

Software Requirements Specification

for

TravelEase

A comprehensive platform for tourists to browse, book, and review tours, accommodations, and activities while facilitating service providers in managing their offerings.

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1.

Introduction

The **TravelEase** Project aims to develop an integrated online platform designed to enhance the travel experience for tourists and streamline operations for tour operators. This comprehensive tourist website will offer users the ability to discover, book, and review tours, while providing tour operators with tools to manage their offerings efficiently. Key features include user registration and authentication, tour management, booking and review systems, and robust search and filtering options. The TravelEase Project aspires to create a user-friendly, scalable, and secure platform that meets the evolving needs of the tourism industry.

1.1 Problem Statement

The tourism industry is rapidly growing, with an increasing number of people seeking travel experiences around the world. However, tourists often face challenges when trying to find reliable information about tours, book them efficiently, and read authentic reviews. Tour operators also struggle to reach a wider audience and manage bookings effectively. There is a need for an integrated online platform that can streamline the process for both tourists and tour operators, enhancing the overall travel experience and operational efficiency.

1.2 Purpose

The purpose of this Software Requirements Specification (SRS) document is to define the requirements for the development of a comprehensive tourist website. This document will serve as a guide for developers, stakeholders, and project managers, ensuring that all parties have a clear understanding of the system's functionality and requirements. The ultimate goal is to create a user-friendly platform that facilitates the discovery, booking, and management of tours, while also providing valuable insights and feedback through user reviews.

1.3 Project Scope

The tourist website will offer a range of functionalities designed to meet the needs of tourists, tour guides, and administrators. Key features of the system will include:

- **User Registration and Authentication:** Allowing users to register, log in, and manage their profiles.
- **Tour Management:** Enabling administrators to add, edit, and delete tours, as well as assign tour guides.
- **Booking System:** Facilitating the booking and management of tours by users.
- **Review System:** Allowing users to provide feedback on tours they have experienced.
- **Tour Guide Management:** Enabling the addition, editing, and deletion of tour guides by administrators.
- **Location Management:** Allowing administrators to manage locations for tours.
- **Search and Filter:** Providing robust search and filtering options to help users find suitable tours.
- **Notification System:** Sending email notifications for booking confirmations, cancellations, and review acknowledgments.
- **Reporting and Analytics:** Offering insights into bookings, popular tours, and user reviews for administrators.

The project aims to create a scalable, secure, and user-friendly platform that improves the efficiency of booking and managing tours while enhancing the user experience for tourists.

1.4 Glossary

This section provides definitions for all document names, acronyms, and abbreviations. The application domain's terms and concepts are defined.

- **SRS:** Software Requirements Specification
- **Visitor:** who accesses the TravelEase platform without being logged in.
- **User:** A registered individual using the website to browse and book tours
- **Administrator:** A user with elevated privileges to manage tours, bookings, reviews, and other users
- **Tour Guide:** A professional providing guided tours to tourists
- **Booking:** The reservation of a tour by a user
- **Review:** Feedback provided by users about their tour experiences
- **Location:** A place or destination where tours are conducted

1.5 References

IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.

1.6 Overview

The TravelEase Project is designed to create a seamless and efficient online platform for the tourism industry, catering to the needs of both tourists and tour operators. The platform will provide users with the ability to explore a wide range of tours, make bookings, and leave reviews, all within a user-friendly interface. Tour operators will have access to robust tools for managing tours, bookings, and customer feedback. The system will include features such as user registration, secure authentication, detailed tour management, real-time booking capabilities, review systems, and advanced search and filtering options. Additionally, the platform will offer notifications and reporting functionalities to keep users informed and provide valuable insights to administrators. TravelEase aims to enhance the overall travel experience, improve operational efficiency, and provide a scalable solution that can adapt to the evolving demands of the tourism market.

2. Stakeholders and Characteristics

2.1 Primary stakeholders:

1. Tourists (Users)
 - Characteristics: Individuals who use the TravelEase platform to browse, book, and review tours. They seek a user-friendly interface, detailed tour information, secure booking processes, and the ability to provide feedback.
2. Tour Operators (Administrators)
 - Characteristics: Businesses or individuals who offer tours and use the TravelEase platform to manage their tour listings, bookings, and customer interactions. They require efficient tools for tour management, booking oversight, and customer engagement.

3. Service Providers

- **Characteristics:** Service Providers on the TravelEase platform, including businesses or individuals offering services such as hotels, transportation, tour guides, and photography services, use the platform to list and manage their offerings efficiently. They require tools for creating, updating, and removing listings, overseeing bookings, and managing availability. Effective communication features are essential for addressing user inquiries and providing customer support. Additionally, Service Providers need to handle payments securely and reliably, manage user reviews and ratings for service improvement, and access analytics and reporting tools to track performance, booking trends, and customer demographics. The platform must also offer multi-channel access, enabling service management and customer interactions across various devices, ensuring convenience and operational flexibility.

4. Payment Gateway

- **Characteristics:** The Payment Gateway on the TravelEase platform ensures secure and efficient financial transactions. It must have robust security to protect financial data, high reliability for uninterrupted service, and support multiple payment methods like credit/debit cards and mobile banking. Seamless integration with the TravelEase platform is essential for a smooth user experience during booking. It should provide real-time transaction processing, instant payment confirmations, and comprehensive reporting for financial tracking. Compliance with global and local financial regulations is also crucial.

2.2 Secondary Stakeholders:

1. Platform Developers

- **Characteristics:** Technical team responsible for the development, maintenance, and enhancement of the TravelEase platform. They need detailed requirements, design specifications, and feedback to ensure the platform meets stakeholder needs.

2. Marketing Team

- **Characteristics:** Team responsible for promoting the TravelEase platform and attracting new users and tour operators. They require insights into user behavior, market trends, and platform performance.

3. Customer Support Team

- **Characteristics:** Team that assists users and operators with any issues or inquiries related to the platform. They need tools to manage customer interactions, resolve issues, and provide support.

4. Investors

- **Characteristics:** Individuals or entities that provide funding for the development and growth of the TravelEase platform. They require regular updates on platform performance, user growth, and financial metrics.

3. Design and Implementation Constraints

To ensure project success, we've identified design and implementation limitations. These constraints encompass the following:

3.1 Language:

User Interface Design: This involves the visual layout of TravelEase, focusing on UI components for user interaction.

Back-end Development: The code that drives the functionality of the platform, including data storage and processing, remains hidden from users.

3.1.1 HTML:

HTML structures web pages and their content, defining elements such as paragraphs, headings, links, and forms.

3.1.2 CSS:

CSS dictates the presentation of HTML or XML documents, ensuring consistent styling across different media.

3.1.3 JavaScript:

JavaScript adds interactivity to Cloth Connect Pro, making the platform dynamic and engaging for users.

3.1.4 PHP:

PHP enables server-side scripting for dynamic web pages, offering a blend of beginner-friendly syntax and advanced features.

3.1.5 Python:

Python powers Cloth Connect Pro's backend, managing server-side logic and data processing efficiently with its simplicity and extensive library support, ensuring scalability and rapid feature development.

3.2 Server-Side Technology:

Server-side development encompasses database management, scripting, backend logic, and API integration.

3.2.1 Database Server:

MySQL serves as the relational database management system for Cloth Connect Pro, organizing and accessing data efficiently through SQL queries.

4. Requirement Specification

All the requirements based on the elicitation process are described in this section.

4.1 Functional Requirement

Functional requirements are specifications that describe the system's functions or capabilities from a user's perspective. They outline what the system should do and how it should behave under specific conditions. Functional requirements are typically expressed as actions or tasks that the system must perform, and they are crucial for defining the system's behavior and determining its success in meeting user needs.

4.1.1 User Registration

FR-1	User Registration		
Description	Allow users to register with username, email, and password.		
Stakeholders	Users, Administrators	Priority	High

4.1.2 User Login

FR-2	User Login		
Description	Allow users to log in using email and password.		
Stakeholders	Users, Administrators	Priority	High

4.1.3 Password Recovery

FR-3	Password Recovery		
Description	Provide a mechanism for users to recover their password.		
Stakeholders	Users, Administrators	Priority	High

4.1.4 Tour Management

FR-4	Tour Management		
Description	Allow administrators to add new tours, edit tours, delete tours, view tours		
Stakeholders	Administrators	Priority	High

4.1.5 Booking Management

FR-5	Booking Managements		
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Description	Allow users to book a tour, view bookings, cancel bookings		
Stakeholders	User, Administrators	Priority	Medium

4.1.6 Review Management

FR-6	Review Management		
Description	Allow users to add reviews for tours they have booked, allow users to edit their reviews, delete their reviews, view reviews for a tour.		
Stakeholders	Users	Priority	Medium

4.1.7 Tour Guide Management

FR-7	Tour Guide Management		
Description	Allow administrators to add new tour guides with details, edit tour guide details, delete tour guides.		
Stakeholders	Administrators	Priority	Medium

4.1.8 Location Management

FR-8	Location Management		
Description	Allow administrators to add new locations, edit location, delete location details.		
Stakeholders	Administrators	Priority	Medium

4.1.9 Search and Filtering

FR-9	Search and Filtering		
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Description	Allow users to search for tour, filter tours based on criteria.		
Stakeholders	Users	Priority	High

4.1.10 Notifications

FR-10	Notifications		
Description	Send confirmation email to users when they book a tour, when their booking is canceled .		
Stakeholders	User, Administrators	Priority	Medium

4.1.11 Reporting and Analytics

FR-11	Reporting and Analytics		
Description	Allow administrators to view reports on bookings, popular tours, and user reviews and export data for further analysis.		
Stakeholders	Administrators	Priority	Medium

5. Requirement Engineering Process

Software requirements are established using requirements engineering (RE), which involves understanding and capturing customer needs or requirements. The requirements engineering process includes several key steps:

- Requirement elicitation techniques
- Requirement validation

5.1 Requirement elicitation techniques

Requirement elicitation, also known as "requirement gathering," is the process of investigating and discovering system requirements from users, clients, and other stakeholders. Various techniques can be employed to elicit requirements effectively:

5.1.1 Hold Interviews

Interviews are one-on-one or small group discussions with stakeholders to gather program criteria. These sessions help in obtaining specific demands from participants and identifying any conflicts or issues.

- Short description about project
- Product details
- Dealing with customer & suppliers
- Transaction & feedback system

5.1.2 Perform document Analysis

Document analysis is a requirement elicitation technique that involves examining existing documentation related to the system to understand its functionalities, constraints, and user requirements. Analysis can help to determine which performance should remain and functionality that isn't in use. This technique is particularly useful for gaining insights into how the current system operates, identifying areas for improvement, and understanding stakeholder needs without directly interacting with them.

5.2 Requirement Validation

Requirement validation is the process of ensuring that the identified requirements accurately represent the needs and expectations of stakeholders and are feasible to implement within the system. It involves verifying that the requirements are complete, consistent, unambiguous, and aligned with the project goals and constraints

5.2.1 Review the Requirement

During the review, potential ambiguities, conflicts, and gaps in the requirements are identified and addressed. Additionally, stakeholders may provide feedback and suggestions for refining or enhancing the requirements. The goal of requirement review is to ensure that the finalized set of requirements forms a solid foundation for the successful development and implementation of the system, minimizing the risk of misunderstandings and costly changes later in the project lifecycle.

5.2.2 Test the Requirement

Conducting user acceptance testing (UAT) to validate that the implemented system meets the specified requirements and satisfies the stakeholders' needs. This involves executing test cases based on the requirements and obtaining feedback from end-users.

6 Use Case Diagram

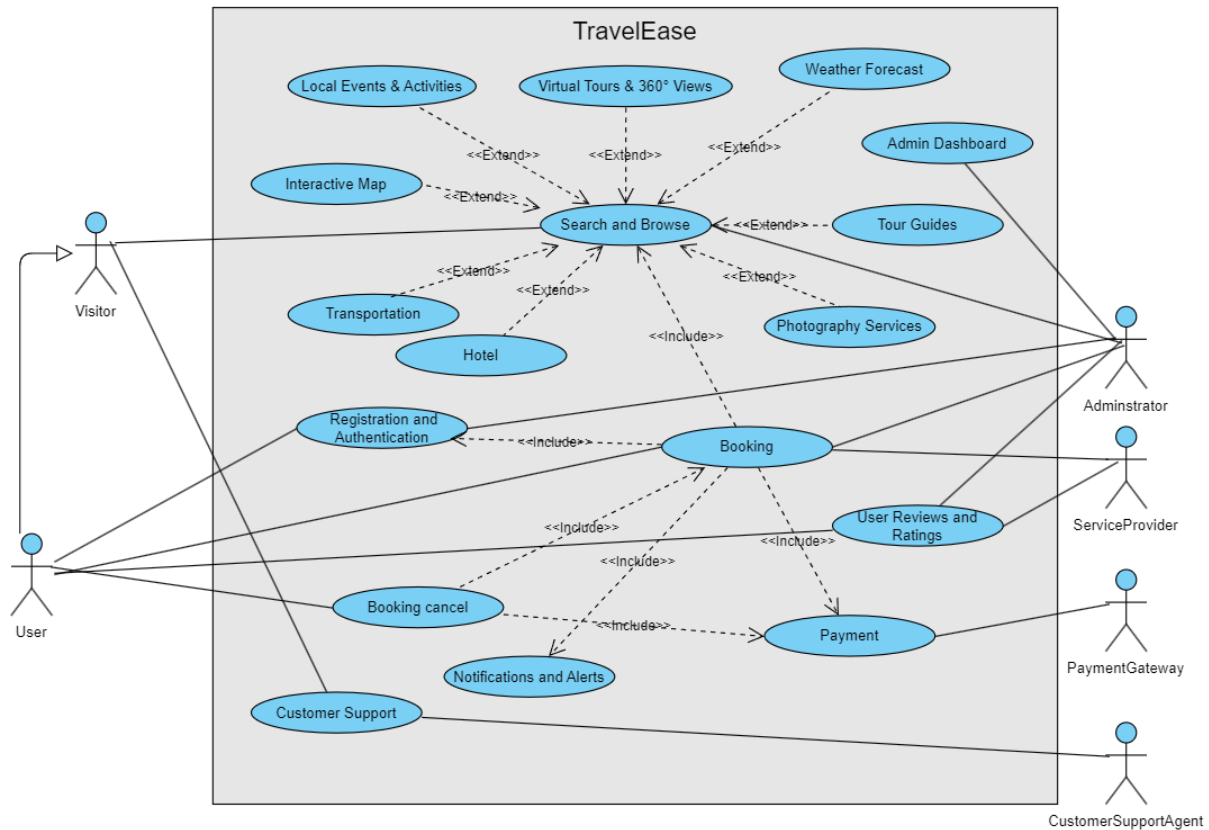


Figure 1: Use Case Diagram

6.a.1 Use Case Descriptions

Use case No.	1
Use case	Registration and Authentication
Description	This use case enables users to either register for a new account or authenticate themselves to access the TravelEase platform.
Actors	Primary Actor: User Secondary Actor:

	Admin
Preconditions	The TravelEase website is accessible.
Success Condition End	User successfully registers for a new account or logs in with existing credentials.
Failed Condition End	User encounters errors during registration or login process.
Trigger	The user selects the option to register or log in to the TravelEase platform.
Basic flow	<ol style="list-style-type: none"> 1. Open TravelEase Website: User navigates to the TravelEase website. 2. Click on 'Register': User selects the option to register for a new account. 3. Display Registration Form: If the user is not already registered, the TravelEase platform displays the registration form. 4. Fill in Registration Form: User enters required information in the registration form. 5. Submit Registration Form: User submits the registration form. 6. Create User Account: The TravelEase platform creates a new user account if the entered information is valid. 7. Send Confirmation Email: The platform sends a confirmation email to the user's provided email address. 8. Display 'Registration Successful' Message: User receives a message confirming successful registration. 9. Redirect to Login Page: User is redirected to the login page to authenticate their newly created account. 10. Enter Email and Password: User enters their email and password. 11. Click on 'Login': User submits the login form. 12. Authenticate User: The TravelEase platform verifies the user's credentials. 13. Display User Dashboard: If the credentials are correct, the platform displays the user dashboard
Alternative flow:	<p>3a. Already Registered:</p> <ul style="list-style-type: none"> • If the user is already registered, the platform redirects them to the login page instead of displaying the registration form. <p>12a. Invalid Credentials</p>

	<ul style="list-style-type: none"> If the entered credentials are incorrect, the platform displays an error message prompting the user to try again.
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Use case No.	2
Use case	Search and Browse
Description	This use case allows users to search for tours on the TravelEase platform based on their criteria and browse through the search results.
Actors	Primary Actor: Visitor Secondary Actor: Admin
Preconditions	The TravelEase website is accessible.
Success End Condition	User finds and selects a tour to view its details.
Failed End Condition	User cannot find a suitable tour or encounters errors during the search process.
Trigger	The Visitor selects the option to search for and browse different travel options on the TravelEase platform.
Basic Flow	<ol style="list-style-type: none"> 1. Open TravelEase Website: User navigates to the TravelEase website. 2. Enter Search Criteria: User enters their criteria for the desired tour (e.g., location, dates, type of tour). 3. Display Search Results: The TravelEase platform retrieves and displays search results based on the user's criteria. 4. Browse Search Results: User browses through the displayed search results to explore available tours. 5. Apply Filters?: If the user wants to apply filters to refine the search results, proceed to step 6. 6. Select Filters: User selects additional filters (e.g., price range, rating, amenities).

	<ol style="list-style-type: none"> 7. Apply Filters to Search Results: The TravelEase platform applies the selected filters to the search results. 8. Display Filtered Search Results: The platform displays the filtered search results according to the user's preferences. 9. Select a Tour: User selects a tour from the displayed search results to view its details. 10. Display Tour Details: The TravelEase platform presents detailed information about the selected tour, including itinerary, pricing, and availability.
Alternative Flow	<ol style="list-style-type: none"> 5a. Apply Filters? (No): <ul style="list-style-type: none"> • If the user decides not to apply any filters and proceeds directly to browsing, they skip steps 6 to 8. 9a. Book Tour? (No): <ul style="list-style-type: none"> • If the user decides not to book the selected tour and continues browsing, they end the use case without proceeding to booking.

Use case No.	3
Use Case	Hotel Booking Process
Description	This use case enables users to search for hotels, select one based on their preferences, and proceed with the booking on the TravelEase platform.
Actors	Primary Actor: User Secondary Actor: Admin, ServiceProvider
Preconditions	The TravelEase website is accessible and user is logged in.
Success End Condition	User successfully books a hotel and receives a booking confirmation.
Failed End Condition	User encounters errors during the booking process or cannot find a suitable hotel.
Trigger	The User selects the option to book a hotel on the TravelEase platform.
Basic Flow	<ol style="list-style-type: none"> 1. Enter Travel Details: User enters their travel details, including destination, dates, and any specific requirements.

	<ol style="list-style-type: none"> 2. Display Hotel Options: The TravelEase platform retrieves and displays a list of available hotel options based on the entered travel details. 3. Browse Hotel Options: User browses through the displayed hotel options to explore available accommodations. 4. Select Hotel: The user finds a suitable hotel and decides to proceed with booking. 5. Display Hotel Details: The TravelEase platform presents detailed information about the selected hotel, including room types, amenities, and pricing. 6. Book Hotel: User confirms the booking by selecting the desired room type and providing necessary payment details. 7. Is Booking Successful?: 8. If the booking process is successful 9. Display Booking Confirmation: The TravelEase platform confirms the successful hotel booking and provides the user with a booking confirmation.
Alternative Flow	<ol style="list-style-type: none"> 4a. Select Hotel (No): <ul style="list-style-type: none"> • If the user decides not to select any hotel option and continues browsing, they end the use case without proceeding to booking. 7a. Booking Successful (No): <ul style="list-style-type: none"> • If the booking is not successful, the platform displays a booking error message, and the user can either retry the booking or continue browsing other options.

Use case No.	4
Use case	Payment Process
Description	This use case enables users to select their preferred payment method and complete the payment for a booking on the TravelEase platform.
Actors	Primary Actor: User Secondary Actor: PaymentGateway
Preconditions	User has selected items for booking and proceeded to payment.
Success End Condition	User successfully completes the payment and receives a payment confirmation.

Failed Condition	End	User encounters errors during the payment process or the payment is not successful.
Trigger		The User selects the option to make a payment for a booking on the TravelEase platform.
Basic Flow		<ol style="list-style-type: none"> 1. Select Payment Method: User selects their preferred payment method from the available options (e.g., mobile banking, bank transfer, credit/debit card). 2. Enter Payment Details: <ul style="list-style-type: none"> • If the selected payment method is "Mobile Banking" or "Bank Transfer", user enters the required details specific to that method. • If other payment methods are selected, user enters general payment details (e.g., card number, CVV, expiration date). 3. Process Payment: The TravelEase platform processes the payment using the provided payment details. 4. The payment process is successful. 5. Display Payment Confirmation: The TravelEase platform confirms the successful payment and provides the user with a payment confirmation.
Alternative Flow		<p>4a. payment process is not successful:</p> <ul style="list-style-type: none"> • If the payment is not successful, the platform displays a booking error message, and the user can either retry the payment or end the use case.

Use case No.	5
Use case	Tour Guide Booking Process
Description	This use case allows users to search for tour guides, select one based on their preferences, and proceed with booking the guide on the TravelEase platform.
Actors	Primary Actor: User Secondary Actor: Admin, ServiceProvider
Preconditions	The TravelEase website is accessible and user is logged in.

Success Condition	End	User successfully books a tour guide and receives a booking confirmation.
Failed Condition	End	User encounters errors during the booking process or cannot find a suitable tour guide.
Trigger		The User selects the option to search for and book tour guide services on the TravelEase platform.
Basic Flow		<ol style="list-style-type: none"> 1. Open TravelEase Website: User navigates to the TravelEase website. 2. Enter Travel Details: User enters their travel details, including destination, dates, and any specific requirements for a tour guide. 3. Display Available Tour Guides: The TravelEase platform retrieves and displays a list of available tour guides based on the entered travel details. 4. Browse Tour Guides: User browses through the displayed tour guides to explore available options. 5. Select Tour Guide: the user finds a suitable tour guide. 6. Display Tour Guide Details: The TravelEase platform presents detailed information about the selected tour guide, including qualifications, expertise, and availability. 7. Book Tour Guide: User confirms the booking by selecting the desired tour guide and providing necessary payment details. 8. The booking process is successful. 9. Display Booking Confirmation: The TravelEase platform confirms the successful tour guide booking and provides the user with a booking confirmation.
Alternative Flow		<ol style="list-style-type: none"> 5a. Select Tour Guide (No): <ul style="list-style-type: none"> • If the user decides not to select any tour guide and continues browsing, they end the use case without proceeding to booking. 8a. The booking process is successful (No): <ul style="list-style-type: none"> • If the booking is not successful, the platform displays a booking error message, and the user can either retry the booking or continue browsing other options.

Use case No.	6
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Use case	Interactive Map
Description	This use case enables users to access and interact with an interactive map feature integrated into the TravelEase platform.
Actors	Primary Actor: Visitor Secondary Actor: Admin
Preconditions	The TravelEase website is accessible. User has entered their travel details.
Success End Condition	User successfully accesses and interacts with the interactive map feature.
Failed End Condition	User encounters errors while trying to access or interact with the interactive map
Trigger	The User selects the option to use the interactive map to find locations and services on the TravelEase platform.
Basic Flow	<ol style="list-style-type: none"> 1. Open TravelEase Website: User navigates to the TravelEase website. 2. Enter Travel Details: User enters travel details (e.g., destination, dates). 3. Display Map Integration Option: TravelEase Platform displays the option to use the interactive map. 4. Select Map Integration: User selects the map integration option. 5. Load Interactive Map: TravelEase Platform loads the interactive map. 6. Explore Interactive Map: User explores the interactive map to view travel details.
Alternative Flow	<p>4a. Map Integration Option Not Available:</p> <ul style="list-style-type: none"> • If the map integration option is not available, the TravelEase Platform displays an error message or alternative options. • Resume at Step 2 if user re-enters travel details or end process if user decides not to continue. <p>5a. Map Fails to Load:</p> <ul style="list-style-type: none"> • If the interactive map fails to load, the TravelEase Platform displays an error message and suggests troubleshooting steps or alternative ways to explore travel details. • Resume at Step 4 once the issue is resolved or end process if user decides not to continue.

	6a. User Encounters Issues While Exploring Map: <ul style="list-style-type: none"> • If the user encounters issues while exploring the interactive map (e.g., slow loading, errors), the TravelEase Platform provides troubleshooting tips or customer support contact options. • Resume at Step 6 once the issue is resolved or end process if user decides not to continue.
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Use case No.	7
Use case	Photographer Booking Process
Description	This use case allows users to search for local photographers, select one based on their preferences, and proceed with booking the photographer's services on the TravelEase platform.
Actors	Primary Actor: User Secondary Actor: Admin, ServiceProvider
Preconditions	The TravelEase website is accessible and user is logged in.
Success End Condition	User successfully books a local photographer and receives a booking confirmation.
Failed End Condition	User encounters errors during the booking process or cannot find a suitable local photographer.
Trigger	The User selects the option to search for and book photography services on the TravelEase platform.
Basic Flow	<ol style="list-style-type: none"> 1. Open TravelEase Website: User navigates to the TravelEase website. 2. Enter Travel Details: User enters their travel details, including destination, dates, and any specific requirements for photography services. 3. Display Available Local Photographers: The TravelEase platform retrieves and displays a list of available local photographers based on the entered travel details. 4. Browse Local Photographers: User browses through the displayed local photographers to explore available options.

	<ol style="list-style-type: none"> 5. Select Photographer: the user finds a suitable local photographer and decides to proceed with booking. 6. Display Photographer Details: The TravelEase platform presents detailed information about the selected local photographer, including portfolio, availability, and pricing. 7. Book Photographer: User confirms the booking by selecting the desired local photographer and providing necessary booking details. 8. The booking process is successful. 9. Display Booking Confirmation: The TravelEase platform confirms the successful photographer booking and provides the user with a booking confirmation..
Alternative Flow	<ol style="list-style-type: none"> 5a. Select Photographer (No): <ul style="list-style-type: none"> • If the user decides not to select any Photographer and continues browsing, they end the use case without proceeding to booking. 8a. The booking process is successful (No): <ul style="list-style-type: none"> • If the booking is not successful, the platform displays a booking error message, and the user can either retry the booking or continue browsing other options.

Use case No.	8
Use case	Review and Ratings
Description	This use case enables users to explore details of a tour, tour guide, or hotel on the TravelEase platform and submit reviews along with ratings based on their experience.
Actors	Primary Actor: User Secondary Actor: Admin, ServiceProvider
Preconditions	User has searched for and accessed details of a tour, tour guide, or hotel.
Success End Condition	User successfully submits a review and rating for the selected tour, tour guide, or hotel.
Failed End Condition	User encounters errors during the review submission process.

Trigger	The User selects the option to read or write reviews and ratings on the TravelEase platform.
Basic Flow	<ol style="list-style-type: none"> 1. Open TravelEase Website: User navigates to the TravelEase website. 2. Search for Tour/Tour Guide/Hotel: User searches for the specific tour, tour guide, or hotel they want to review. 3. Display Tour/Tour Guide/Hotel Details: TravelEase Platform displays the details of the selected tour, tour guide, or hotel. 4. Explore Details: User explores the details of the selected item. 5. Write Review and Rate: User writes a review and provides a rating. 6. Submit Review and Rating: TravelEase Platform submits the user's review and rating. 7. Receive Confirmation: User receives a confirmation that their review and rating have been submitted successfully.
Alternative Flow	<p>5a. Review Moderation:</p> <ul style="list-style-type: none"> • If the review contains inappropriate content, the TravelEase Platform flags it for moderation. • Resume at Step 6 once the user modifies and resubmits the review. <p>6a. Network Error:</p> <ul style="list-style-type: none"> • If there is a network error during the submission process, the TravelEase Platform displays a network error message. • Resume at Step 6 once the network issue is resolved and the user resubmits the review and rating. <p>6b. Duplicate Review:</p> <ul style="list-style-type: none"> • If the user has already submitted a review for the same tour, tour guide, or hotel, the TravelEase Platform displays a duplicate review error message. • User can update the existing review or choose not to submit a new one. • Resume at Step 5 if the user decides to update the review. <p>6c. Missing Required Information:</p> <ul style="list-style-type: none"> • If the review or rating is missing required information, the TravelEase Platform displays an error message indicating what information is missing. • Resume at Step 5 once the user provides the missing information and resubmits the review.

Use case No.	9
Use case	Booking Cancellation Process
Description	This use case allows users to cancel their bookings on the TravelEase platform, providing a streamlined process for managing reservations.
Actors	Primary Actor: User Secondary Actor: Admin, ServiceProvider
Preconditions	The User must be logged into the system. User has an existing booking that they wish to cancel.
Success End Condition	User successfully cancels the booking and receives a cancellation confirmation.
Failed End Condition	User encounters errors during the cancellation process.
Trigger	The user selects the option to cancel a booking.
Basic Flow	<ol style="list-style-type: none"> 1. Open TravelEase Website: User navigates to the TravelEase website. 2. Access Booking Details: User accesses the details of the booking they wish to cancel. 3. Display Booking Details: The TravelEase platform retrieves and displays the details of the selected booking. 4. Initiate Cancellation Request: User initiates the cancellation request for the booking. 5. Process Cancellation Request: The TravelEase platform processes the cancellation request. 6. The cancellation process is successful. 7. Display Cancellation Confirmation: The TravelEase platform confirms the successful cancellation of the booking and provides a cancellation confirmation to the user.
Alternative Flow	6a. The cancellation process is not successful: <ul style="list-style-type: none"> • If the booking is not successful, the platform displays a booking error message, and the user can either retry the booking or continue browsing other options.

Use case No.	10
Use case	Notification and Alert
Description	This use case involves the generation, sending, and viewing of notifications and alerts by the TravelEase platform and users.
Actors	Primary Actor: TravelEase Platform Secondary Actor: User
Preconditions	The TravelEase platform is operational. Events trigger the generation of notifications and alerts.
Success End Condition	Users successfully receive and view notifications and alerts generated by the TravelEase platform.
Failed End Condition	Notifications or alerts fail to be generated, sent, or viewed by users due to system errors.
Trigger	The TravelEase platform generates a notification based on an event (e.g., booking confirmation, updates).
Basic Flow	<ol style="list-style-type: none"> 1. Event Triggered: TravelEase Platform detects an event that requires a notification. 2. Generate Notification: TravelEase Platform generates the appropriate notification. 3. Send Notification: TravelEase Platform sends the notification to the user. 4. Receive Notification: User receives the notification. 5. View Notification Details: User views the details of the notification. 6. Mark Notification as Read: If the user views the notification, the platform marks it as read.
Alternative Flow	<p>4a. Notification Not Received:</p> <ul style="list-style-type: none"> • If the user does not receive the notification (due to network issues or incorrect contact details), the platform attempts to resend the notification. • Resume at Step 3 once the issue is resolved and the notification is sent again. <p>6a. Notification Ignored:</p>

	<ul style="list-style-type: none"> • If the user does not view the notification, the platform keeps the notification marked as unread. • The user can view the notification later. • Resume at Step 5 when the user decides to view the notification details.
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Use case No.	11
Use case	Virtual Tour
Description	This use case allows users to search for tours, apply filters, select a tour, and explore it through a virtual tour if available.
Actors	Primary Actor: User Secondary Actor: TravelEase Platform
Preconditions	The TravelEase website is accessible. Users have an internet connection.
Success End Condition	Users cannot access the virtual tour or the tour does not have a virtual tour available.
Failed End Condition	The system is unable to add the selected crops to the cart and notifies the customer of the issue.
Trigger	The user selects the option to search for and explore tours, including virtual tours if available.
Basic Flow	<ol style="list-style-type: none"> 1. Open TravelEase Website: User navigates to the TravelEase website. 2. Enter Search Criteria: User enters search criteria for the desired tour. 3. Display Search Results: TravelEase Platform displays the search results based on the entered criteria. 4. Browse Search Results: User browses through the search results. 5. Apply Filters?: 6. If the user wants to apply filters, proceed to step 6. 7. If not, proceed to step 8. 8. Select Filters: User selects the desired filters.

	<p>9. Apply Filters to Search Results: TravelEase Platform applies the selected filters to the search results.</p> <p>10. Display Filtered Search Results: TravelEase Platform displays the filtered search results.</p> <p>11. Select a Tour: User selects a tour from the search results.</p> <p>12. Display Tour Details: TravelEase Platform displays the details of the selected tour.</p> <p>13. Click 'Virtual Tour': User clicks on the 'Virtual Tour' option.</p> <p>14. Tour has Virtual Tour?:</p> <p>15. If the tour has a virtual tour available, proceed to step 13.</p> <p>16. If not, proceed to step 15.</p> <p>17. Load Virtual Tour: TravelEase Platform loads the virtual tour for the selected tour.</p> <p>18. Explore Virtual Tour: User explores the virtual tour.</p> <p>19. Display 'Virtual Tour Not Available' Message: TravelEase Platform displays a message indicating that the virtual tour is not available.</p> <p>20. Continue Browsing: User continues browsing other tours.</p>
Alternative Flow	<p>5a. No Filters Applied:</p> <ul style="list-style-type: none"> User decides not to apply any filters and continues browsing the initial search results. <p>12a. Virtual Tour Not Available:</p> <ul style="list-style-type: none"> If the selected tour does not have a virtual tour, the platform displays a message stating that the virtual tour is not available, and the user can continue browsing other tours.

Use case No.	12
Use case	Admin Dashboard
Description	This use case allows the admin to access and manage the TravelEase platform through the admin dashboard.
Actors	<p>Primary Actor: Admin</p> <p>Secondary Actor: N/A</p>

Preconditions	The admin has valid credentials.
Success Condition End	Admin successfully accesses the admin dashboard and performs necessary management functions.
Failed Condition End	Admin is unable to access the dashboard due to invalid credentials or other errors.
Trigger	The Admin selects the option to perform management tasks on the TravelEase platform
Basic Flow	<ol style="list-style-type: none"> 1. Open Admin Dashboard URL: Admin navigates to the admin dashboard URL. 2. Enter Credentials: Admin enters their username and password. 3. Authenticate Admin: TravelEase Platform validates the credentials. 4. Load Admin Dashboard: TravelEase Platform loads the admin dashboard. 5. Access Dashboard Functions: Admin accesses and uses the various functions available on the dashboard. 6. End Process: Process ends.
Alternative Flow	<p>3a. Invalid Credentials:</p> <ul style="list-style-type: none"> • If the credentials entered are invalid, the TravelEase Platform displays an "Invalid Credentials" message. • The admin can retry entering credentials. • Resume at Step 2 once the admin re-enters credentials.

Use case No.	13
Use case	Customer Support
Description	This use case enables users to contact and receive assistance from customer support representatives for any issues or inquiries encountered on the TravelEase platform.
Actors	Primary Actor: Visitor Secondary Actor: Customer Support agents
Preconditions	Users have encountered an issue or have an inquiry that requires assistance.
Success Condition End	The user's issue or inquiry is resolved or addressed satisfactorily.

Failed Condition	End	The user's issue or inquiry is not resolved.
Trigger		The User selects the option to contact customer support for assistance on the TravelEase platform.
Basic Flow		<ol style="list-style-type: none"> 1. Open TravelEase Website: User navigates to the TravelEase website. 2. Encounter Issue or Inquiry: User encounters an issue or has an inquiry. 3. Display Customer Support Options: TravelEase Platform displays available customer support options (e.g., chat, email, phone). 4. Select Customer Support Option: User selects a preferred customer support option. 5. Connect to Customer Support Representative: TravelEase Platform connects the user to a customer support representative. 6. Address User Issue or Inquiry: Customer Support Representative addresses the user's issue or inquiry. 7. Resolve Issue or Provide Assistance: Customer Support Representative resolves the issue or provides the necessary assistance. 8. Display Resolution or Assistance: TravelEase Platform displays the resolution or assistance provided to the user. 9. End Process: Process ends.
Alternative Flow		<p>4a. No Customer Support Option Selected:</p> <ul style="list-style-type: none"> • If the user does not select any customer support option, they can choose to continue browsing or attempting to resolve the issue independently. • Resume at Step 4 if the user decides to select a customer support option later. <p>6a. Issue Not Resolved:</p> <ul style="list-style-type: none"> • If the customer support representative is unable to resolve the issue, the user may be escalated to a higher level of support or provided with alternative solutions. • Resume at Step 6 once the issue is escalated or alternative solutions are provided.

Use case No.	14
Use case	Transportation Booking Process

Description	This use case allows users to search for, select, and book transportation options through the TravelEase platform.
Actors	Primary Actor: User Secondary Actor: Admin, ServiceProvider
Preconditions	The TravelEase website is accessible and user is logged in.
Success End Condition	Users successfully book transportation and receive a booking confirmation.
Failed End Condition	Users cannot complete the transportation booking.
Trigger	The User selects the option to search for and book transportation services on the TravelEase platform.
Basic Flow	<ol style="list-style-type: none"> 1. Open TravelEase Website: User navigates to the TravelEase website. 2. Enter Travel Details: User enters travel details such as destination, date, and time. 3. Display Transportation Options: TravelEase Platform displays available transportation options based on the entered details. 4. Browse Transportation Options: User browses through the available transportation options. 5. Select Transportation: the user selects a transportation option 6. Display Transportation Details: TravelEase Platform displays the details of the selected transportation option. 7. Book Transportation: User books the selected transportation option. 8. The booking is successful 9. Display Booking Confirmation: TravelEase Platform displays a booking confirmation. 10. End Process: Process ends successfully.
Alternative Flow	<p>5a. No Transportation Selected:</p> <ul style="list-style-type: none"> • If the user does not select any transportation option, the user continues browsing other transportation options. <p>8a. Booking Not Successful:</p> <ul style="list-style-type: none"> • If the booking is not successful, the platform displays a booking error message, and the user can either retry the booking or continue browsing other options.

Use case No.	15
Use case	Local Events & Activities
Description	This use case allows users to view and participate in local events and activities available on the TravelEase platform.
Actors	Primary Actor: User Secondary Actor: Admin, ServiceProvider
Preconditions	The TravelEase website is accessible. User is logged in.
Success End Condition	User successfully views details of local events and activities and books participation if desired.
Failed End Condition	User encounters errors while trying to view or book local events and activities.
Trigger	The User selects the option to view or participate in local events and activities on the TravelEase platform.
Basic Flow	<ol style="list-style-type: none"> 1. Open Local Events & Activities Section: User navigates to the Local Events & Activities section on the TravelEase platform. 2. Enter Search Criteria: User enters search criteria to find relevant local events and activities. 3. Display Search Results: TravelEase Platform displays a list of local events and activities based on the search criteria. 4. Browse Events: User browses through the list of local events and activities. 5. Select Event: User selects a specific event or activity to view more details. 6. Display Event Details: TravelEase Platform displays detailed information about the selected event, including date, time, location, and availability. 7. Book Event Participation: If the user decides to participate, they proceed to book a spot in the event. 8. Confirm Booking: TravelEase Platform processes the booking and confirms the user's participation in the event.
Alternative Flow	2a. Update Event Details: <ul style="list-style-type: none"> • If the ServiceProvider updates the event details: • The ServiceProvider accesses the event management section. • The ServiceProvider updates the details of the event (e.g., date, time, location).

- TravelEase Platform reflects the changes in the event information and notifies users as necessary.

6.b Activity Diagram

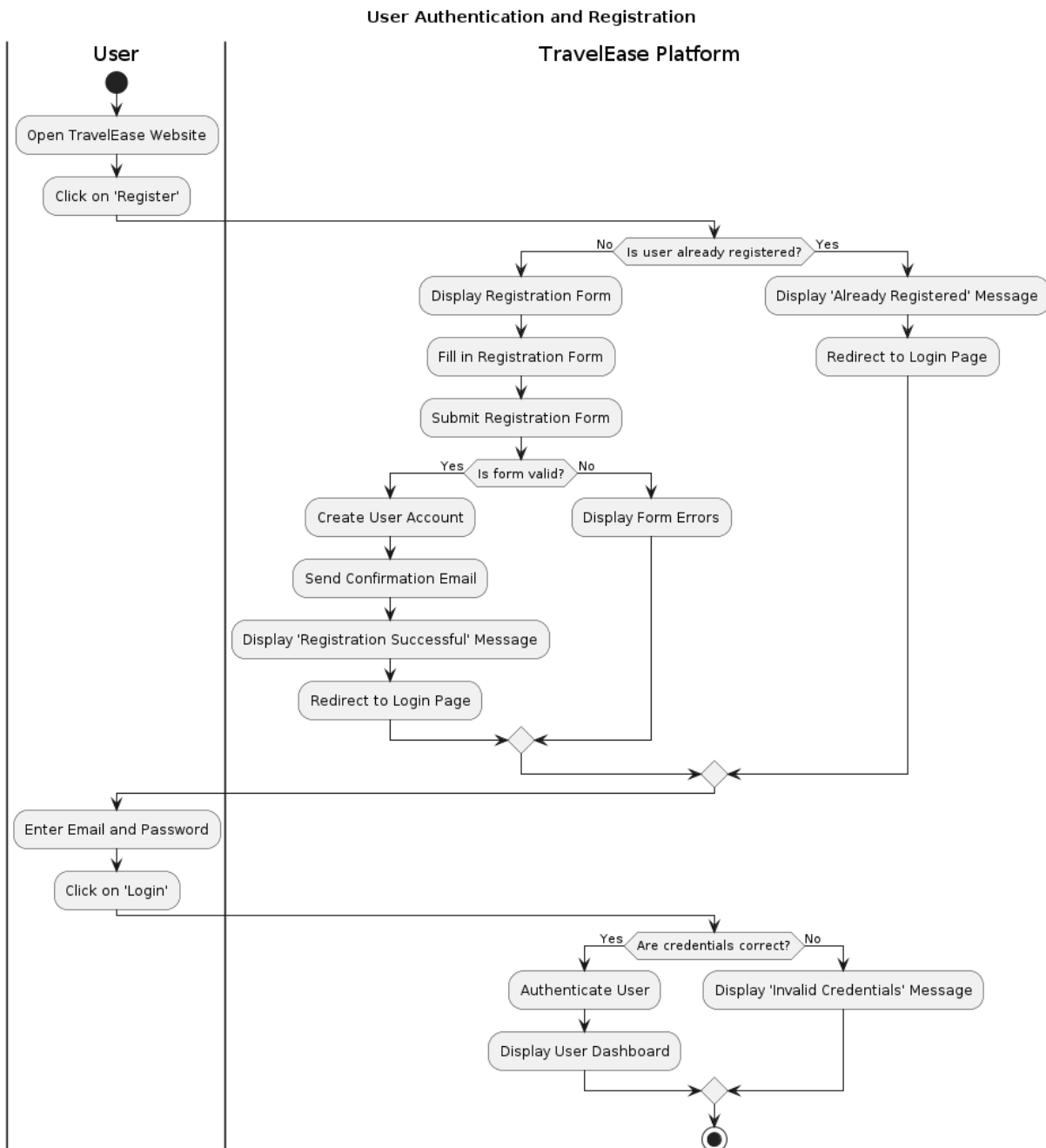


Figure 2: User Authentication and Registration

Search and Browse Tours

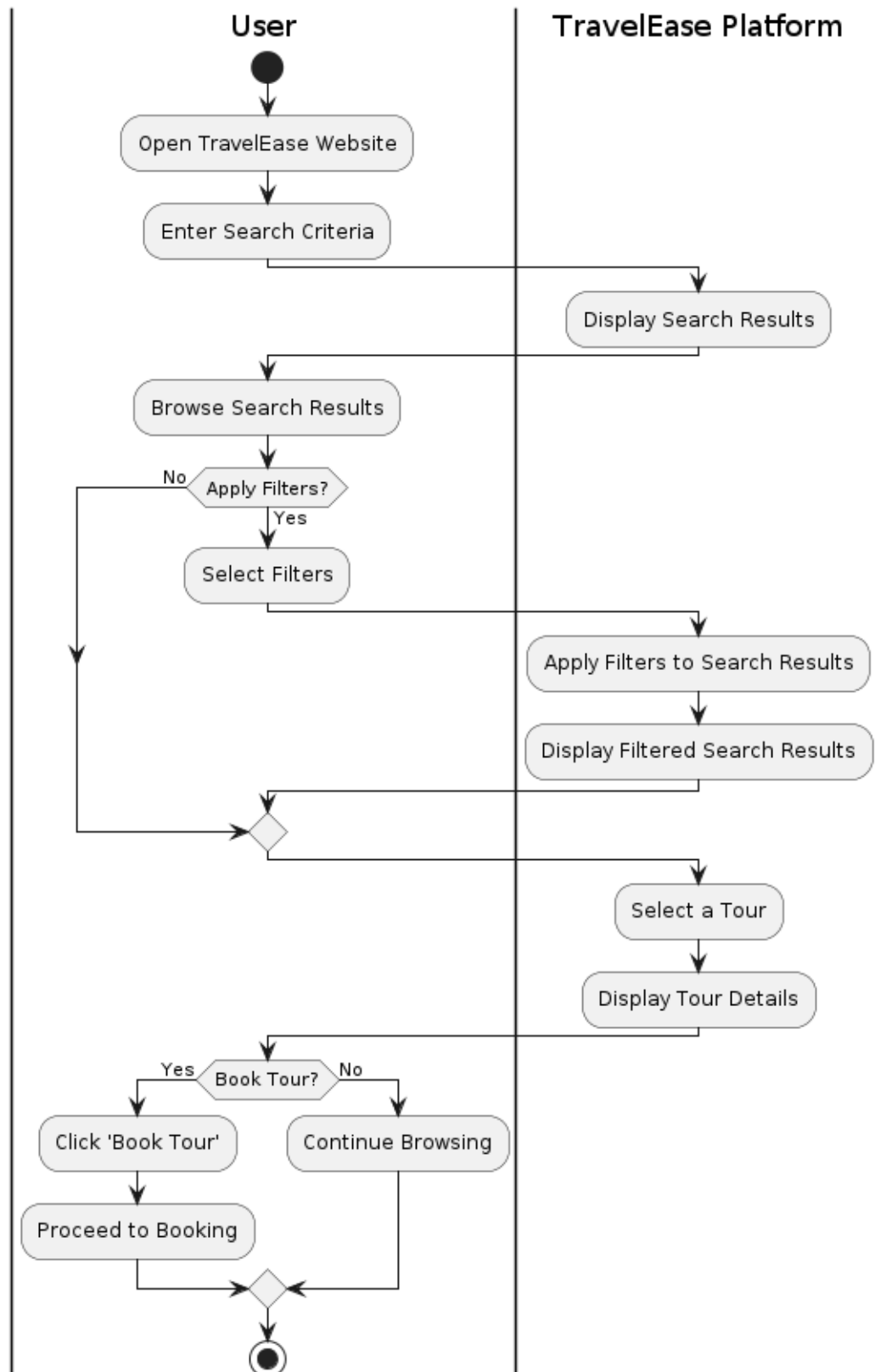


Figure 3: Search and Browse

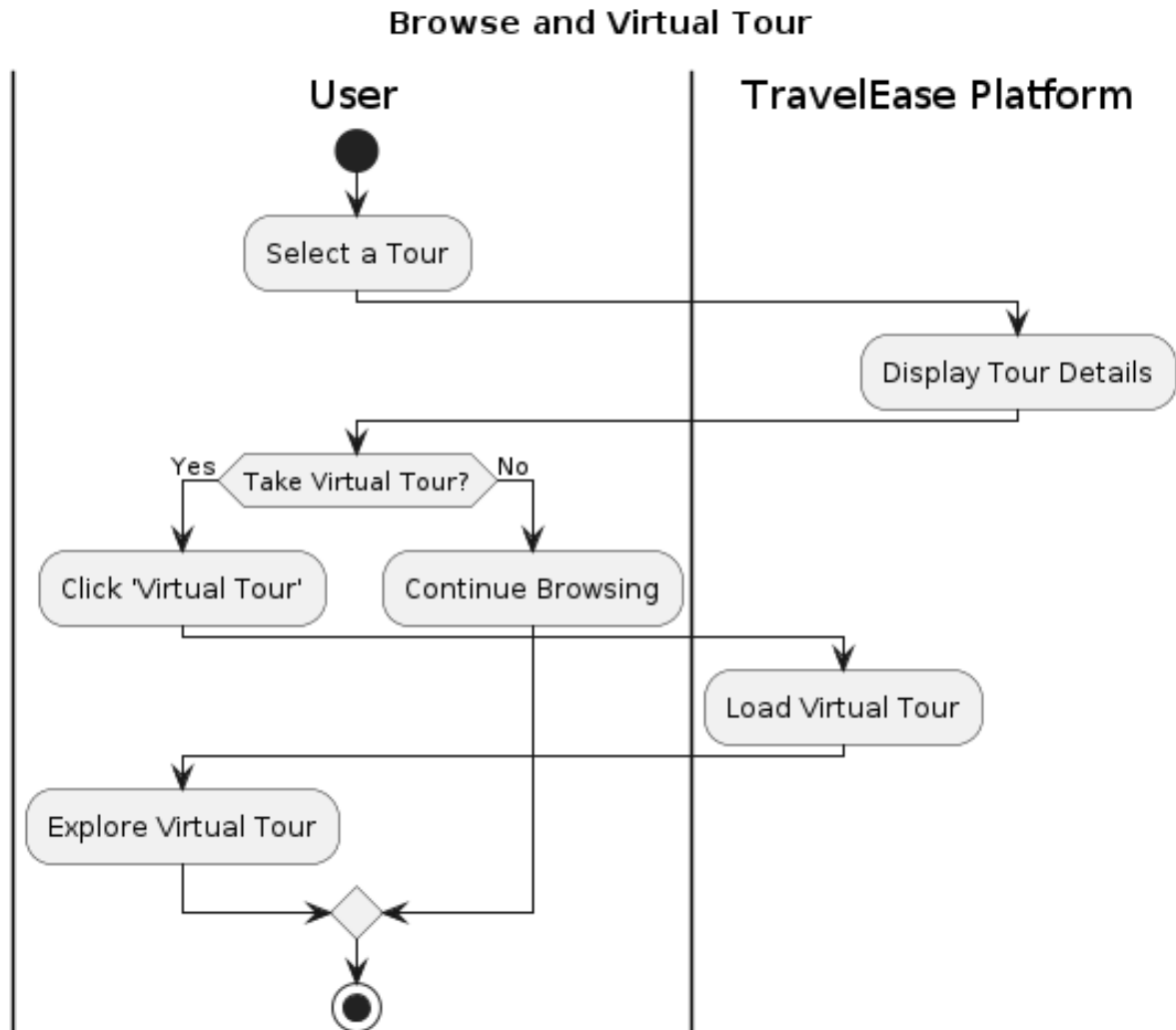


Figure 4: Virtual tour

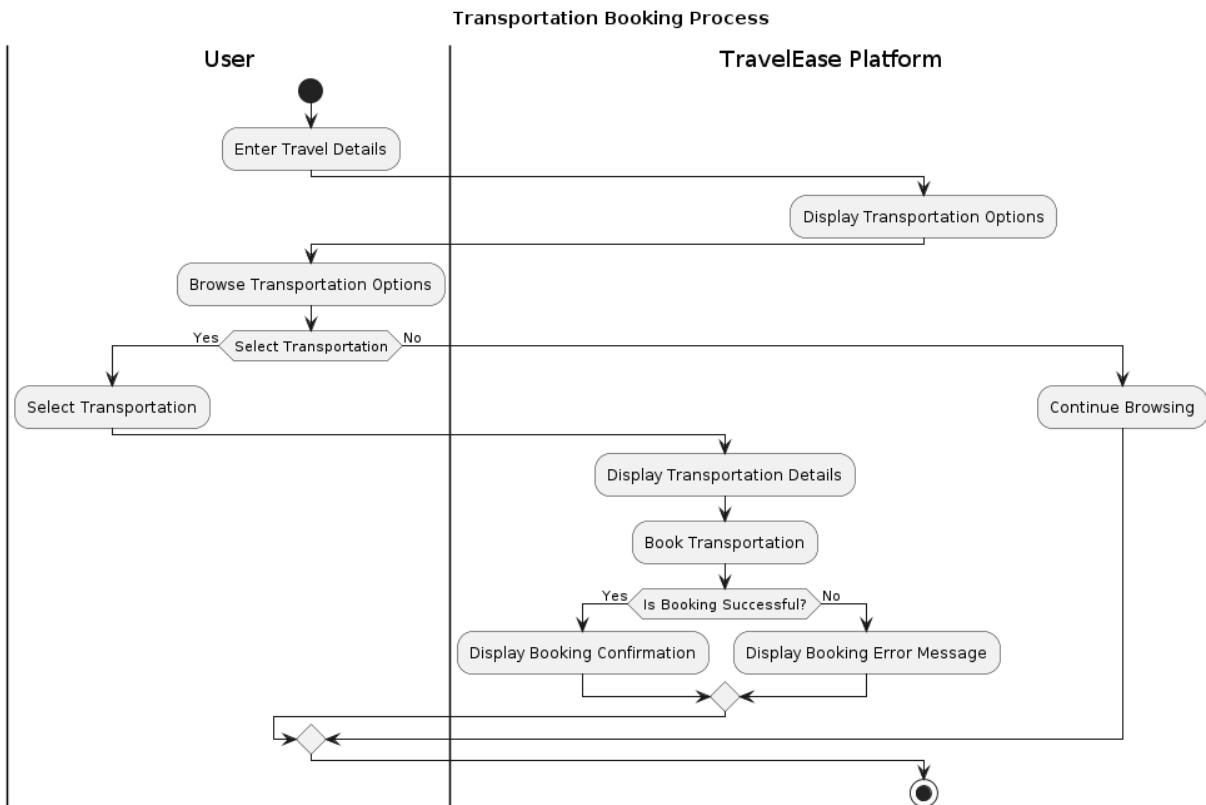


Figure 5: Transport Booking

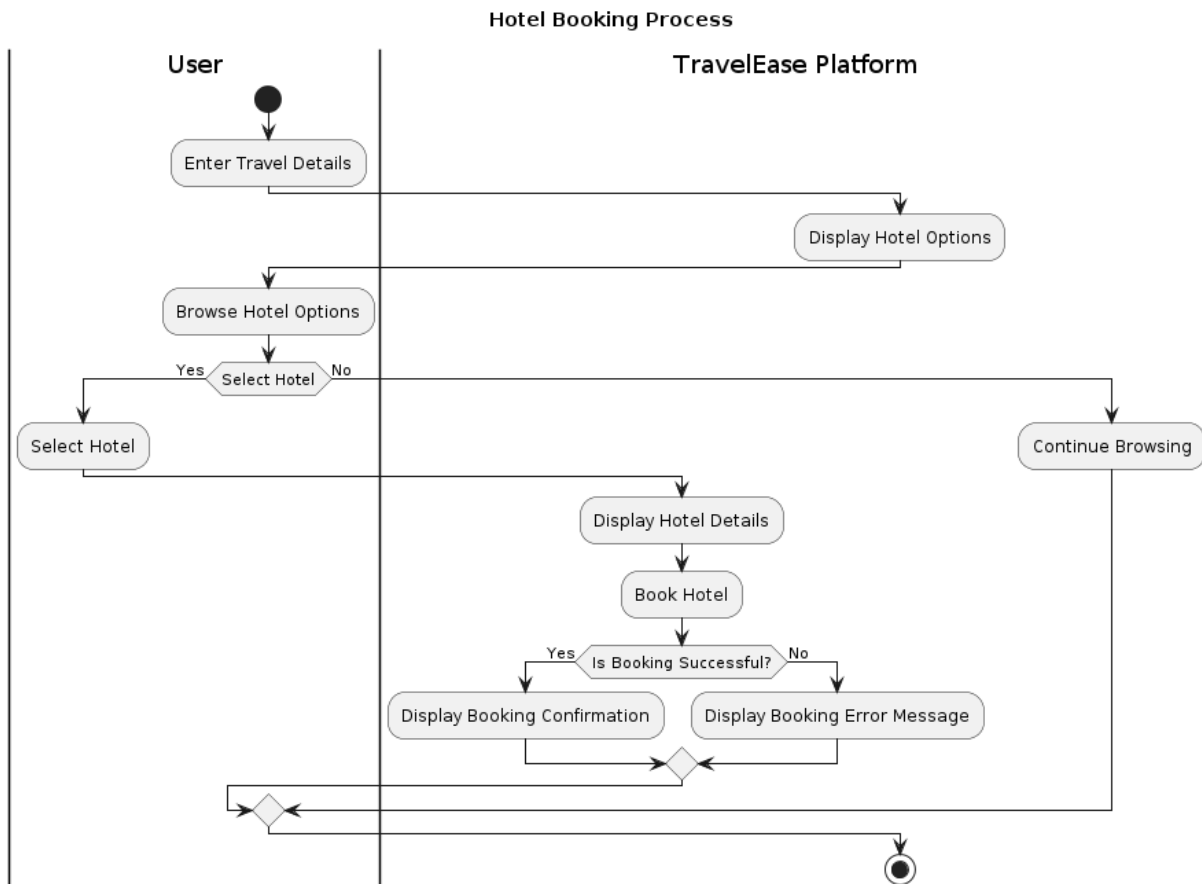


Figure 6: Hotel Booking process

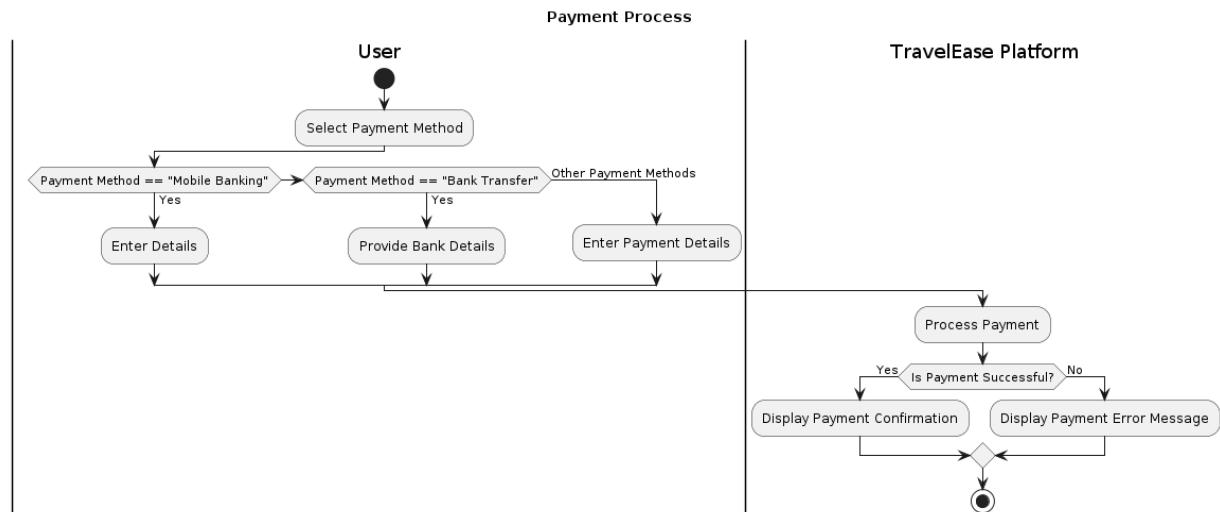


Figure 7: Payment Process

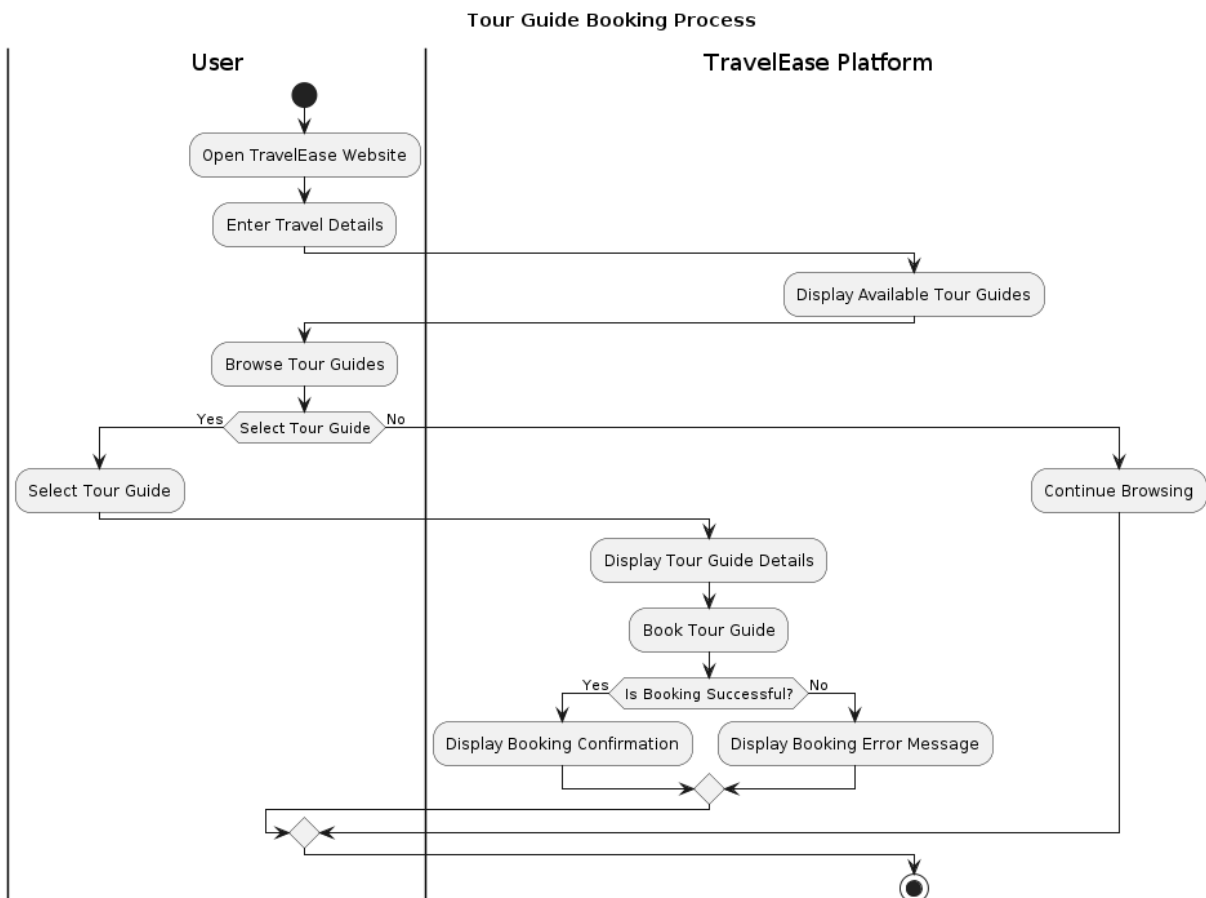


Figure 8:Booking tour guide

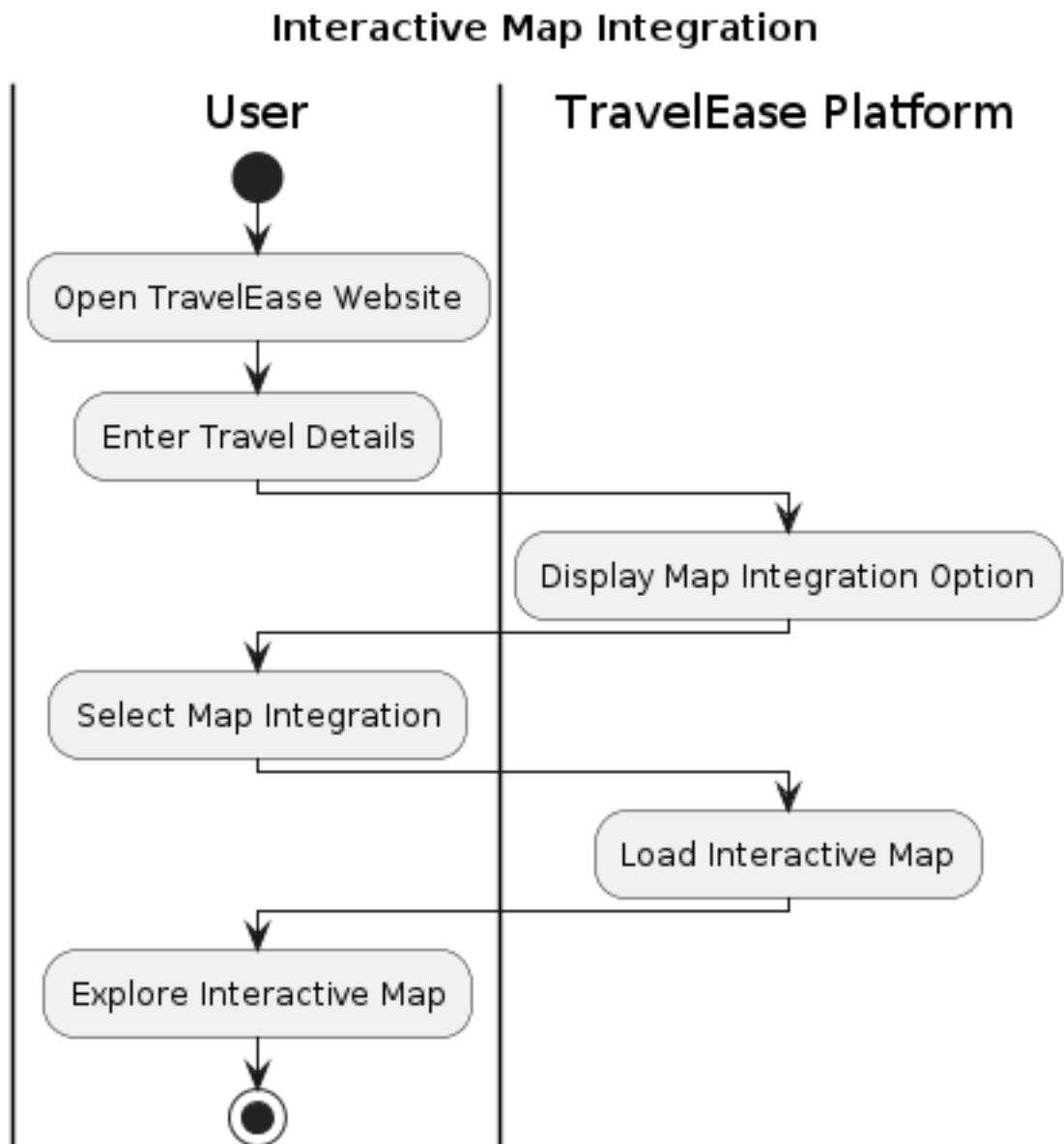


Figure 9: Map Integration

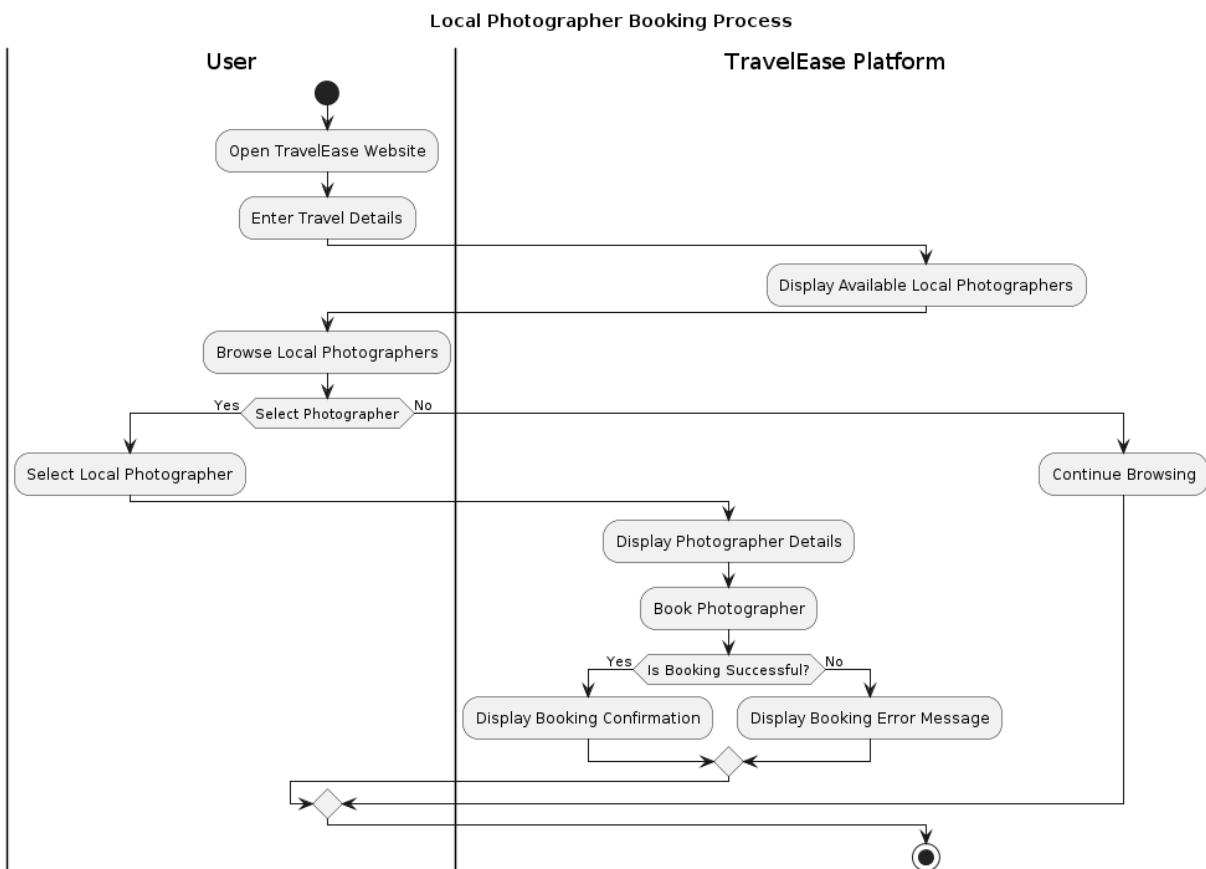


Figure 10: Booking local photographers

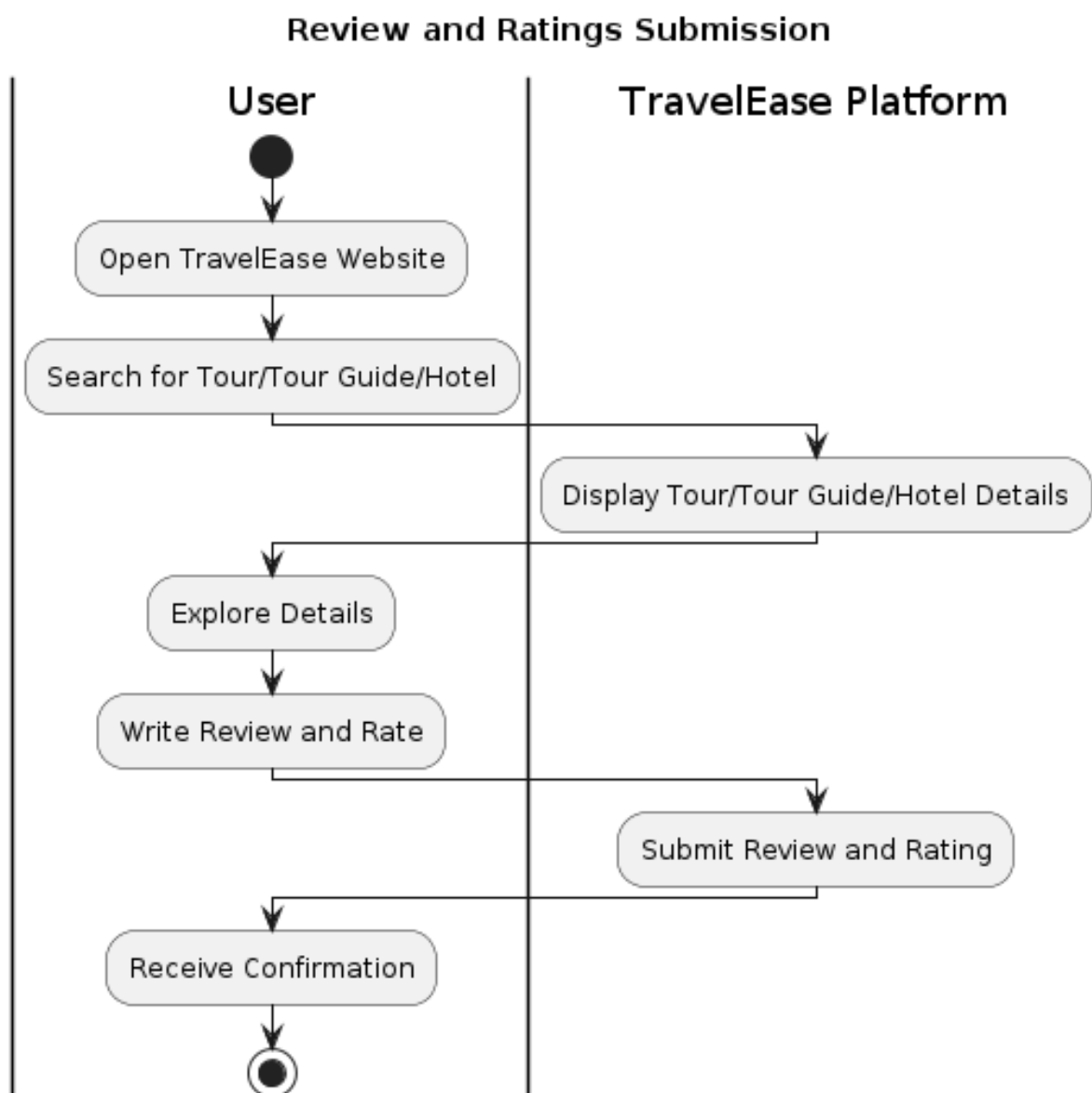


Figure 11: Ratings

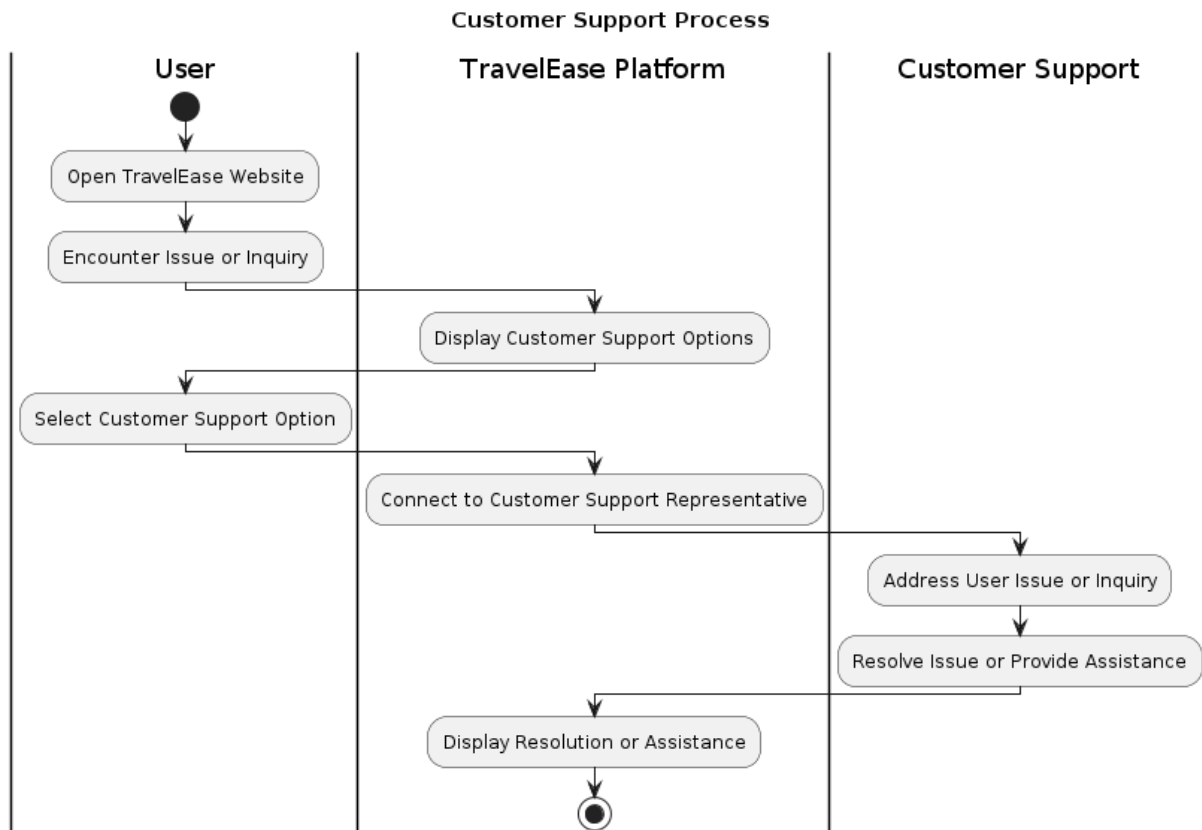


Figure 12: Customer support

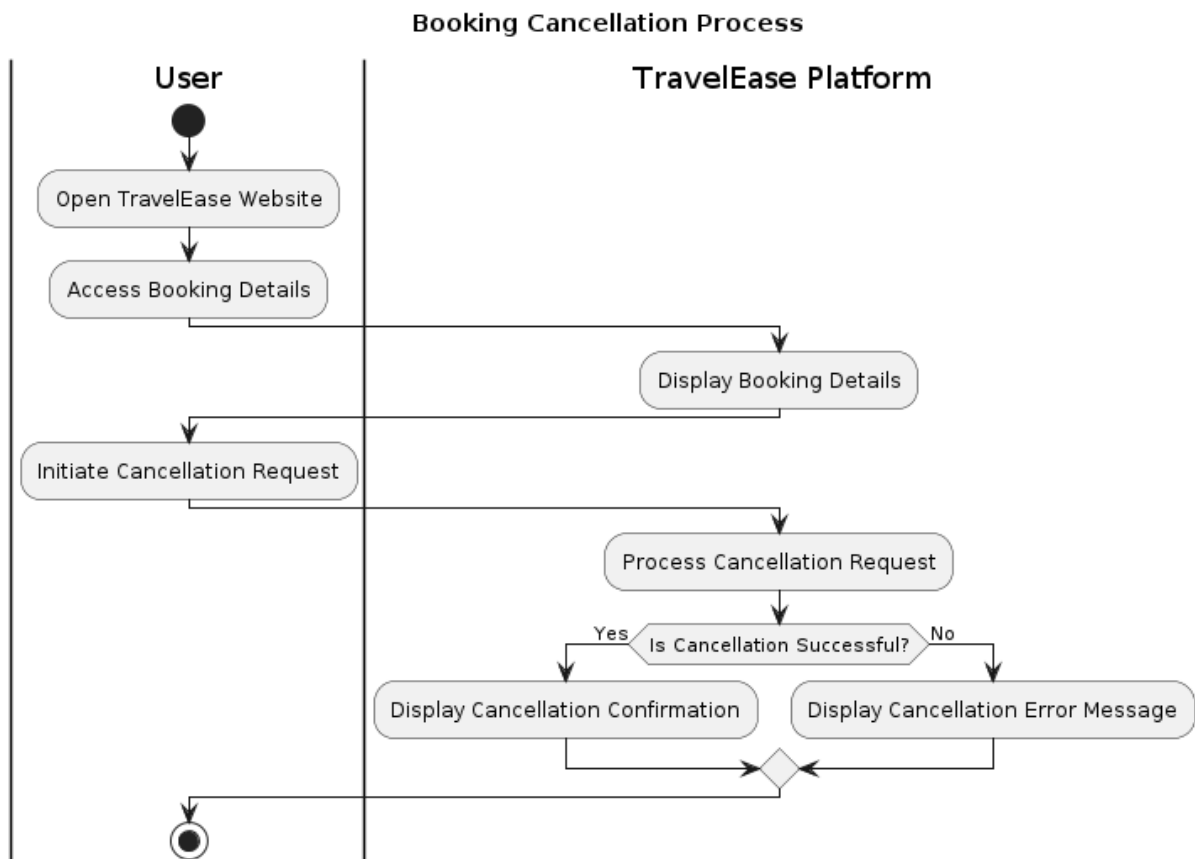


Figure 13: Cancel Booking

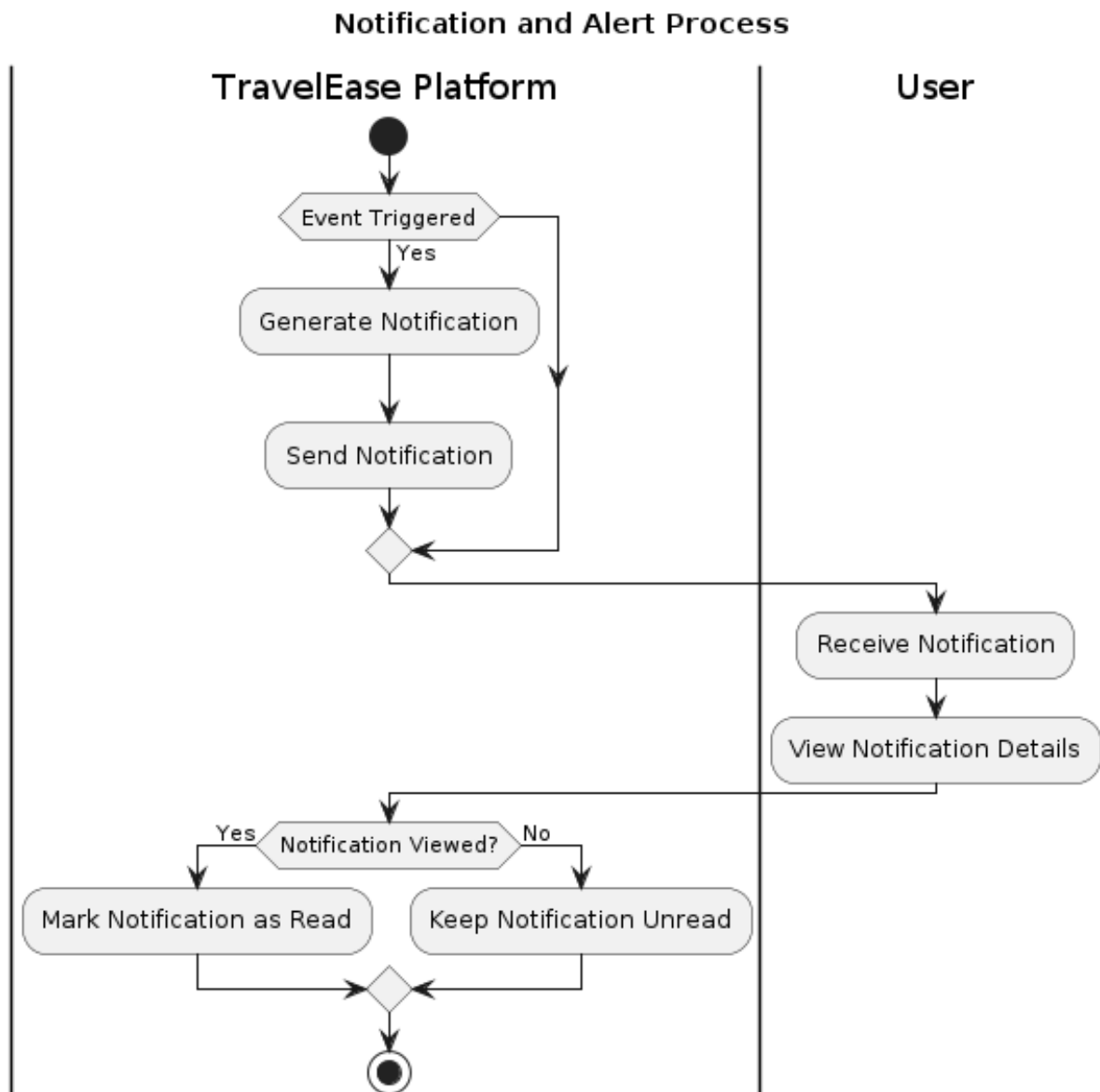


Figure 14: Notifications and alert

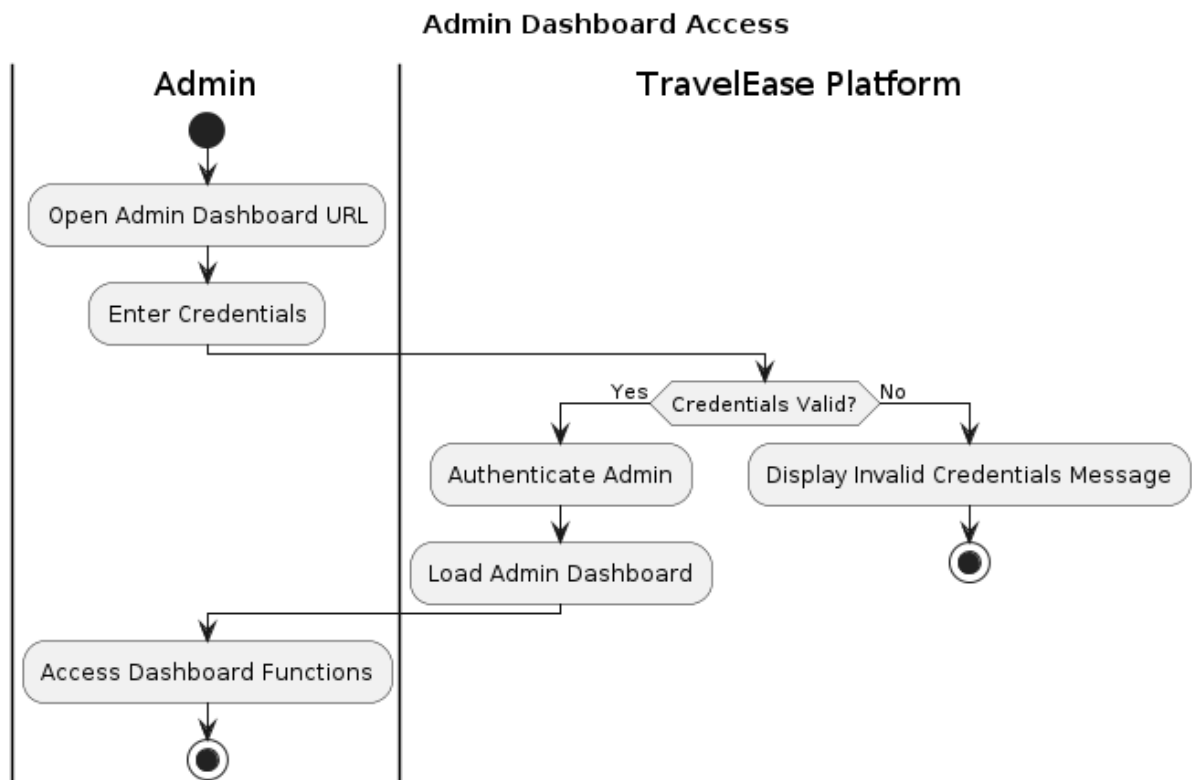


Figure 15: Admin dashboard