Trip-Tailor

(travel management system)

BY- SREYA SHYJASH

BTECH CSE CYBER SECURITY

3RD YEAR

INDEX

AIM

The primary aim of this project is to design, develop, and deploy a full-stack web application, "Trip Tailor," that serves as a comprehensive and user-friendly travel booking platform. The project focuses on creating a seamless user journey, from initial search to final booking, incorporating secure user authentication, real-time data integration from external APIs, and automated email notifications for a professional and reliable user experience.

INTRODUCTION

In the modern digital landscape, travellers expect a centralized, intuitive, and reliable platform to plan and book their journeys. Trip Tailor addresses this need by providing a one-stop solution for searching and booking flights and hotels. The application moves beyond static content by integrating with the live Amadeus Travel API, offering users real-time options. It emphasizes security through a server-side authentication system and enhances user trust with automated, professional email confirmations for key actions like registration and order placement. This project demonstrates a complete development cycle, from frontend user interface design to backend API creation, database management, and third-party service integration.

METHOLODOGY

The project was executed using a client-server architecture, employing a range of modern web technologies to build a robust and feature-complete application.

1. Frontend Development (Client-Side)

The user interface was built using foundational web technologies to ensure broad compatibility and a responsive experience.

- **HTML5 & CSS3:** The structure is built across multiple pages (index.html, flight.html, hotel.html) to separate concerns. CSS is used extensively for the modern, dark-themed styling, responsive layouts, and custom animations (e.g., loading spinners).
- **Vanilla JavaScript:** Acts as the core of the frontend logic for:
    - **DOM Manipulation:** Dynamically rendering flight and hotel search results, updating the shopping cart, and populating user dashboard sections without page reloads.
    - **Event Handling:** Managing all user interactions, including form submissions, button clicks, and modal operations.
    - **API Communication:** Utilizing the fetch API to communicate with the backend server for authentication, search queries, and order processing.
    - **Session Management:** Using sessionStorage to maintain user login state and shopping cart contents across different pages.
    - **Custom Modals:** A custom-built modal system replaces all default browser alert() pop-ups for a branded and consistent user experience.

2. Backend Development (Server-Side)

The backend is powered by a Node.js server, handling all business logic, security, and data persistence.

- **Node.js & Express.js:** A lightweight Express.js server is used to create a RESTful API with the following endpoints:
    - /api/users/register: Handles new user creation.
    - /api/users/login: Authenticates existing users.
    - /api/orders: Manages order creation and storage.
    - /api/feedback: Receives and processes user feedback.

- /api/search-flights & /api/search-hotels: Act as secure proxies to the Amadeus API, protecting API keys from being exposed on the frontend.

- **File-Based Database (db.json):** For this project, a simple JSON file serves as the database to store user credentials and order history, demonstrating the principles of data persistence.
- **Dotenv:** Used to securely manage sensitive environment variables like API keys and email credentials.

3. Email Automation System

A crucial feature for user trust and communication, handled entirely on the backend.

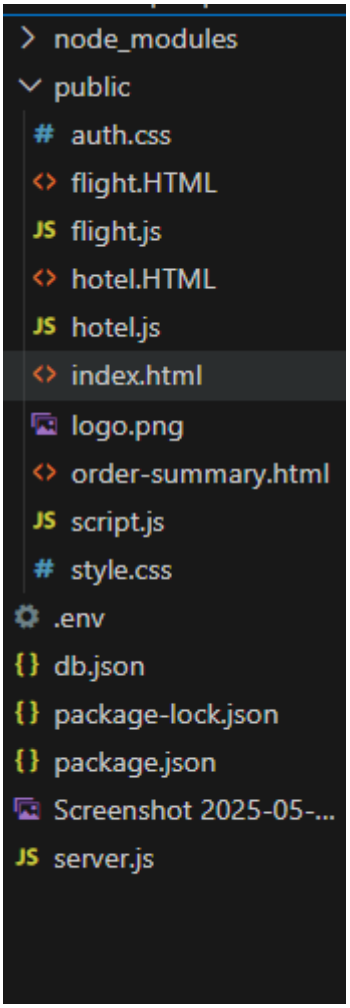
- **Nodemailer:** This Node.js module is configured to send emails via a Gmail account.
- **Google App Passwords:** Ensures secure authentication with the Gmail SMTP server without exposing the primary account password.
- **Automated Triggers:** Emails are automatically sent upon:
    1. Successful user registration (Welcome Email).
    2. Successful order placement (Order Confirmation Email with itemized receipt).
    3. User feedback submission (Notification to the admin email).

4. External API Integration

- **Amadeus Self-Service API:** Provides real-time, dynamic data for flight and hotel searches, forming the core of the travel search functionality.
- **Google Translate API:** A widget is integrated to provide multi-language support, enhancing the application's accessibility.
- **html2pdf.js Library:** Used on the frontend to dynamically generate a downloadable PDF receipt from the order summary page.

CODE

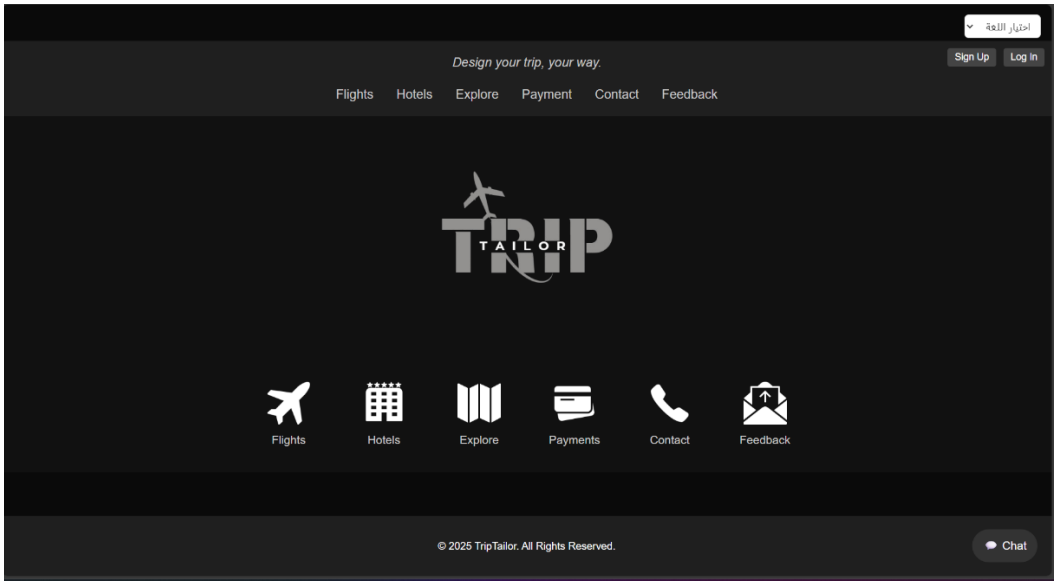
These are the files required. The codes are provided in the GitHub.

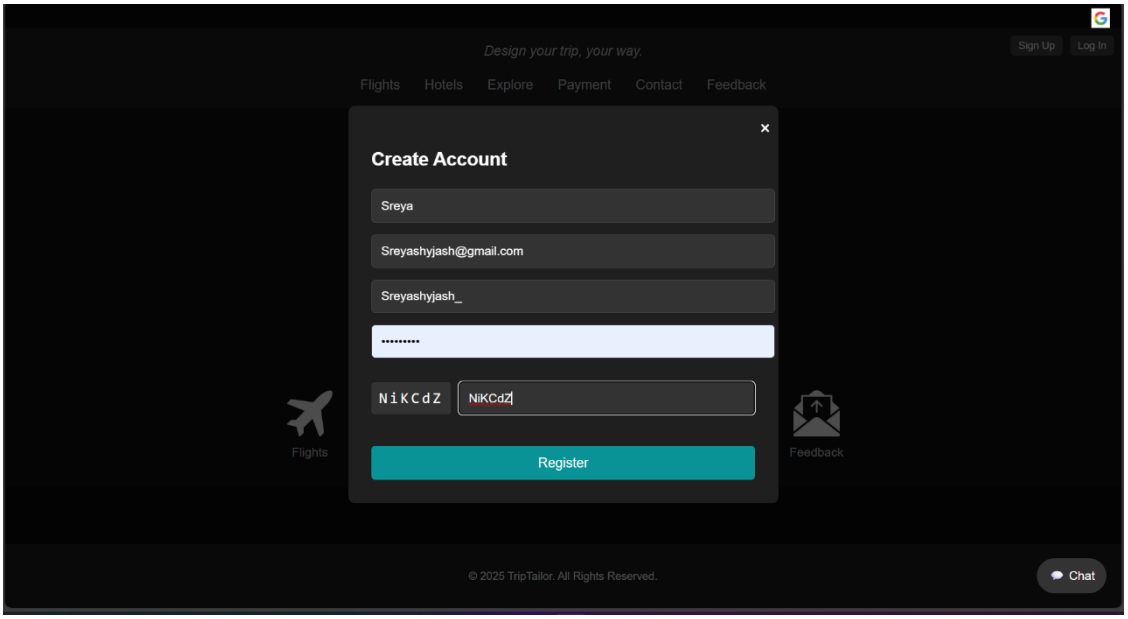


RESULT AND TESTING

The project has successfully achieved its aims, resulting in a fully functional prototype that demonstrates a complete user flow, as documented in the provided screenshots.

- **Seamless Authentication:** Users can successfully register, log in, and log out. The UI correctly reflects the user's authentication status, showing a personalized side menu when logged in.
- **Functional Email System:** The system reliably sends professionally formatted HTML emails for registration, orders, and feedback, confirming that the backend Nodemailer integration is working perfectly.
- **Dynamic Search and Booking:** The flight and hotel search pages successfully fetch and display real-time data from the Amadeus API. Users can add these dynamic items to the cart.
- **End-to-End Order Flow:** A user can add multiple items to the cart, view the calculated total, proceed to a payment page, and confirm their booking. The booking is then saved to the database, displayed in the "My Bookings" section, and a confirmation email is dispatched.
- **Professional User Interface:** The custom modal system provides a consistent and branded experience. The interface is clean, responsive, and easy to navigate. The multi-language feature works as intended.
- **Receipt Generation:** The "Download Receipt" feature correctly generates a clean PDF of the order summary, providing a tangible record for the user.
-




Design your trip, your way.
Sign Up
Log In
Flights
Hotels
Explore
Payment
Contact
Feedback
Create Account
Sreya
Sreyashyjash@gmail.com
Sreyashyjash_
NiKCdZ
NiKCdZ
Register
Flights
Feedback
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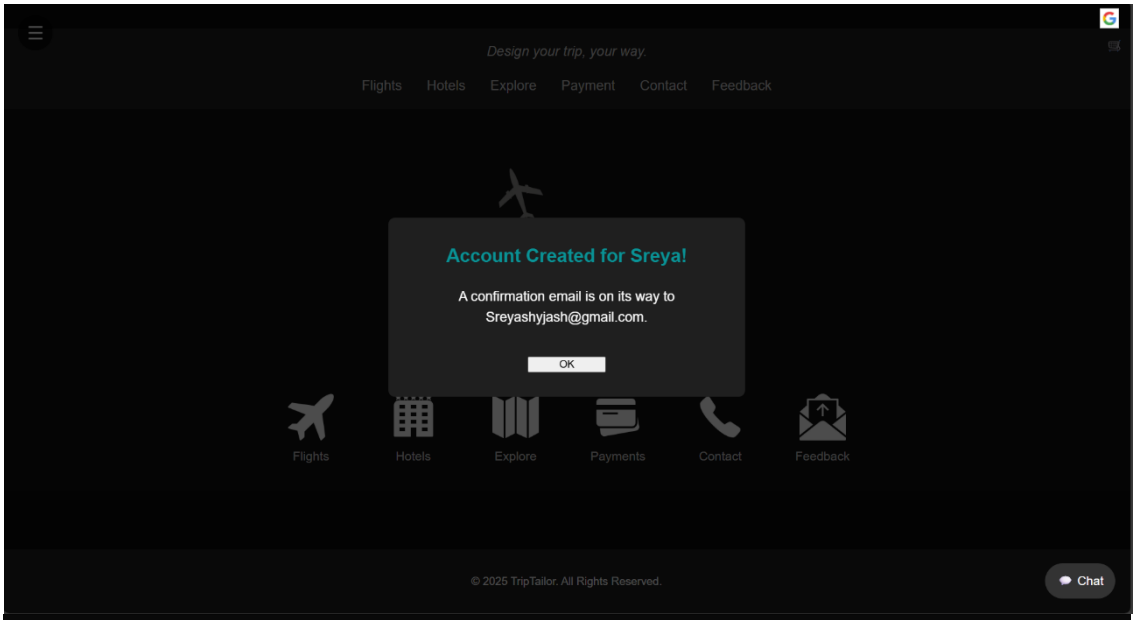
Chat


Design your trip, your way.
Flights
Hotels
Explore
Payment
Contact
Feedback
Account Created for Sreya!
A confirmation email is on its way to Sreyashyjash@gmail.com.
OK
Flights
Hotels
Explore
Payments
Contact
Feedback
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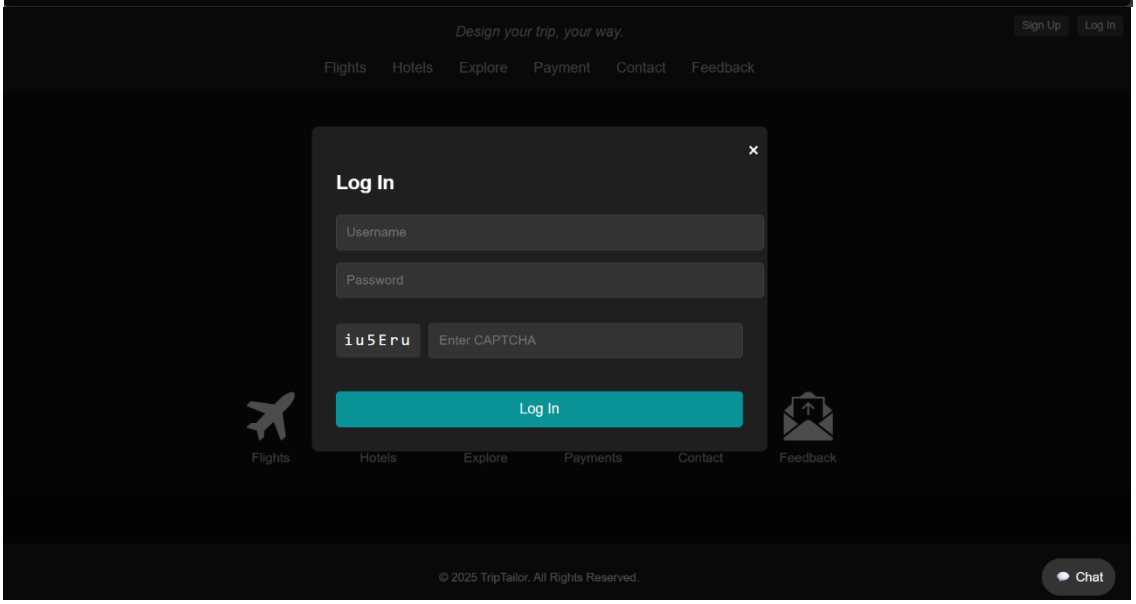
Chat


Design your trip, your way.
Sign Up
Log In
Flights
Hotels
Explore
Payment
Contact
Feedback
Log In
Username
Password
iu5Eru
Enter CAPTCHA
Log In
Flights
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Feedback
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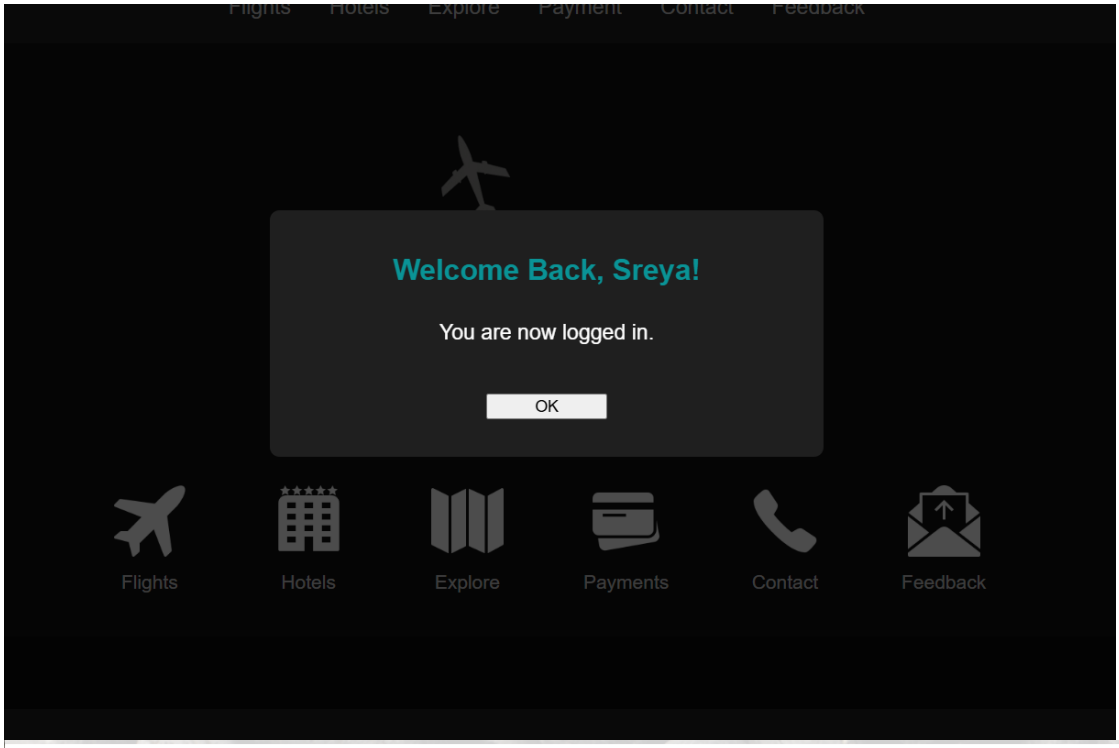


Welcome to Trip Tailor! Your account is ready. Inbox ×

Trip Tailor <triptailor2025@gmail.com>
to me

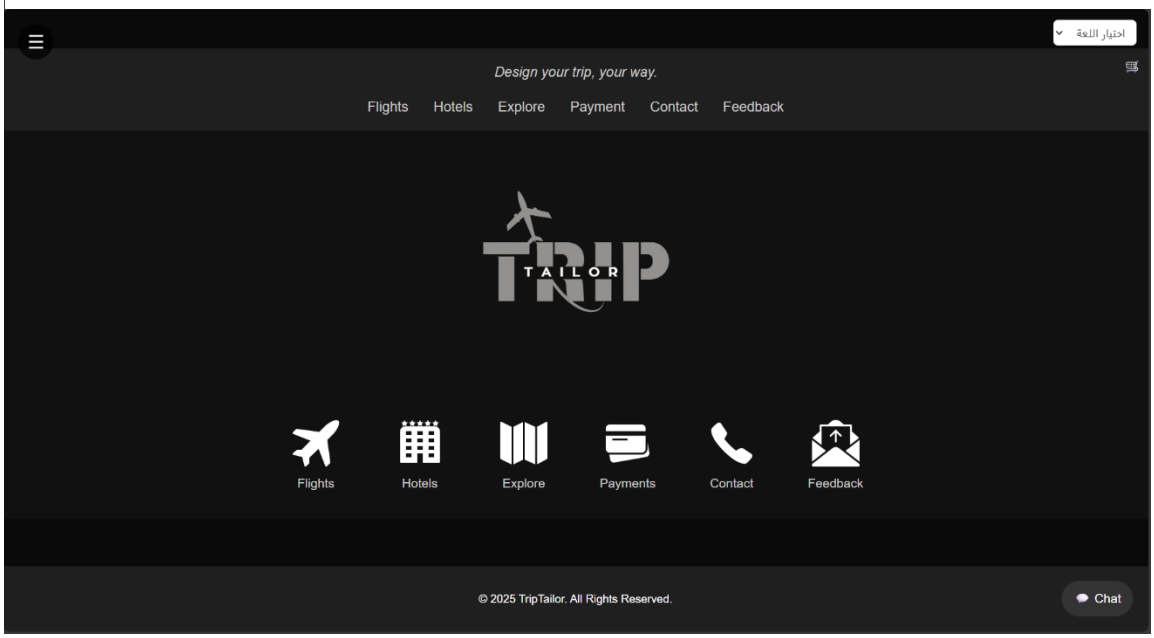
Hi Sreya,

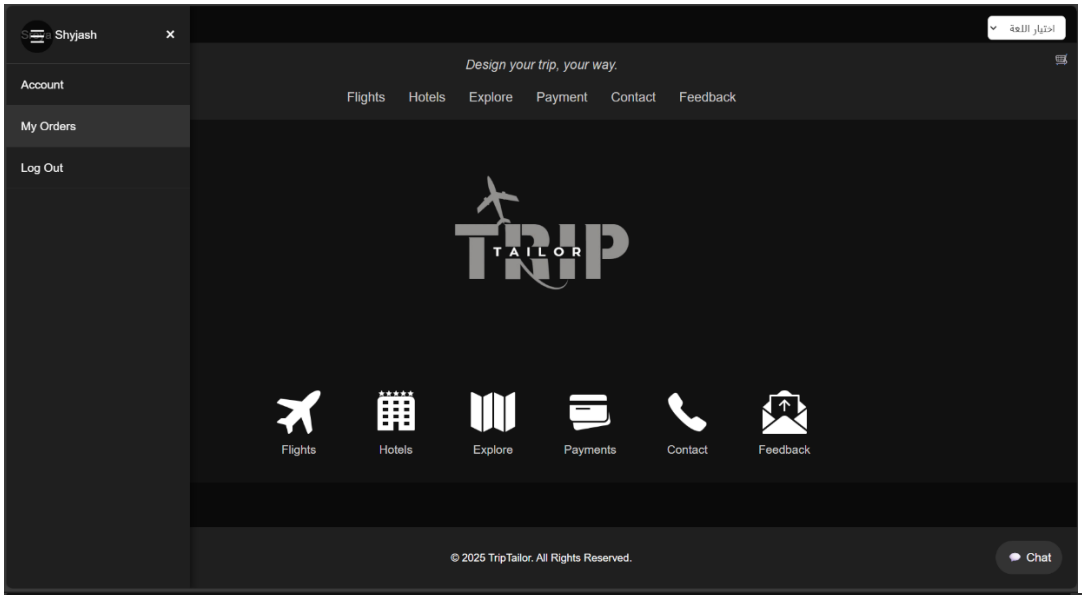
Welcome to Trip Tailor! Your account has been successfully created.

You can now log in and start planning your next great adventure.

Happy travels,

The Trip Tailor Team




Shyjash
Account
My Orders
Log Out
اختيار اللغة
Design your trip, your way.
Flights Hotels Explore Payment Contact Feedback
TRIP
TAILOR
Flights
Hotels
Explore
Payments
Contact
Feedback
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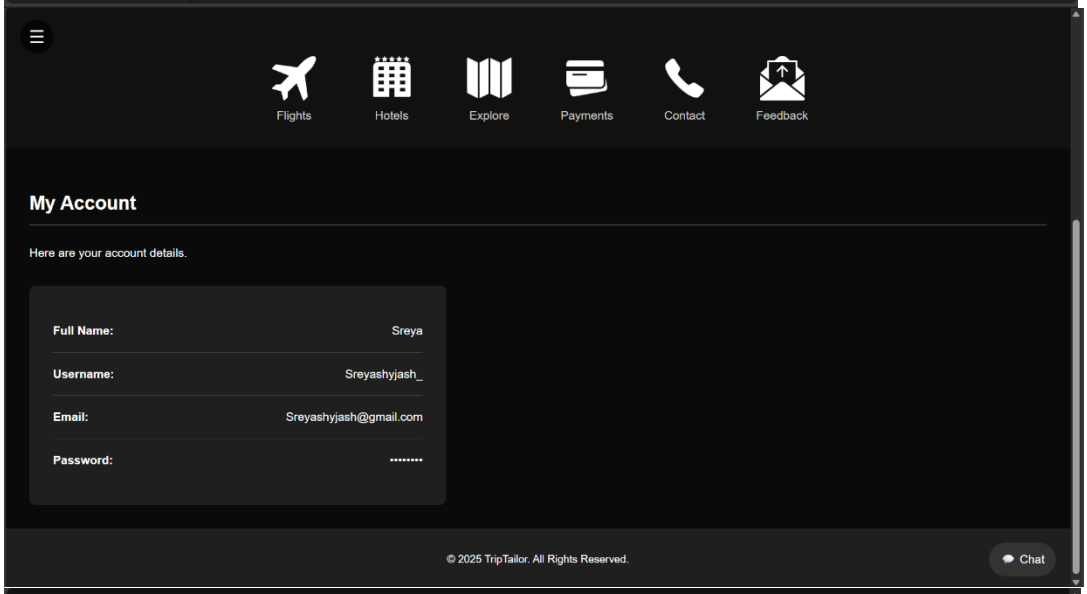
Chat


Flights
Hotels
Explore
Payments
Contact
Feedback
My Account
Here are your account details.
Full Name: Sreya
Username: Sreyashyjash_
Email: Sreyashyjash@gmail.com
Password: ••••••••
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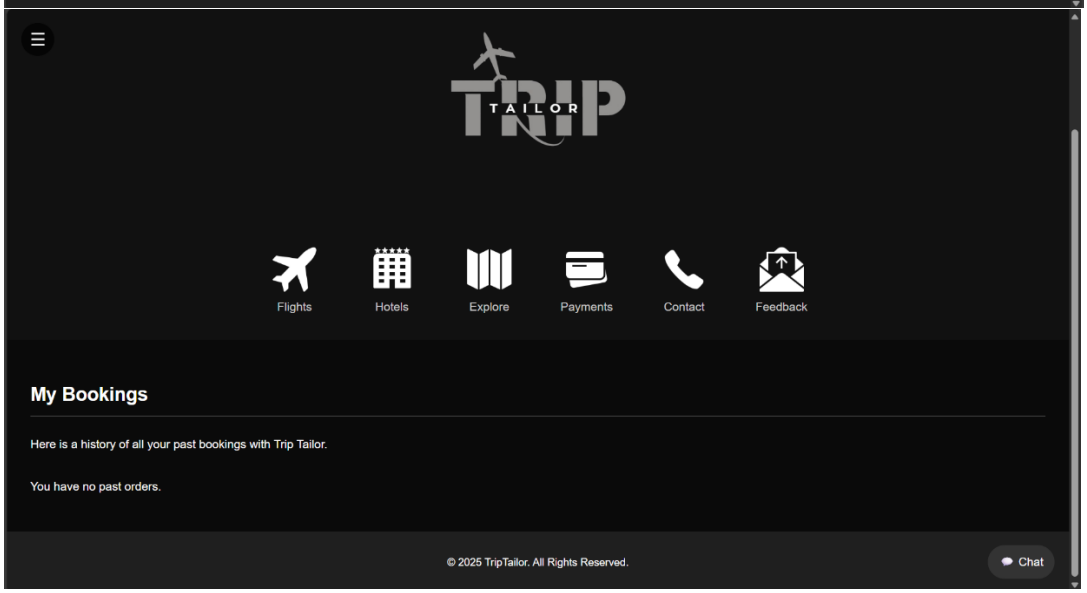
Chat


TRIP
TAILOR
Flights
Hotels
Explore
Payments
Contact
Feedback
My Bookings
Here is a history of all your past bookings with Trip Tailor.
You have no past orders.
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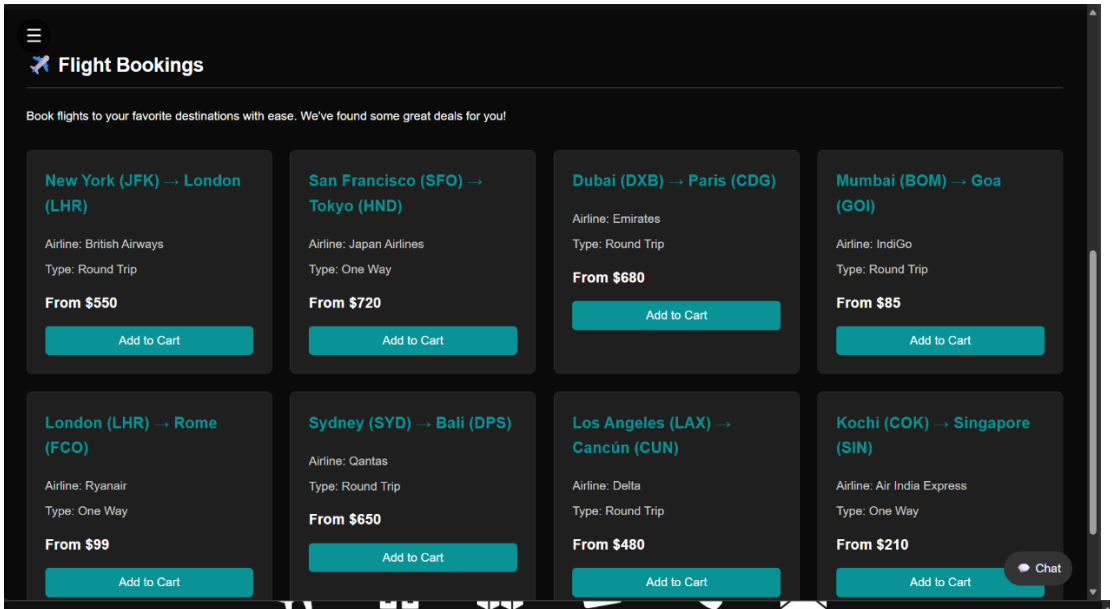
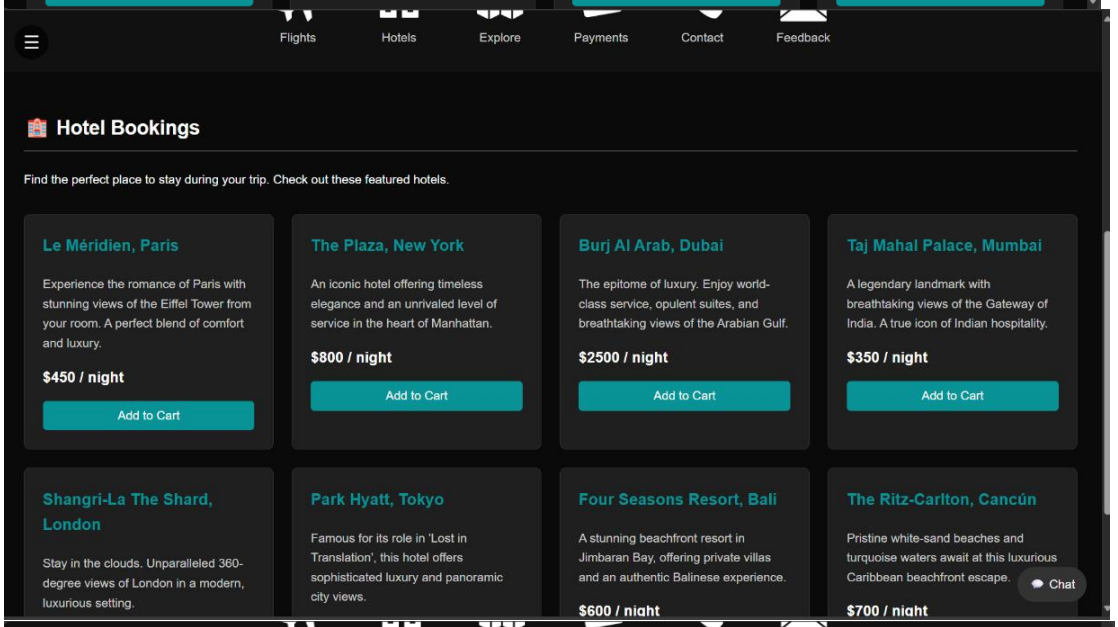
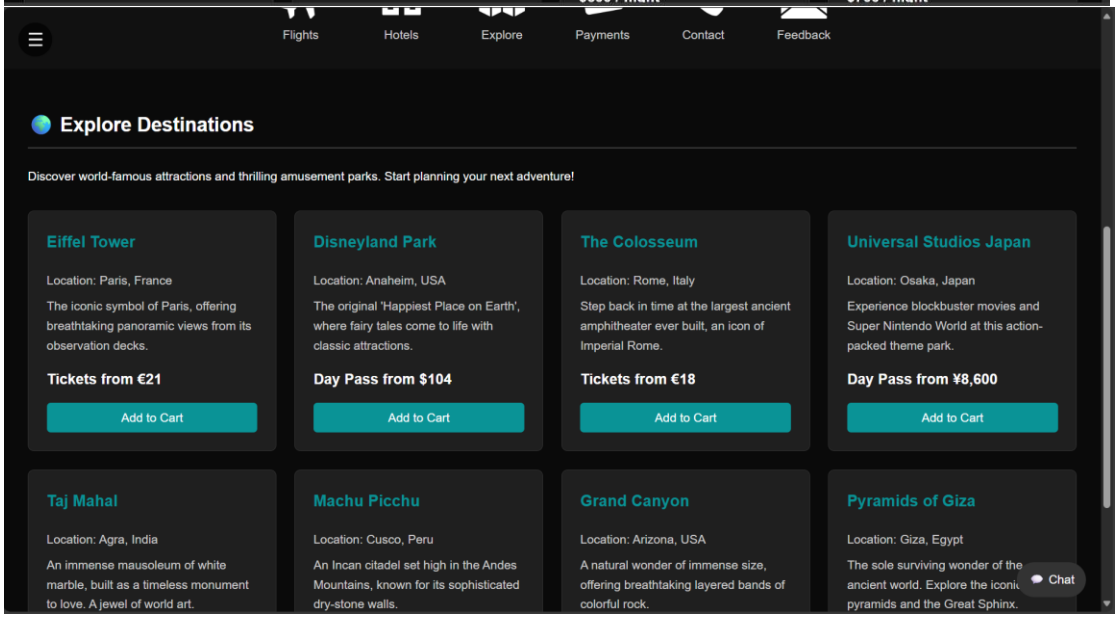

Flight Bookings
Book flights to your favorite destinations with ease. We've found some great deals for you!
New York (JFK) → London (LHR)
Airline: British Airways
Type: Round Trip
From $550
Add to Cart
San Francisco (SFO) → Tokyo (HND)
Airline: Japan Airlines
Type: One Way
From $720
Add to Cart
Dubai (DXB) → Paris (CDG)
Airline: Emirates
Type: Round Trip
From $680
Add to Cart
Mumbai (BOM) → Goa (GOI)
Airline: IndiGo
Type: Round Trip
From $85
Add to Cart
London (LHR) → Rome (FCO)
Airline: Ryanair
Type: One Way
From $99
Add to Cart
Sydney (SYD) → Bali (DPS)
Airline: Qantas
Type: Round Trip
From $650
Add to Cart
Los Angeles (LAX) → Cancún (CUN)
Airline: Delta
Type: Round Trip
From $480
Add to Cart
Kochi (COK) → Singapore (SIN)
Airline: Air India Express
Type: One Way
From $210
Add to Cart
Chat


Flights
Hotels
Explore
Payments
Contact
Feedback
Hotel Bookings
Find the perfect place to stay during your trip. Check out these featured hotels.
Le Méridien, Paris
Experience the romance of Paris with stunning views of the Eiffel Tower from your room. A perfect blend of comfort and luxury.
$450 / night
Add to Cart
The Plaza, New York
An iconic hotel offering timeless elegance and an unrivaled level of service in the heart of Manhattan.
$800 / night
Add to Cart
Burj Al Arab, Dubai
The epitome of luxury. Enjoy world-class service, opulent suites, and breathtaking views of the Arabian Gulf.
$2500 / night
Add to Cart
Taj Mahal Palace, Mumbai
A legendary landmark with breathtaking views of the Gateway of India. A true icon of Indian hospitality.
$350 / night
Add to Cart
Shangri-La The Shard, London
Stay in the clouds. Unparalleled 360-degree views of London in a modern, luxurious setting.
Park Hyatt, Tokyo
Famous for its role in 'Lost in Translation', this hotel offers sophisticated luxury and panoramic city views.
Four Seasons Resort, Bali
A stunning beachfront resort in Jimbaran Bay, offering private villas and an authentic Balinese experience.
$600 / night
The Ritz-Carlton, Cancún
Pristine white-sand beaches and turquoise waters await at this luxurious Caribbean beachfront escape.
$700 / night
Chat


Flights
Hotels
Explore
Payments
Contact
Feedback
Explore Destinations
Discover world-famous attractions and thrilling amusement parks. Start planning your next adventure!
Eiffel Tower
Location: Paris, France
The iconic symbol of Paris, offering breathtaking panoramic views from its observation decks.
Tickets from €21
Add to Cart
Disneyland Park
Location: Anaheim, USA
The original 'Happiest Place on Earth', where fairy tales come to life with classic attractions.
Day Pass from $104
Add to Cart
The Colosseum
Location: Rome, Italy
Step back in time at the largest ancient amphitheater ever built, an icon of Imperial Rome.
Tickets from €18
Add to Cart
Universal Studios Japan
Location: Osaka, Japan
Experience blockbuster movies and Super Nintendo World at this action-packed theme park.
Day Pass from ¥8,600
Add to Cart
Taj Mahal
Location: Agra, India
An immense mausoleum of white marble, built as a timeless monument to love. A jewel of world art.
Machu Picchu
Location: Cusco, Peru
An Incan citadel set high in the Andes Mountains, known for its sophisticated dry-stone walls.
Grand Canyon
Location: Arizona, USA
A natural wonder of immense size, offering breathtaking layered bands of colorful rock.
Pyramids of Giza
Location: Giza, Egypt
The sole surviving wonder of the ancient world. Explore the iconic pyramids and the Great Sphinx.
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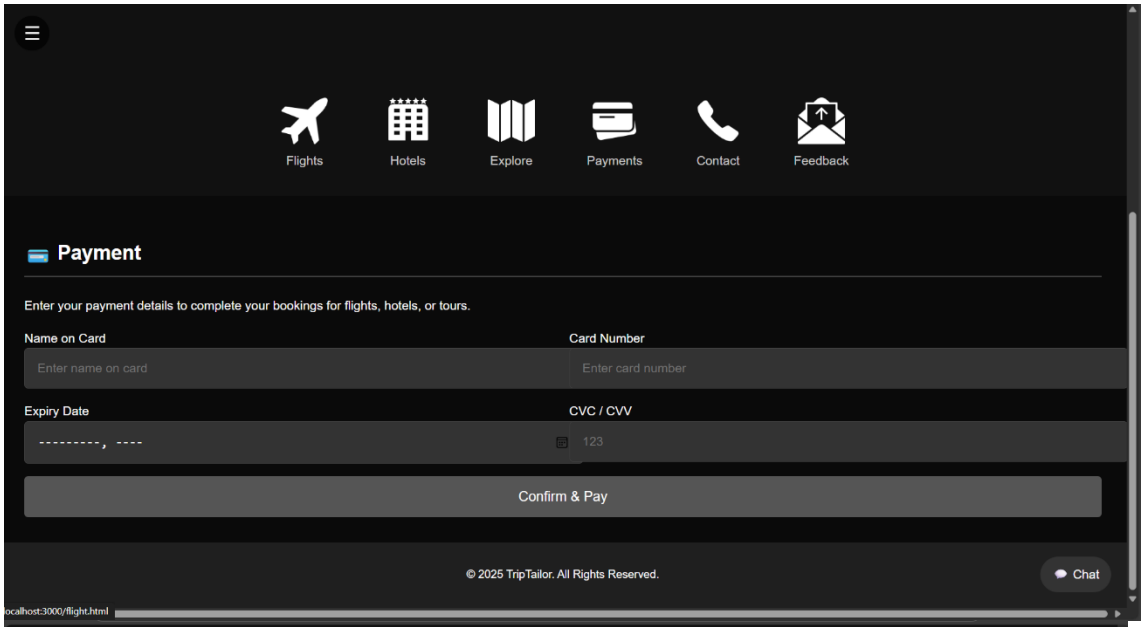
Flights
Hotels
Explore
Payments
Contact
Feedback
Payment
Enter your payment details to complete your bookings for flights, hotels, or tours.
Name on Card
Enter name on card
Card Number
Enter card number
Expiry Date
--------, ----
CVC / CVV
123
Confirm & Pay
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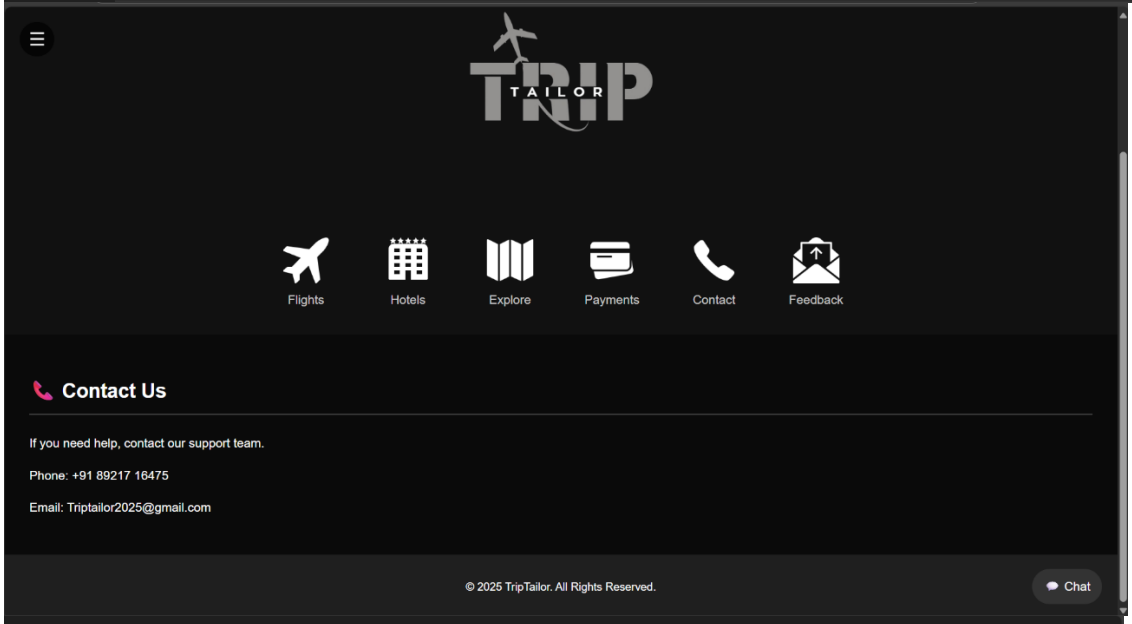
localhost:3000/flight.html


TRIP
TAILOR
Flights
Hotels
Explore
Payments
Contact
Feedback
Contact Us
If you need help, contact our support team.
Phone: +91 89217 16475
Email: Triptailor2025@gmail.com
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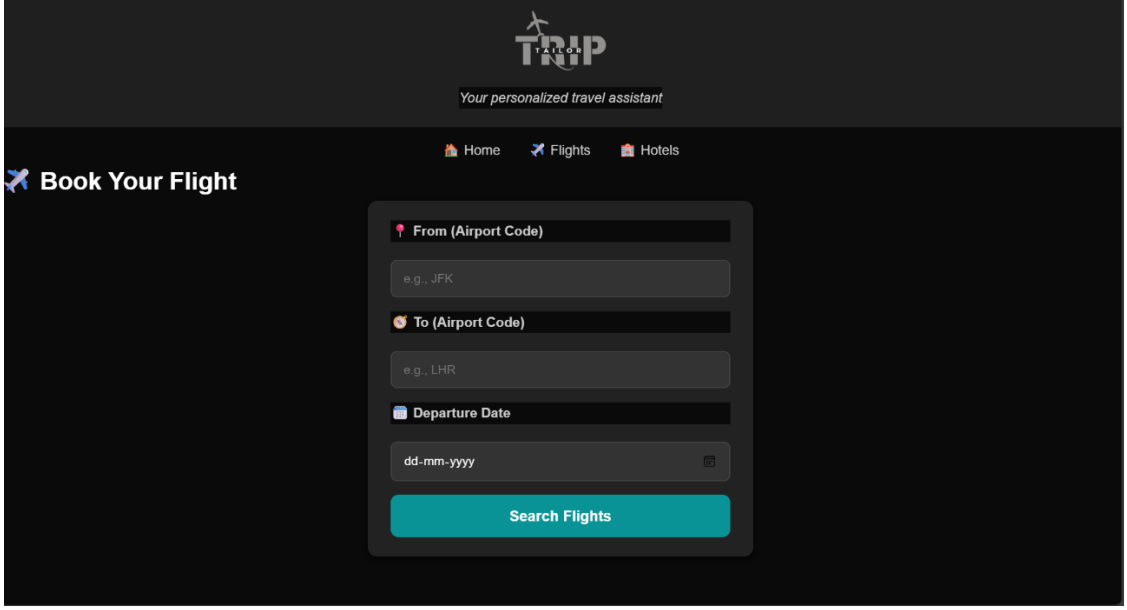
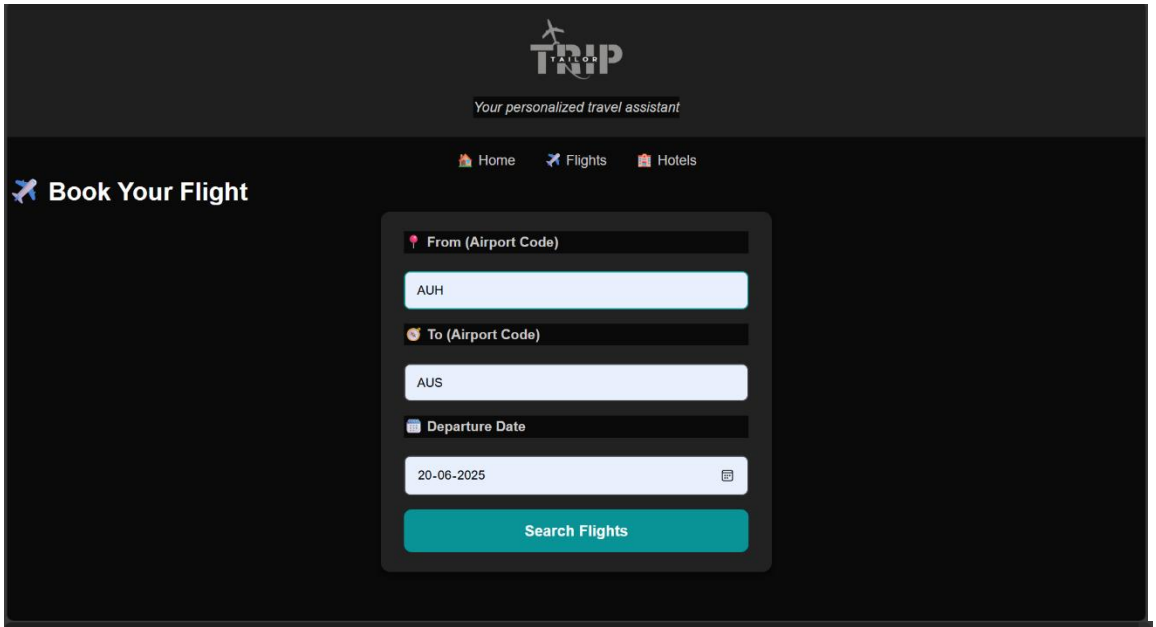
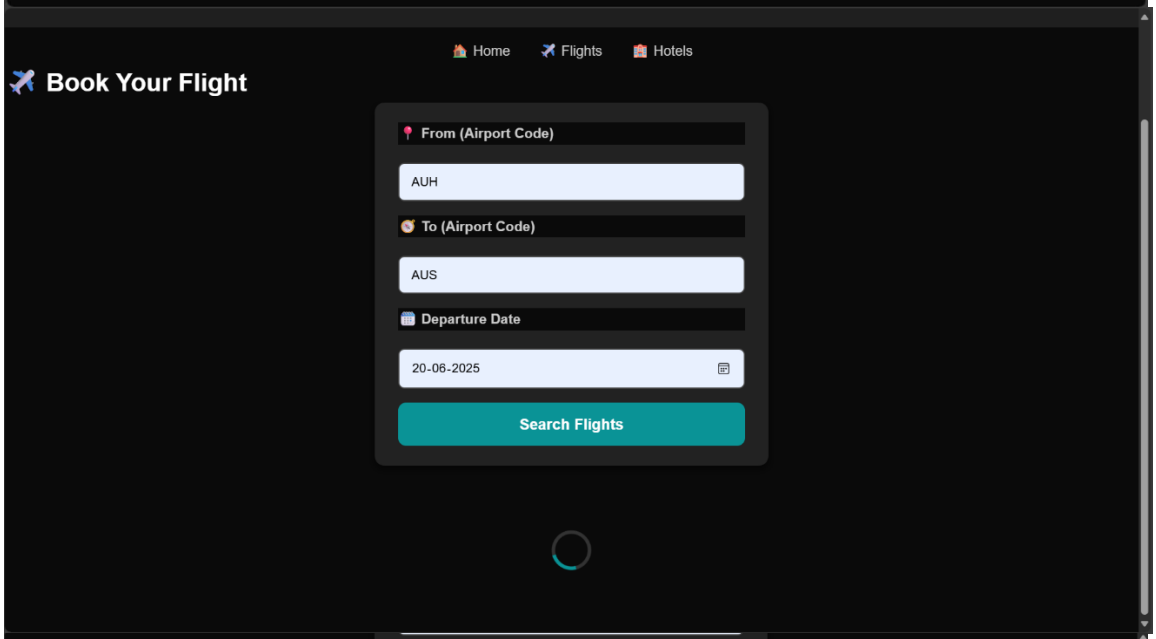
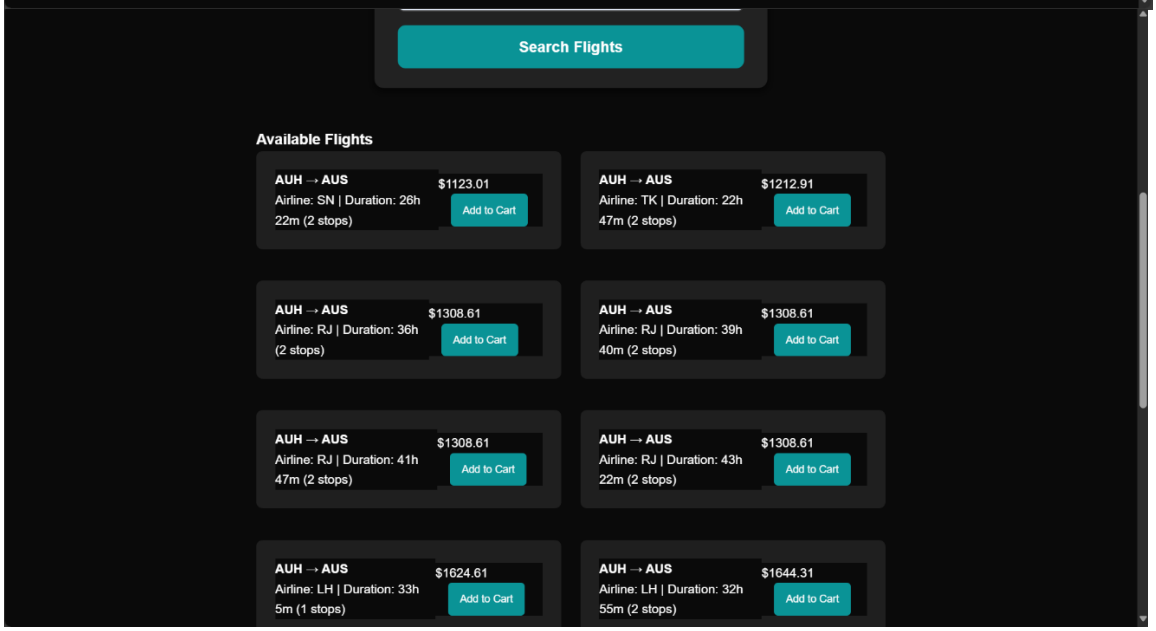
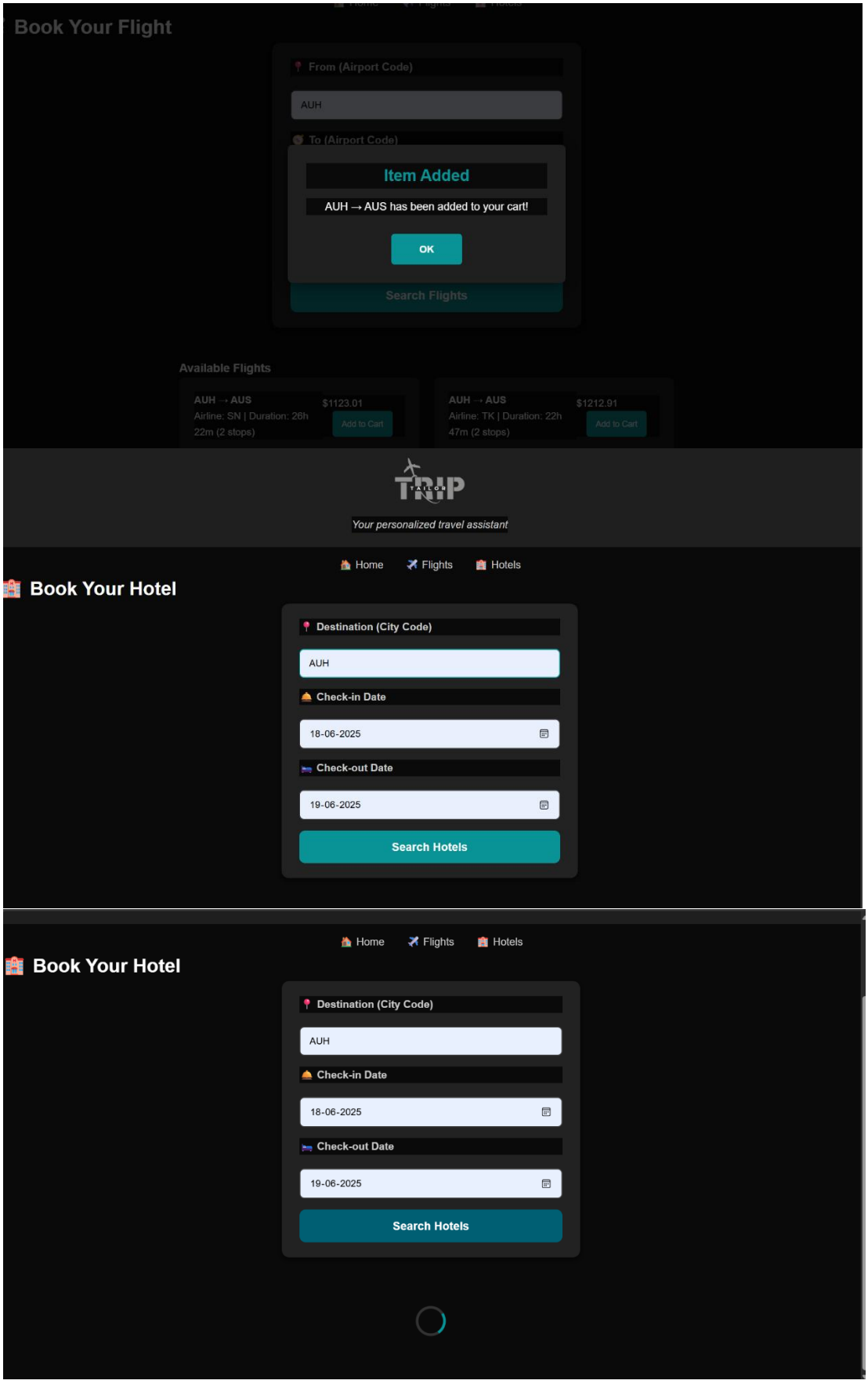
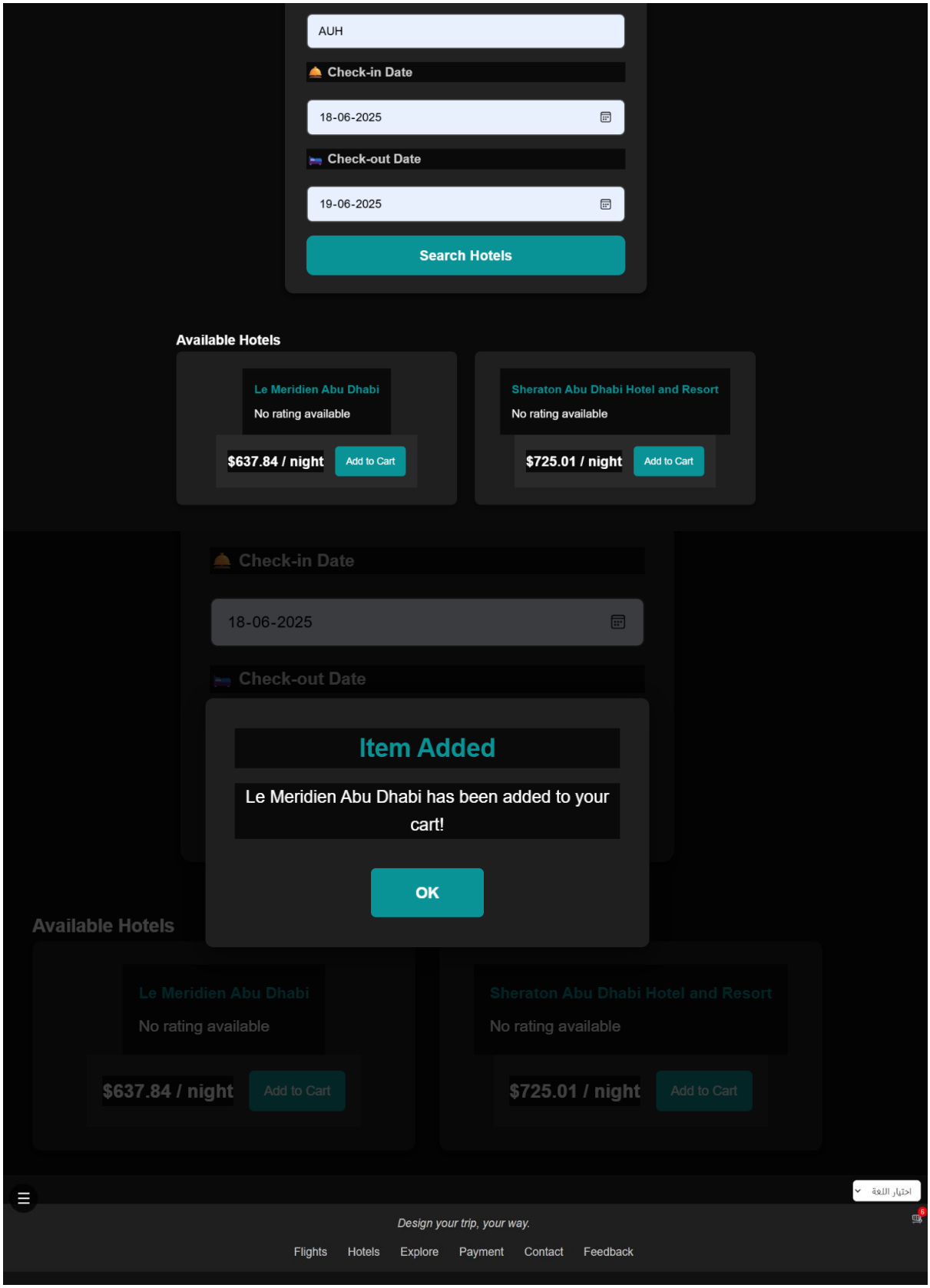

TRIP
TAILOR
Your personalized travel assistant
Home
Flights
Hotels
Book Your Flight
From (Airport Code)
e.g., JFK
To (Airport Code)
e.g., LHR
Departure Date
dd-mm-yyyy
Search Flights

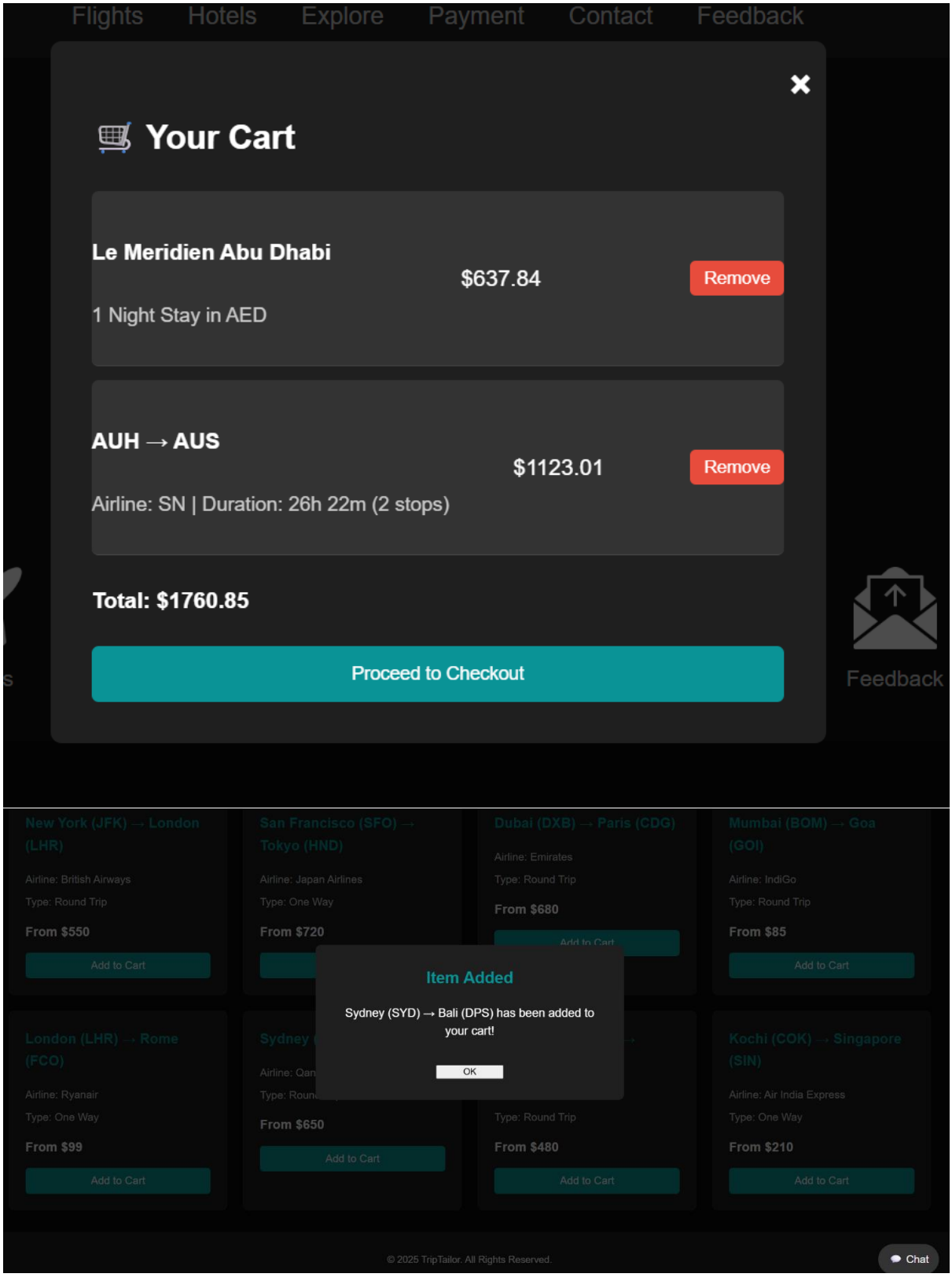

TRIP
TAILOR
Your personalized travel assistant
Home
Flights
Hotels
Book Your Flight
From (Airport Code)
AUH
To (Airport Code)
AUS
Departure Date
20-06-2025
Search Flights


Home
Flights
Hotels
Book Your Flight
From (Airport Code)
AUH
To (Airport Code)
AUS
Departure Date
20-06-2025
Search Flights


Search Flights
Available Flights
AUH → AUS
Airline: SN | Duration: 26h 22m (2 stops)
$1123.01
Add to Cart
AUH → AUS
Airline: TK | Duration: 22h 47m (2 stops)
$1212.91
Add to Cart
AUH → AUS
Airline: RJ | Duration: 36h (2 stops)
$1308.61
Add to Cart
AUH → AUS
Airline: RJ | Duration: 39h 40m (2 stops)
$1308.61
Add to Cart
AUH → AUS
Airline: RJ | Duration: 41h 47m (2 stops)
$1308.61
Add to Cart
AUH → AUS
Airline: RJ | Duration: 43h 22m (2 stops)
$1308.61
Add to Cart
AUH → AUS
Airline: LH | Duration: 33h 5m (1 stops)
$1624.61
Add to Cart
AUH → AUS
Airline: LH | Duration: 32h 55m (2 stops)
$1644.31
Add to Cart


Book Your Flight
From (Airport Code)
AUH
To (Airport Code)
Item Added
AUH → AUS has been added to your cart!
OK
Search Flights
Available Flights
AUH → AUS
$1123.01
Airline: SN | Duration: 26h 22m (2 stops)
Add to Cart
AUH → AUS
$1212.91
Airline: TK | Duration: 22h 47m (2 stops)
Add to Cart
TRIP
Your personalized travel assistant
Home
Flights
Hotels
Book Your Hotel
Destination (City Code)
AUH
Check-in Date
18-06-2025
Check-out Date
19-06-2025
Search Hotels
Home
Flights
Hotels
Book Your Hotel
Destination (City Code)
AUH
Check-in Date
18-06-2025
Check-out Date
19-06-2025
Search Hotels


AUH
Check-in Date
18-06-2025
Check-out Date
19-06-2025
Search Hotels
Available Hotels
Le Meridien Abu Dhabi
No rating available
$637.84 / night
Add to Cart
Sheraton Abu Dhabi Hotel and Resort
No rating available
$725.01 / night
Add to Cart
Check-in Date
18-06-2025
Check-out Date
Item Added
Le Meridien Abu Dhabi has been added to your cart!
OK
Available Hotels
Le Meridien Abu Dhabi
No rating available
$637.84 / night
Add to Cart
Sheraton Abu Dhabi Hotel and Resort
No rating available
$725.01 / night
Add to Cart
Design your trip, your way.
Flights
Hotels
Explore
Payment
Contact
Feedback


Flights
Hotels
Explore
Payment
Contact
Feedback
Your Cart
Le Meridien Abu Dhabi
$637.84
Remove
1 Night Stay in AED
AUH → AUS
$1123.01
Remove
Airline: SN | Duration: 26h 22m (2 stops)
Total: $1760.85
Proceed to Checkout
Feedback
New York (JFK) → London (LHR)
Airline: British Airways
Type: Round Trip
From $550
Add to Cart
San Francisco (SFO) → Tokyo (HND)
Airline: Japan Airlines
Type: One Way
From $720
Dubai (DXB) → Paris (CDG)
Airline: Emirates
Type: Round Trip
From $680
Mumbai (BOM) → Goa (GOI)
Airline: IndiGo
Type: Round Trip
From $85
Add to Cart
Item Added
Sydney (SYD) → Bali (DPS) has been added to your cart!
OK
London (LHR) → Rome (FCO)
Airline: Ryanair
Type: One Way
From $99
Add to Cart
From $650
Add to Cart
Type: Round Trip
From $480
Add to Cart
Kochi (COK) → Singapore (SIN)
Airline: Air India Express
Type: One Way
From $210
Add to Cart
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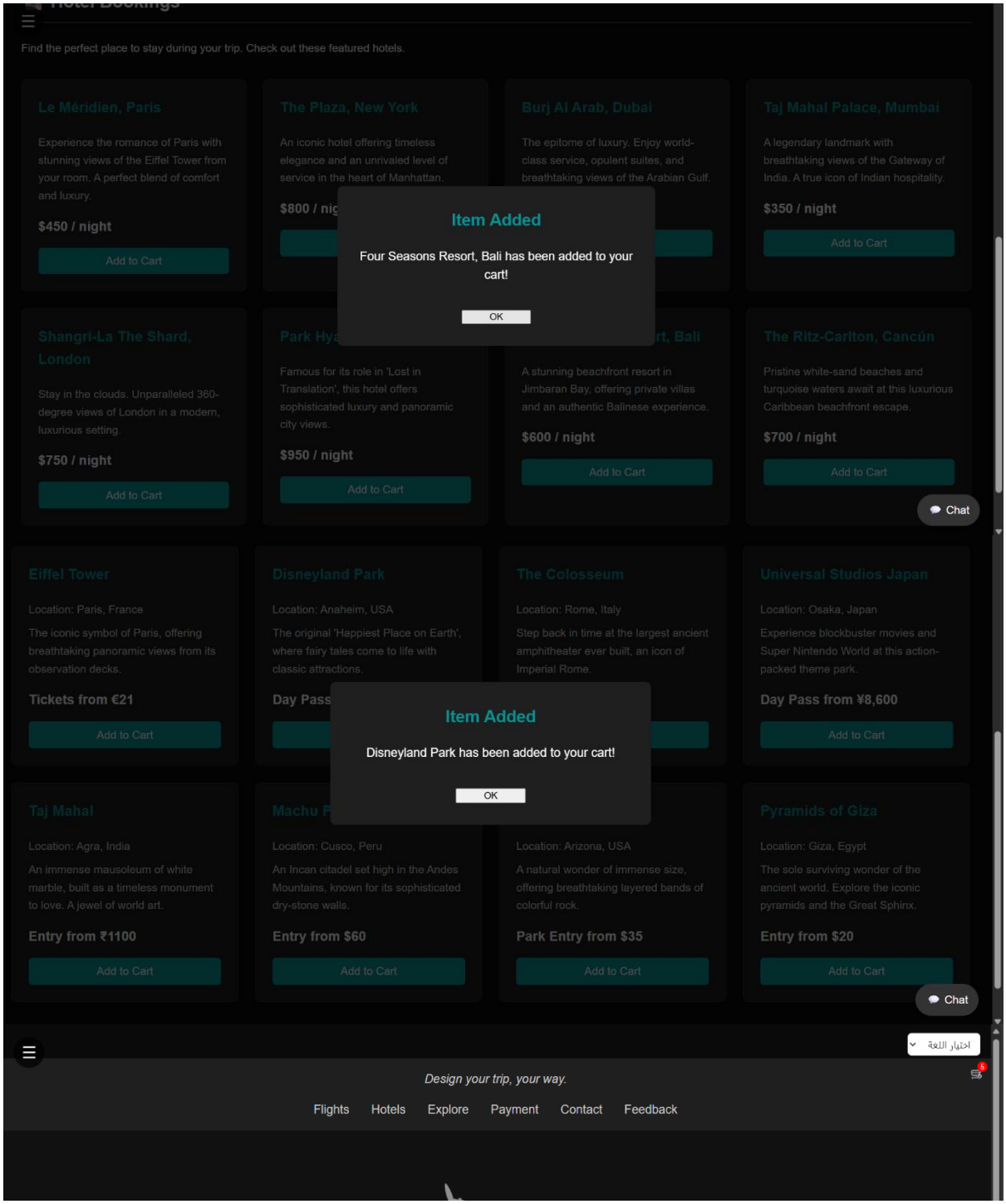
Find the perfect place to stay during your trip. Check out these featured hotels.
Le Méridien, Paris
Experience the romance of Paris with stunning views of the Eiffel Tower from your room. A perfect blend of comfort and luxury.
$450 / night
Add to Cart
The Plaza, New York
An iconic hotel offering timeless elegance and an unrivaled level of service in the heart of Manhattan.
Burj Al Arab, Dubai
The epitome of luxury. Enjoy world-class service, opulent suites, and breathtaking views of the Arabian Gulf.
Taj Mahal Palace, Mumbai
A legendary landmark with breathtaking views of the Gateway of India. A true icon of Indian hospitality.
$350 / night
Add to Cart
Item Added
Four Seasons Resort, Bali has been added to your cart!
OK
Shangri-La The Shard, London
Stay in the clouds. Unparalleled 360-degree views of London in a modern, luxurious setting.
$750 / night
Add to Cart
Famous for its role in 'Lost in Translation', this hotel offers sophisticated luxury and panoramic city views.
$950 / night
Add to Cart
A stunning beachfront resort in Jimbaran Bay, offering private villas and an authentic Balinese experience.
$600 / night
Add to Cart
The Ritz-Carlton, Cancún
Pristine white-sand beaches and turquoise waters await at this luxurious Caribbean beachfront escape.
$700 / night
Add to Cart
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Eiffel Tower
Location: Paris, France
The iconic symbol of Paris, offering breathtaking panoramic views from its observation decks.
Tickets from €21
Add to Cart
Disneyland Park
Location: Anaheim, USA
The original 'Happiest Place on Earth', where fairy tales come to life with classic attractions.
The Colosseum
Location: Rome, Italy
Step back in time at the largest ancient amphitheater ever built, an icon of Imperial Rome.
Universal Studios Japan
Location: Osaka, Japan
Experience blockbuster movies and Super Nintendo World at this action-packed theme park.
Day Pass from ¥8,600
Add to Cart
Item Added
Disneyland Park has been added to your cart!
OK
Taj Mahal
Location: Agra, India
An immense mausoleum of white marble, built as a timeless monument to love. A jewel of world art.
Entry from ₹1100
Add to Cart
Location: Cusco, Peru
An Incan citadel set high in the Andes Mountains, known for its sophisticated dry-stone walls.
Entry from $60
Add to Cart
Location: Arizona, USA
A natural wonder of immense size, offering breathtaking layered bands of colorful rock.
Park Entry from $35
Add to Cart
Pyramids of Giza
Location: Giza, Egypt
The sole surviving wonder of the ancient world. Explore the iconic pyramids and the Great Sphinx.
Entry from $20
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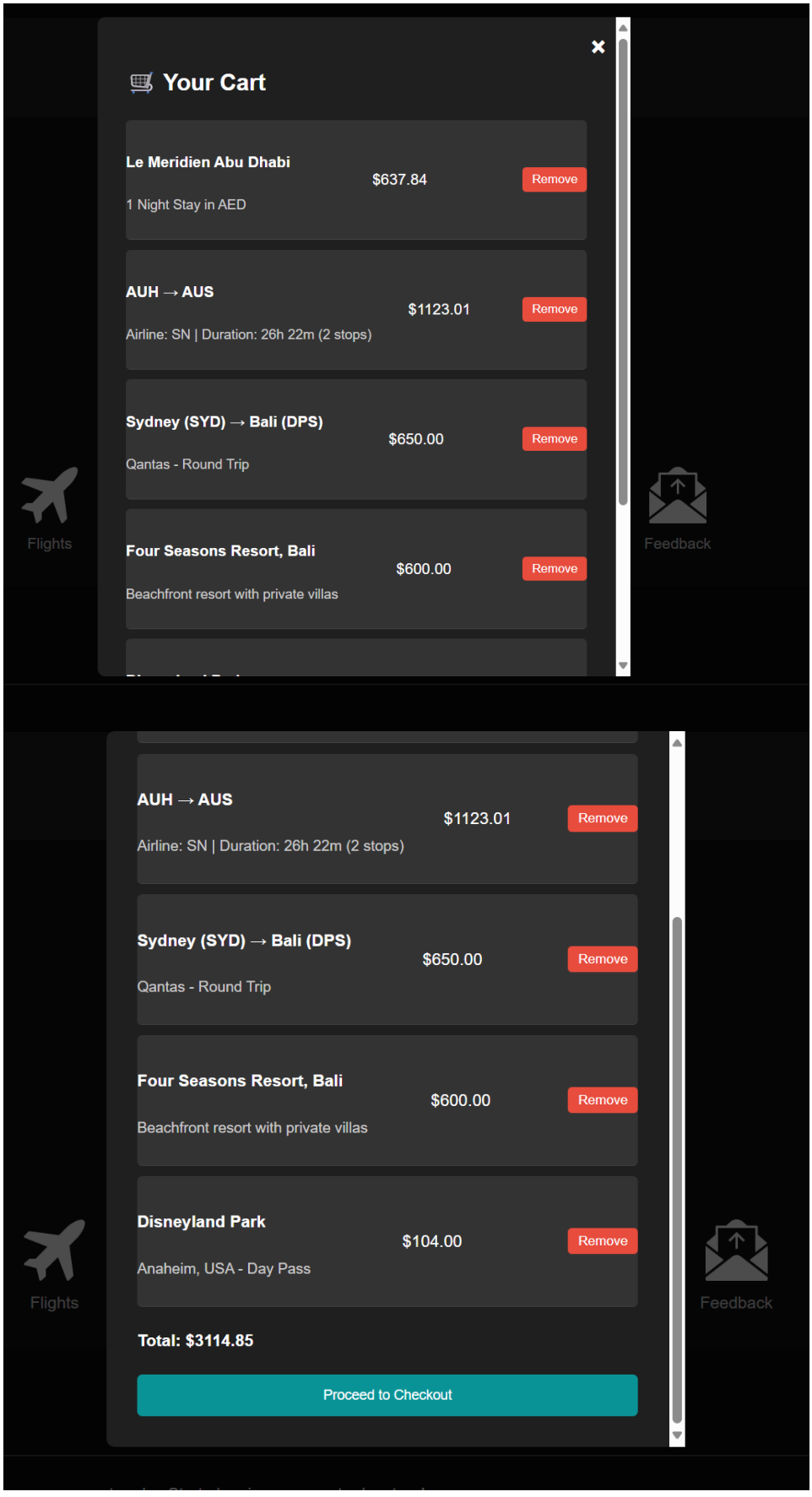
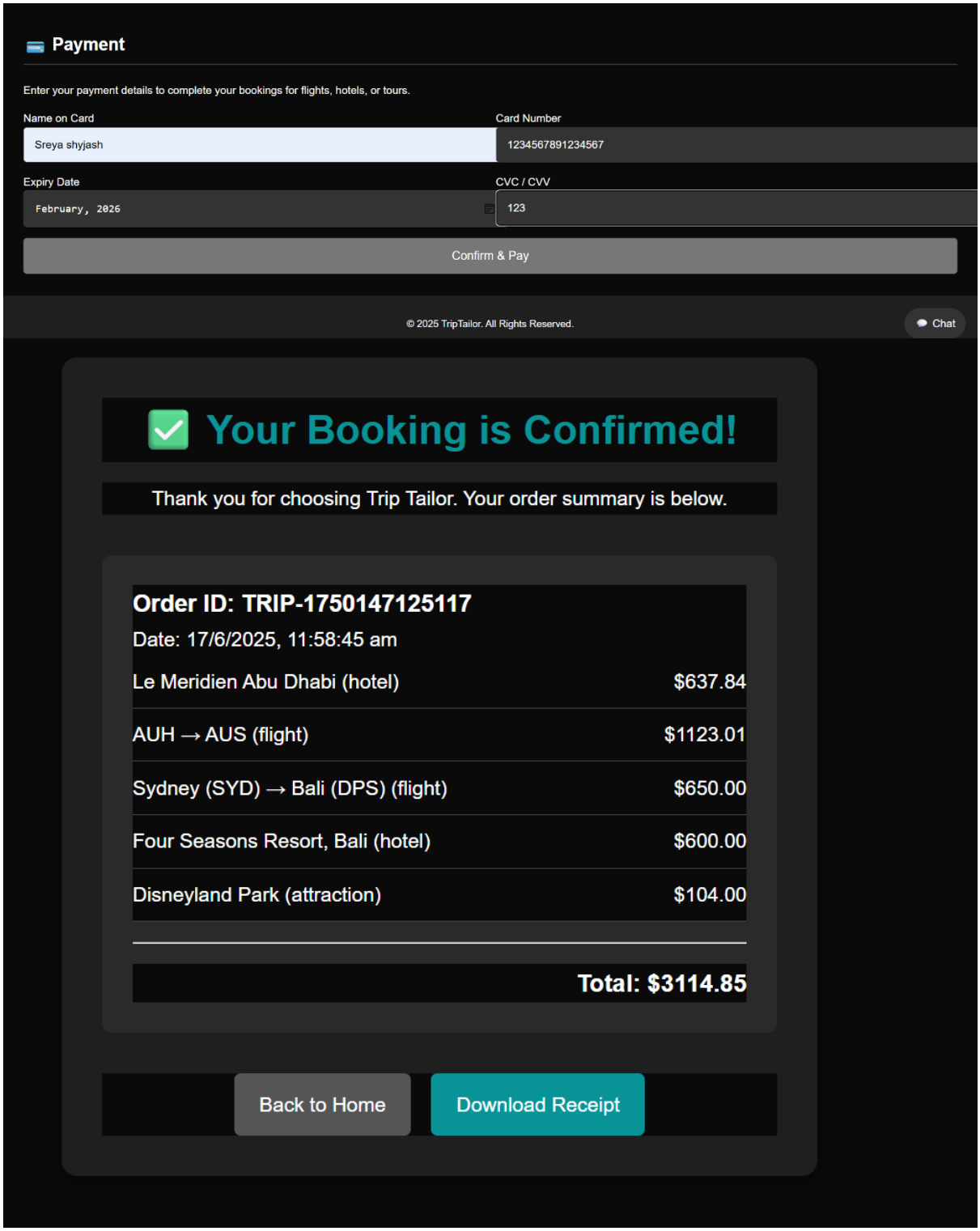

Your Cart
Le Meridien Abu Dhabi
$637.84
Remove
1 Night Stay in AED
AUH → AUS
$1123.01
Remove
Airline: SN | Duration: 26h 22m (2 stops)
Sydney (SYD) → Bali (DPS)
$650.00
Remove
Qantas - Round Trip
Four Seasons Resort, Bali
$600.00
Remove
Beachfront resort with private villas
Flights
Feedback
AUH → AUS
$1123.01
Remove
Airline: SN | Duration: 26h 22m (2 stops)
Sydney (SYD) → Bali (DPS)
$650.00
Remove
Qantas - Round Trip
Four Seasons Resort, Bali
$600.00
Remove
Beachfront resort with private villas
Disneyland Park
$104.00
Remove
Anaheim, USA - Day Pass
Total: $3114.85
Proceed to Checkout
Flights
Feedback


Payment
Enter your payment details to complete your bookings for flights, hotels, or tours.
Name on Card
Sreya shyjash
Card Number
1234567891234567
Expiry Date
February, 2026
CVC / CVV
123
Confirm & Pay
© 2025 TripTailor. All Rights Reserved.
Chat
Your Booking is Confirmed!
Thank you for choosing Trip Tailor. Your order summary is below.
Order ID: TRIP-1750147125117
Date: 17/6/2025, 11:58:45 am
Le Meridien Abu Dhabi (hotel) $637.84
AUH → AUS (flight) $1123.01
Sydney (SYD) → Bali (DPS) (flight) $650.00
Four Seasons Resort, Bali (hotel) $600.00
Disneyland Park (attraction) $104.00
Total: $3114.85
Back to Home
Download Receipt

Order ID: TRIP-1750147125117
Date: 17/6/2025, 11:58:45 am

Le Meridien Abu Dhabi (hotel)	$637.84
AUH → AUS (flight)	$1123.01
Sydney (SYD) → Bali (DPS) (flight)	$650.00
Four Seasons Resort, Bali (hotel)	$600.00
Disneyland Park (attraction)	$104.00

Total: $3114.85

My Bookings

Here is a history of all your past bookings with Trip Tailor.

Order ID: TRIP-1750147125117

Date: 17/6/2025

Le Meridien Abu Dhabi - $637.84
AUH → AUS - $1123.01
Sydney (SYD) → Bali (DPS) - $650.00
Four Seasons Resort, Bali - $600.00
Disneyland Park - $104.00

Total: $3114.85

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Chat

Your Trip Tailor Order is Confirmed! (ID: TRIP-1750147125117) Inbox ×

Trip Tailor <triptailor2025@gmail.com> 11:58 AM (0 minutes ago)
to me

Hi Sreya,

Thank you for your booking! We've received your order and are getting everything ready for your trip.

Order Summary

Order ID: TRIP-1750147125117

Purchase Date: 17/6/2025

Item	Price
Le Meridien Abu Dhabi	$637.84
AUH → AUS	$1123.01
Sydney (SYD) → Bali (DPS)	$650.00
Four Seasons Resort, Bali	$600.00
Disneyland Park	$104.00
Total:	**$3114.85**

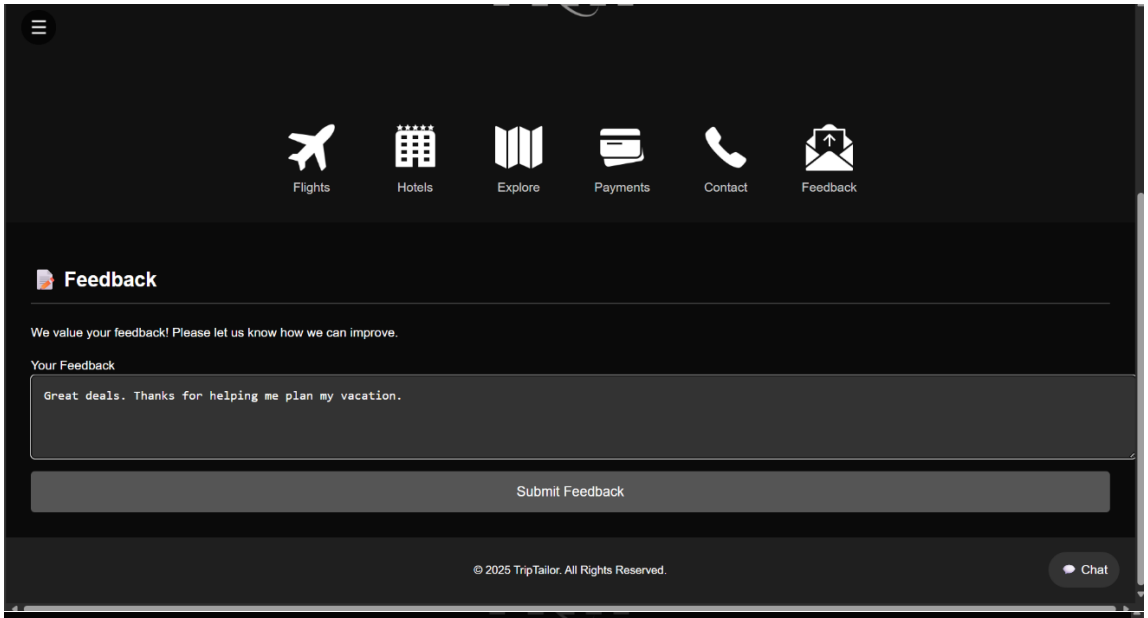
Item	Price
Le Meridien Abu Dhabi	$637.84
AUH → AUS	$1123.01
Sydney (SYD) → Bali (DPS)	$650.00
Four Seasons Resort, Bali	$600.00
Disneyland Park	$104.00
Total:	**$3114.85**

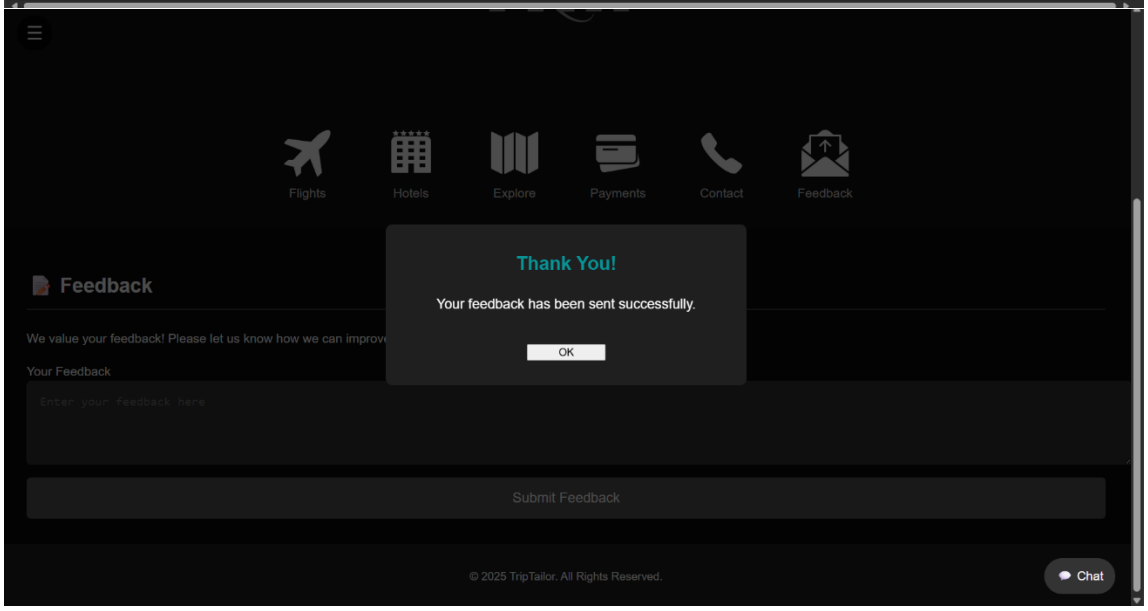
You can always view your order history by logging into your account on our website.

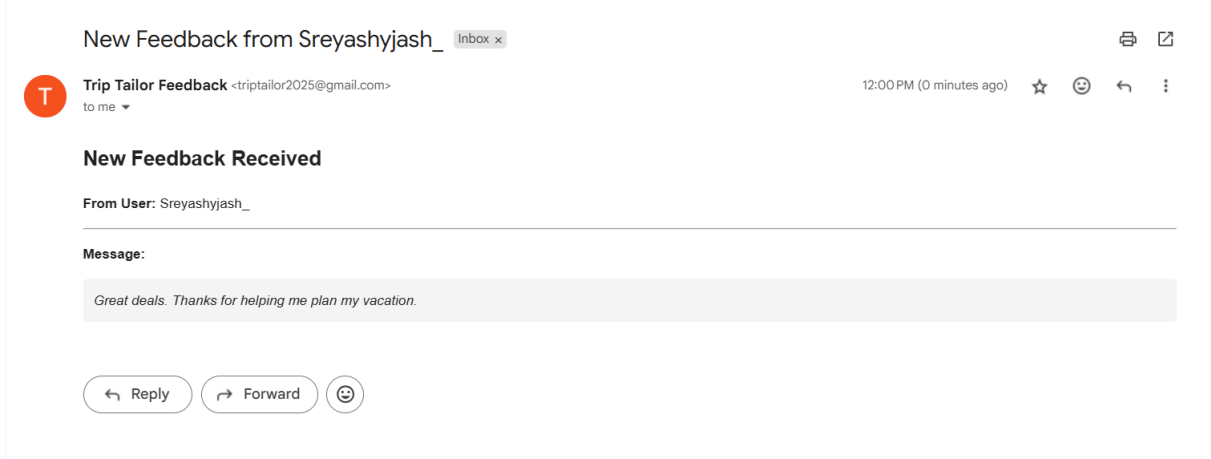
Happy travels,

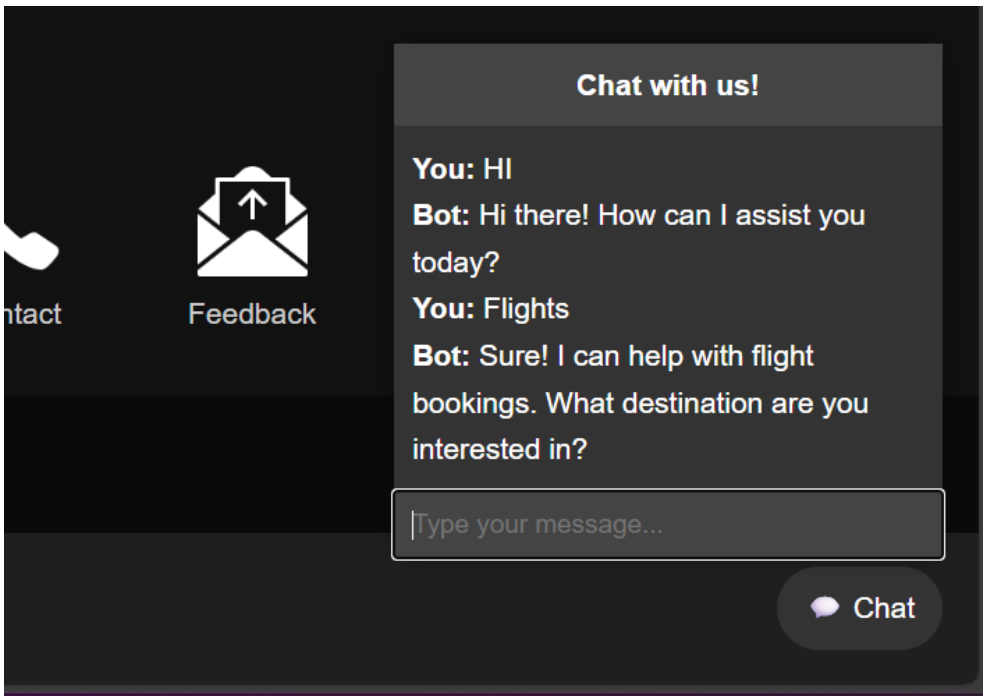
The Trip Tailor Team

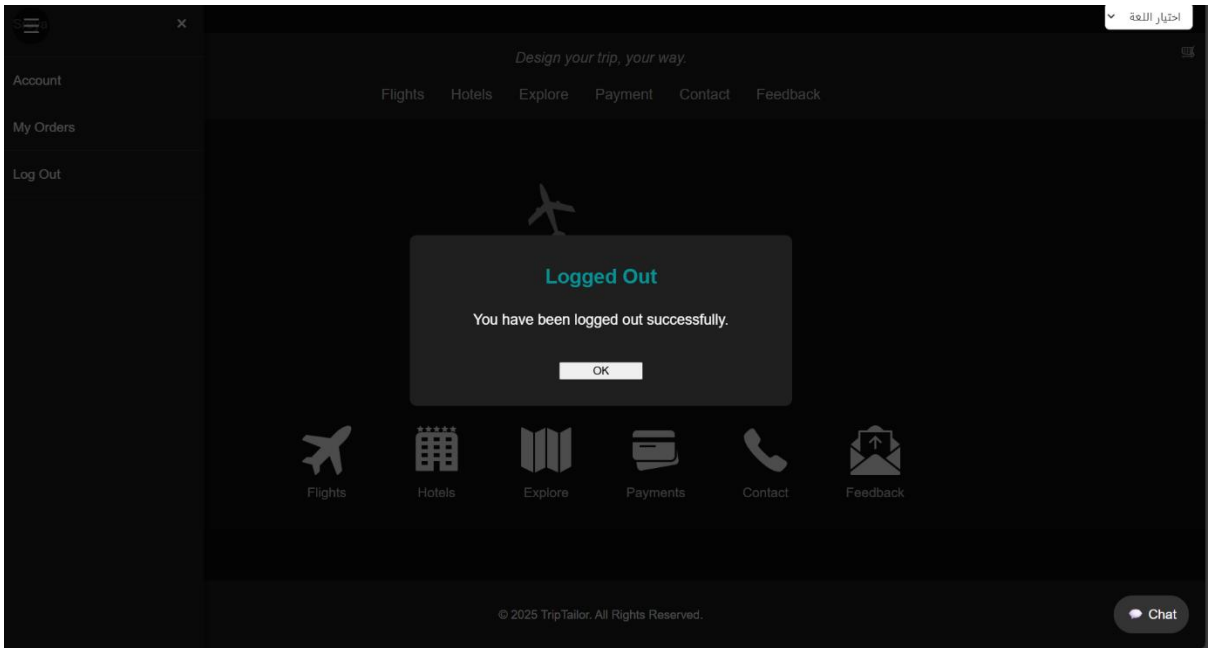
Reply Forward






New Feedback from Sreyashyjash_
Inbox ×
Trip Tailor Feedback <triptailor2025@gmail.com>
to me
12:00 PM (0 minutes ago)
New Feedback Received
From User: Sreyashyjash_
Message:
Great deals. Thanks for helping me plan my vacation.
Reply
Forward


ntact
Feedback
Chat with us!
You: HI
Bot: Hi there! How can I assist you today?
You: Flights
Bot: Sure! I can help with flight bookings. What destination are you interested in?
Type your message...
Chat


Account
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Logged Out
You have been logged out successfully.
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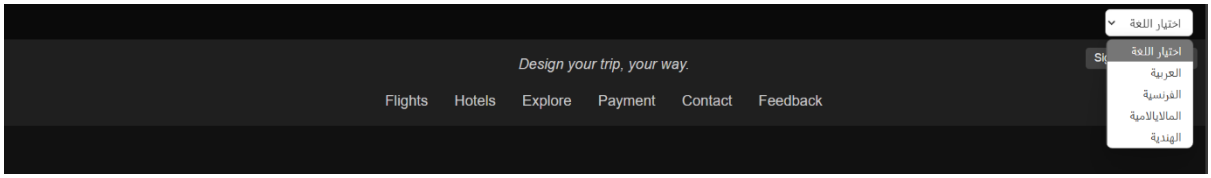
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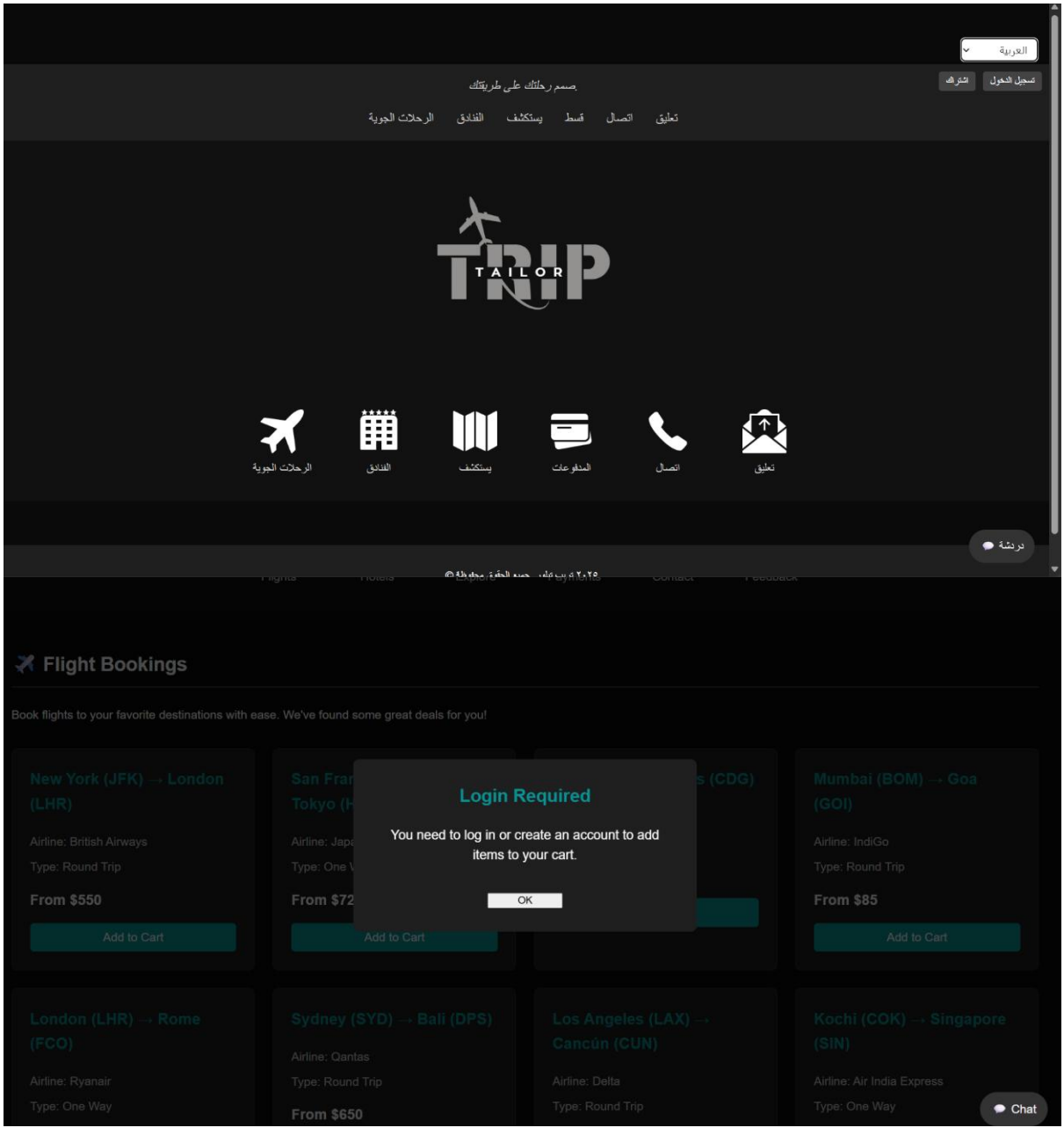
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تسجيل الدخول
اشترك
صمم رحلتك على طريقتك
الرحلات الجوية
الفنادق
يستكشف
قسط
اتصال
تعليق
TRIP
TAILOR
الرحلات الجوية
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Book flights to your favorite destinations with ease. We've found some great deals for you!
New York (JFK) → London (LHR)
Airline: British Airways
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You need to log in or create an account to add items to your cart.
OK
Mumbai (BOM) → Goa (GOI)
Airline: IndiGo
Type: Round Trip
From $85
Add to Cart
London (LHR) → Rome (FCO)
Airline: Ryanair
Type: One Way
Sydney (SYD) → Bali (DPS)
Airline: Qantas
Type: Round Trip
From $650
Los Angeles (LAX) → Cancún (CUN)
Airline: Delta
Type: Round Trip
Kochi (COK) → Singapore (SIN)
Airline: Air India Express
Type: One Way
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CONCLUSION

Trip Tailor successfully demonstrates the creation of a complex, full-stack web application from the ground up. It effectively combines frontend interactivity with a secure, logic-driven backend. The integration of a major third-party API (Amadeus) and the implementation of a robust server-side email system are key achievements that mirror real-world application requirements.