text

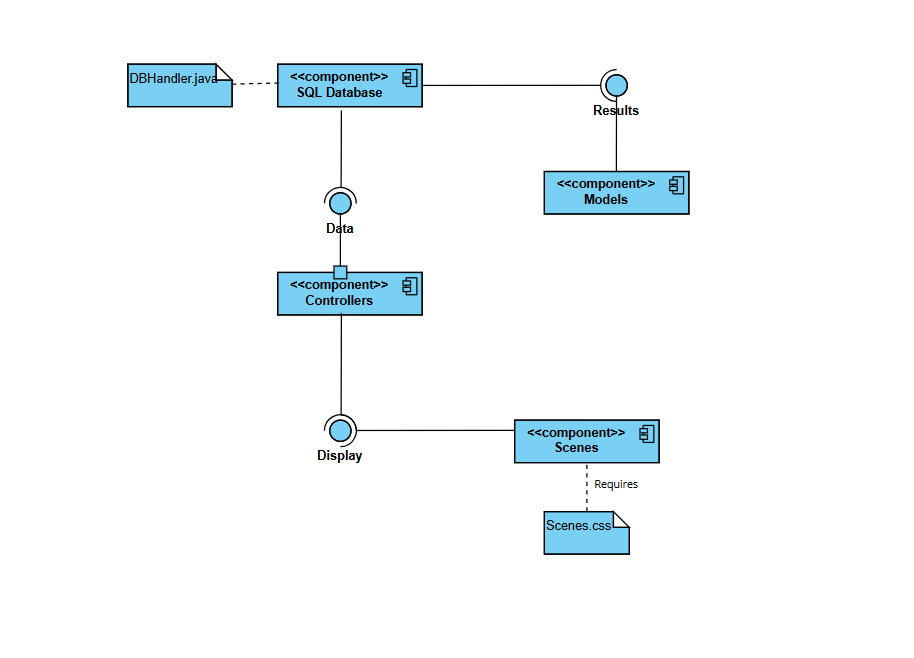
Description automatically generated**

1. **Deployment Diagram**

**A computer screen shot of a blue box

Description automatically generated**

1. **Component Diagram**

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