Flight Booking Website Documentation

Team ID	LTVIP2025TMID58525
Project Title	Flight finder: navigating your air travel options

Flight Booking Website

Overview

A full-stack flight booking platform where users can:

- Search and book one-way or round-trip flights
- Select seats per flight
- Make secure payments via Stripe
- Receive downloadable e-tickets (PDF)
- View bookings in their profile
- Admin can manage flights, users, and view statistics

Tech Stack

Frontend	React.js, React Router DOM
Styling	CSS, Tailwind (optional), Icons
Backend	Node.js, Express.js
Database	MongoDB with Mongoose
Auth	JWT, bcrypt
Payment	Stripe
PDF	pdfkit (Node.js library)

Features

User Features

- Flight search by source, destination, date

- Round-trip support with seat selection

- Live seat availability tracking

- Stripe payment integration

- E-ticket PDF generation and download

- View past bookings

Admin Features

- Admin login

- Flight CRUD operations

- View all bookings

- Admin dashboard with statistics

Folder Structure (Simplified)

```
project-root/

├── client/            # React frontend

│   ├── components/        # Reusable components

│   ├── pages/            # Route-level pages

│   ├── App.js

│   └── index.js

│

├── server/            # Node backend
```

```
│   ├── controllers/      # Route logic
│   ├── models/           # MongoDB schemas
│   ├── routes/           # Express endpoints
│   ├── middleware/       # Auth & error handling
│   └── index.js          # Server entry
│
├── .env                  # Environment config
```

▯ Frontend Details

- `Home.js` - Search UI for flights

- `BookingPage.js` - Booking form

- `SelectSeats.js` - Select seats for both flights

- `PaymentPage.js` - Stripe payment handler

- `MyBookings.js` - View & download booked tickets

- `AdminDashboard.js` - Admin stats and flight management

▯ Backend Details

Key Routes:

- `/api/auth/login`, `/register`

- `/api/flights` (CRUD)

- `/api/bookings` (POST/GET)

- `/api/seats` (availability)

- `/api/admin/stats` (dashboard)

▯ Database Models

User

```
{

name: String,

email: String,

password: String,

role: { type: String, enum: ["user", "admin"], default: "user" }

}
```

Flight

```
{

airline: String,

from: String,

to: String,

departureTime: Date,

arrivalTime: Date,

travelClass: ["Economy", "Business"],

price: Number,

seats: { economy: Number, business: Number }

}
```

Booking

```
{

userId: ObjectId,

flightId: ObjectId,

seatNumbers: [String],
paymentStatus: String,
roundTrip: Boolean,
returnFlightId: ObjectId,
ticketPdfUrl: String
}
```

Middleware:

- `authMiddleware` - Verifies JWT

- `errorMiddleware` - Global error handler

□ Auth System

- JWT-based login with access control

- Passwords hashed with bcrypt

- Protected routes for admin access

□ Payment Integration

- Stripe Checkout used for payment

- Once payment succeeds:

- Booking data is stored

- Ticket PDF is generated

□ PDF Ticket Generation

- On booking success, a PDF is generated using `pdfkit`

- Contains:

- Flight info

- Passenger details

- Seat numbers

- Booking reference

- Available for download from "My Bookings"

Deployment

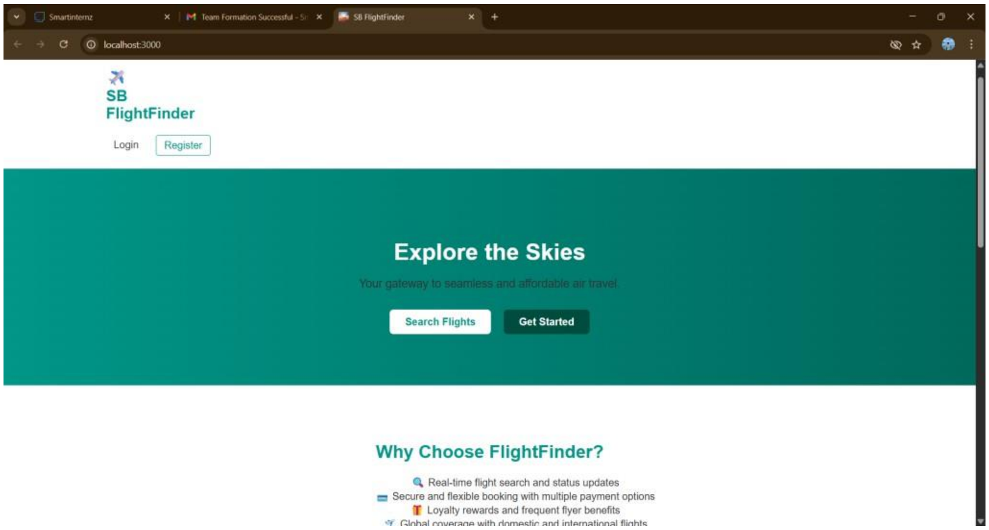
- DB: MongoDB Atlas

.env example:

```
MONGO_URI=<Your MongoDB URI>

JWT_SECRET=<Your JWT secret>

STRIPE_SECRET_KEY=<Stripe Key>

CLIENT_URL=http://localhost:3000
```

Screenshots

1. Home Page



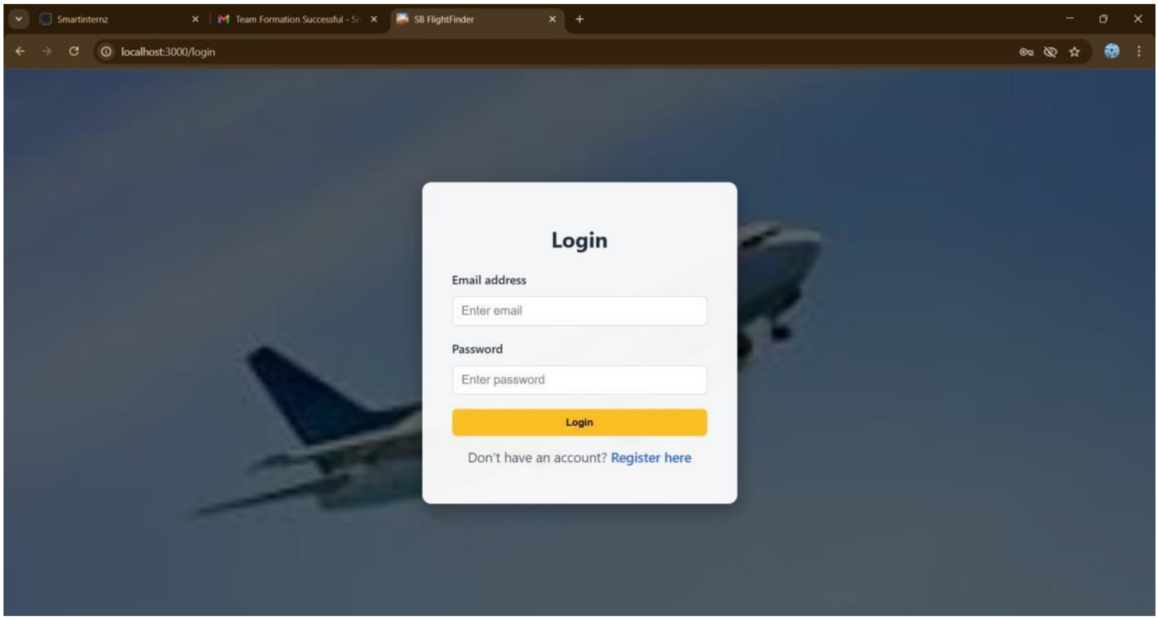
Explore the Skies

Your gateway to seamless and affordable air travel

Why Choose FlightFinder?

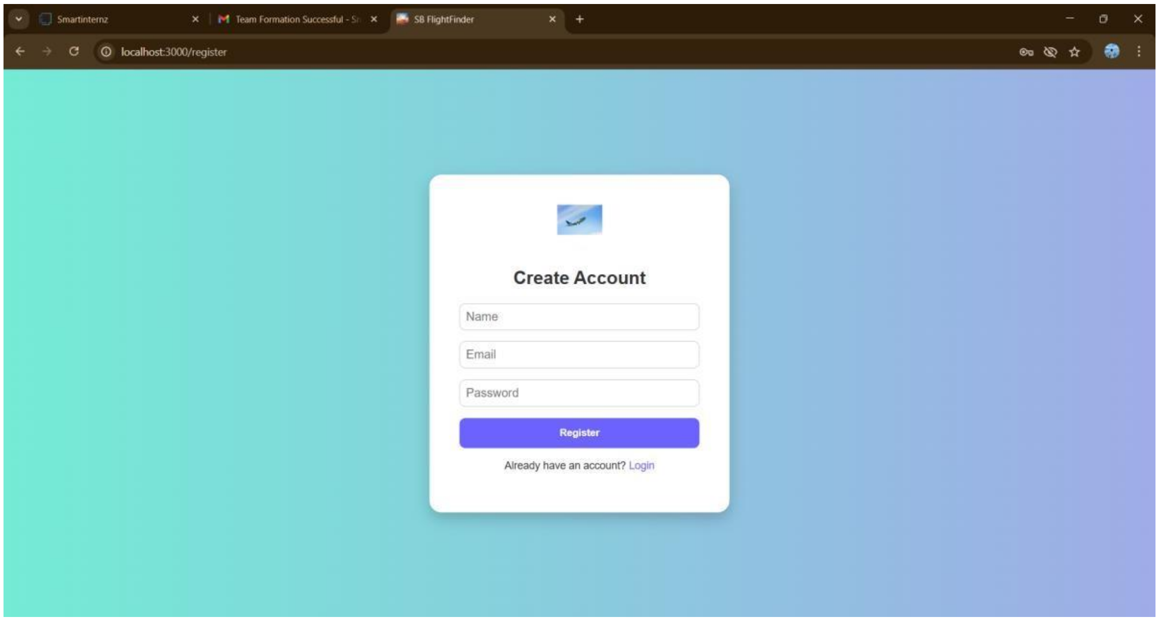
🔍 Real-time flight search and status updates
💳 Secure and flexible booking with multiple payment options
🎁 Loyalty rewards and frequent flyer benefits
✈ Global coverage with domestic and international flights

2. Login Page



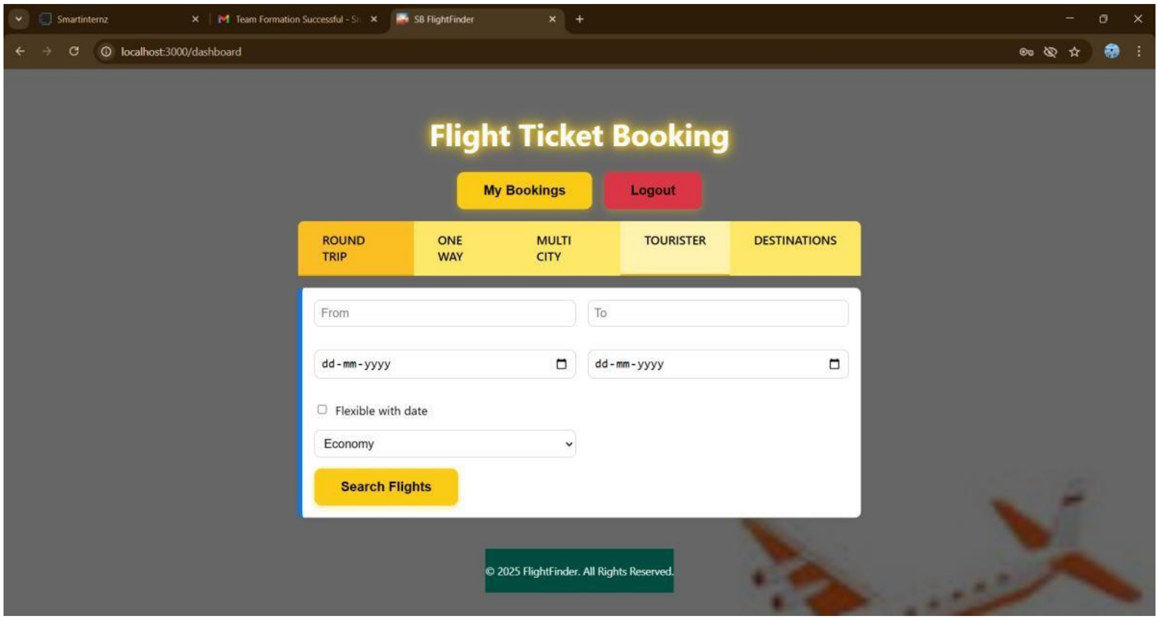
Don't have an account? Register here

3. Register Page



Already have an account? Login

4. Dashboard



Flight Ticket Booking

From

To

dd-mm-yyyy

dd-mm-yyyy

□ Flexible with date

Economy

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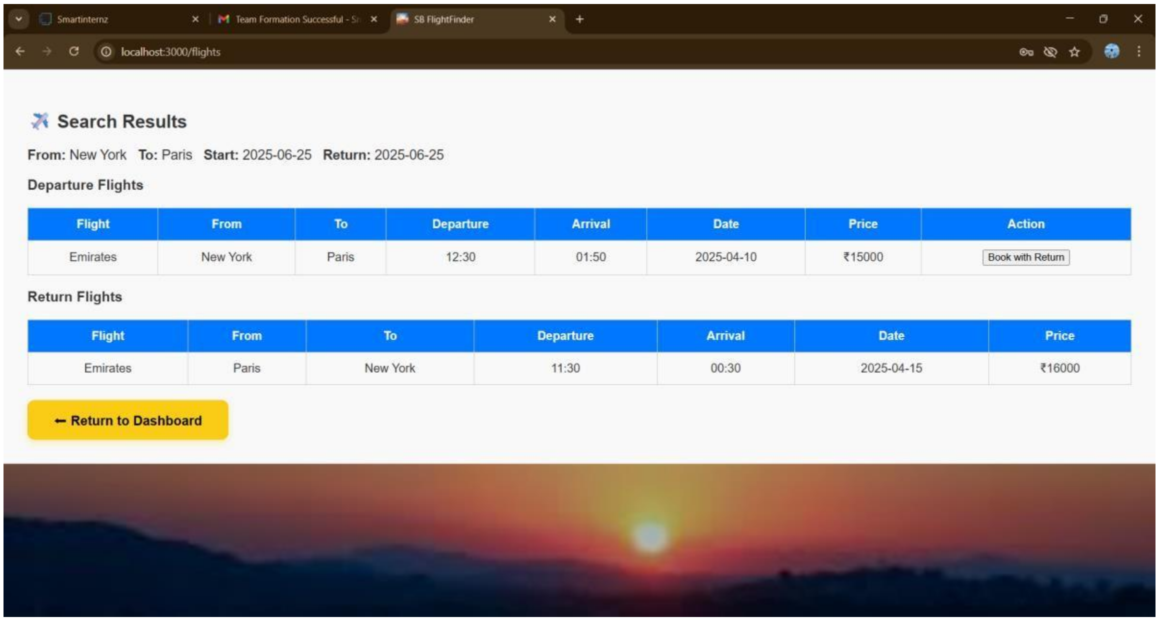
5. Flight search



Search Results

From: New York **To:** Paris **Start:** 2025-06-25 **Return:** 2025-06-25

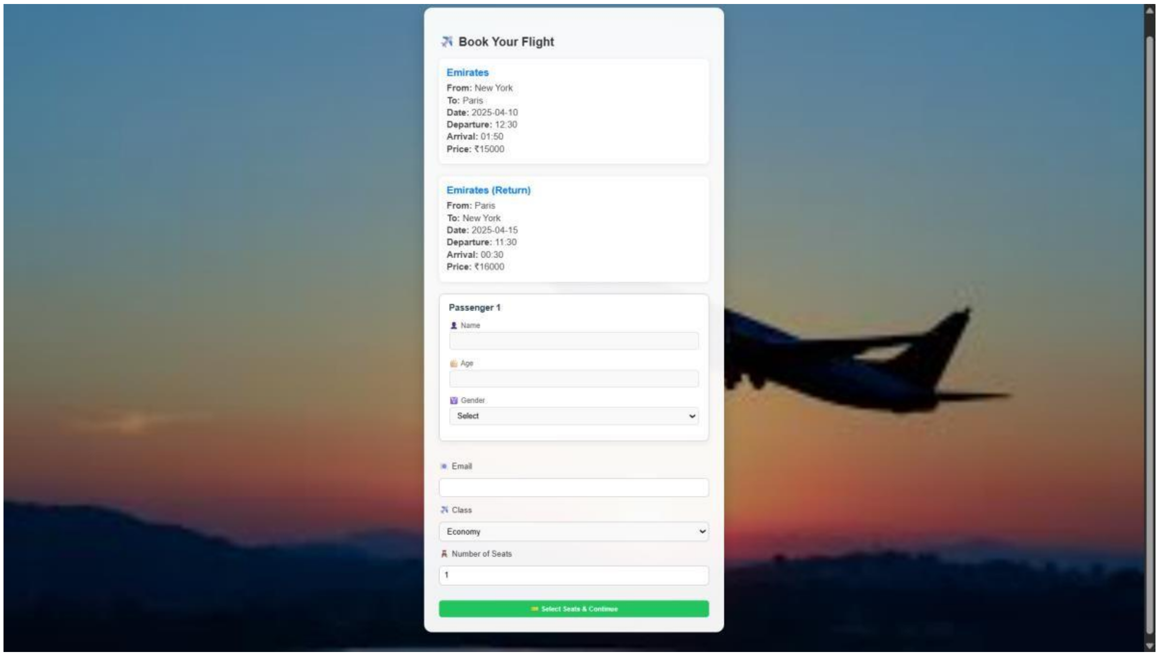
Departure Flights

Flight	From	To	Departure	Arrival	Date	Price	Action
Emirates	New York	Paris	12:30	01:50	2025-04-10	₹15000	Book with Return

Return Flights

Flight	From	To	Departure	Arrival	Date	Price
Emirates	Paris	New York	11:30	00:30	2025-04-15	₹16000

6. booking page



Book Your Flight

Emirates

From: New York
To: Paris
Date: 2025-04-10
Departure: 12:30
Arrival: 01:50
Price: ₹15000

Emirates (Return)

From: Paris
To: New York
Date: 2025-04-15
Departure: 11:30
Arrival: 00:30
Price: ₹16000

Passenger 1

Name:

Age:

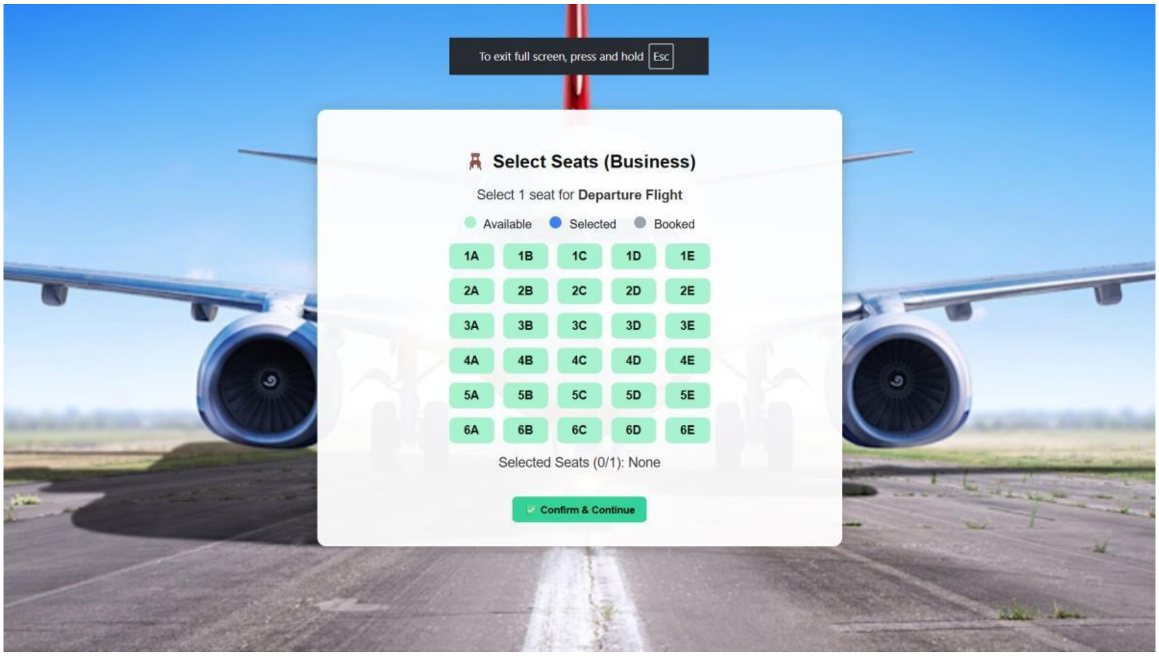
Gender: Select

Email:

Class: Economy

Number of Seats: 1

6. seat selection page

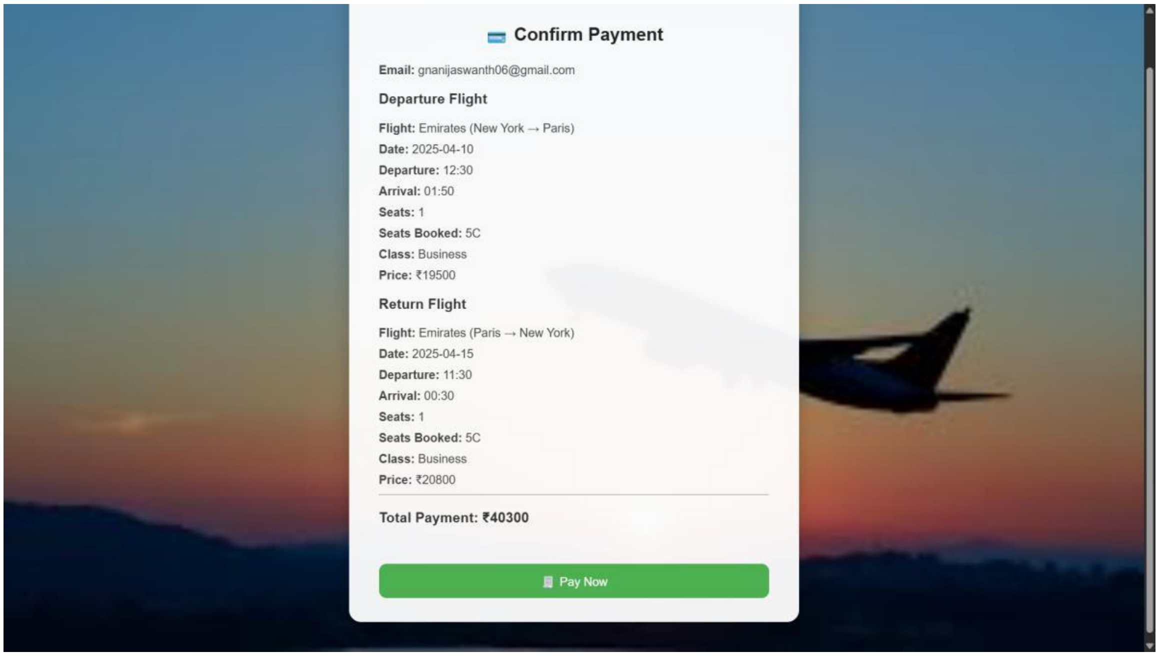


Select Seats (Business)

Select 1 seat for **Departure Flight**

Selected Seats (0/1): None

7. payment page



Confirm Payment

Email: gnanijaswanth06@gmail.com

Departure Flight

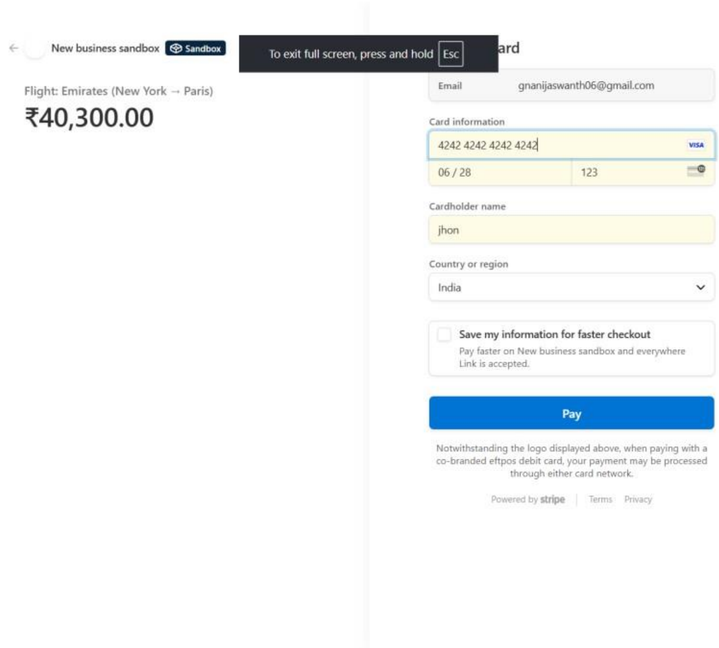
Flight: Emirates (New York → Paris)
Date: 2025-04-10
Departure: 12:30
Arrival: 01:50
Seats: 1
Seats Booked: 5C
Class: Business
Price: ₹19500

Return Flight

Flight: Emirates (Paris → New York)
Date: 2025-04-15
Departure: 11:30
Arrival: 00:30
Seats: 1
Seats Booked: 5C
Class: Business
Price: ₹20800

Total Payment: ₹40300

7. transaction page



Flight: Emirates (New York → Paris)

₹40,300.00

Email gnanijaswanth06@gmail.com

Card information

4242 4242 4242 4242

06 / 28 123

Cardholder name

jhon

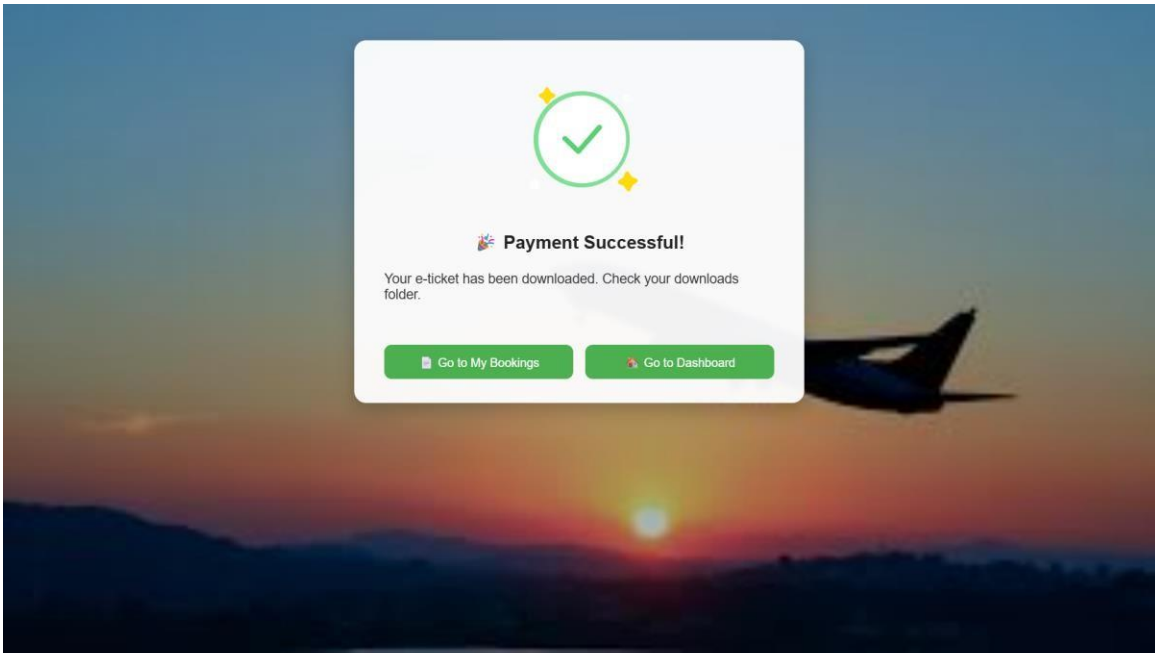
Country or region

India

□ Save my information for faster checkout
Pay faster on New business sandbox and everywhere Link is accepted.

Notwithstanding the logo displayed above, when paying with a co-branded eftpos debit card, your payment may be processed through either card network.

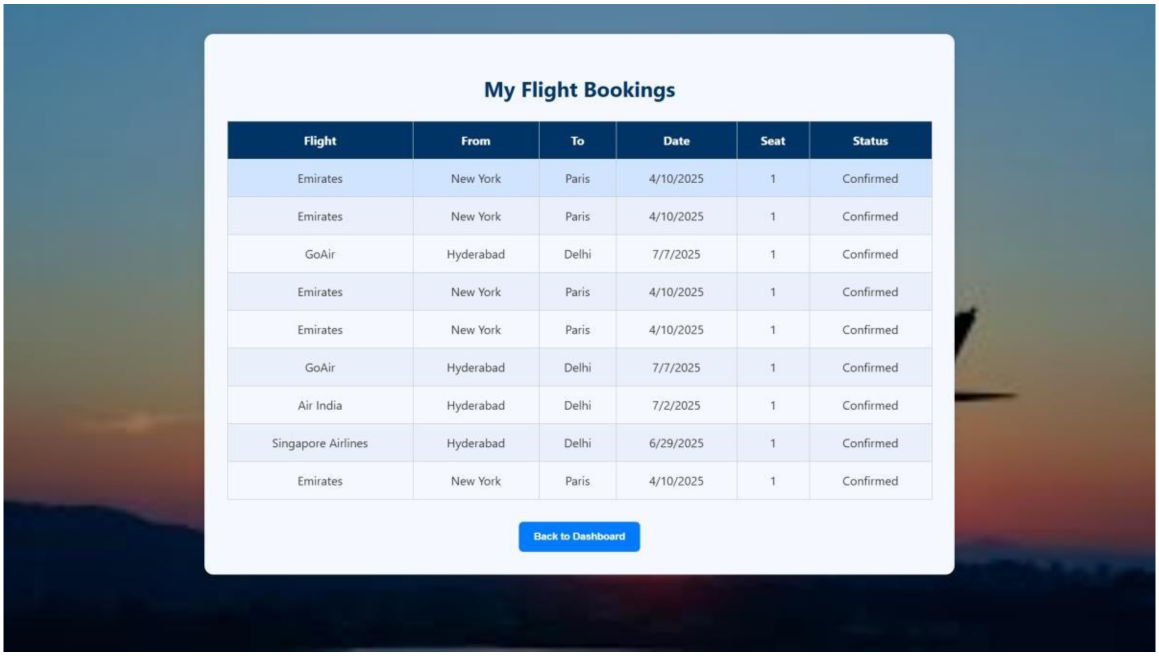
8. confirmation page



🎉 Payment Successful!

Your e-ticket has been downloaded. Check your downloads folder.

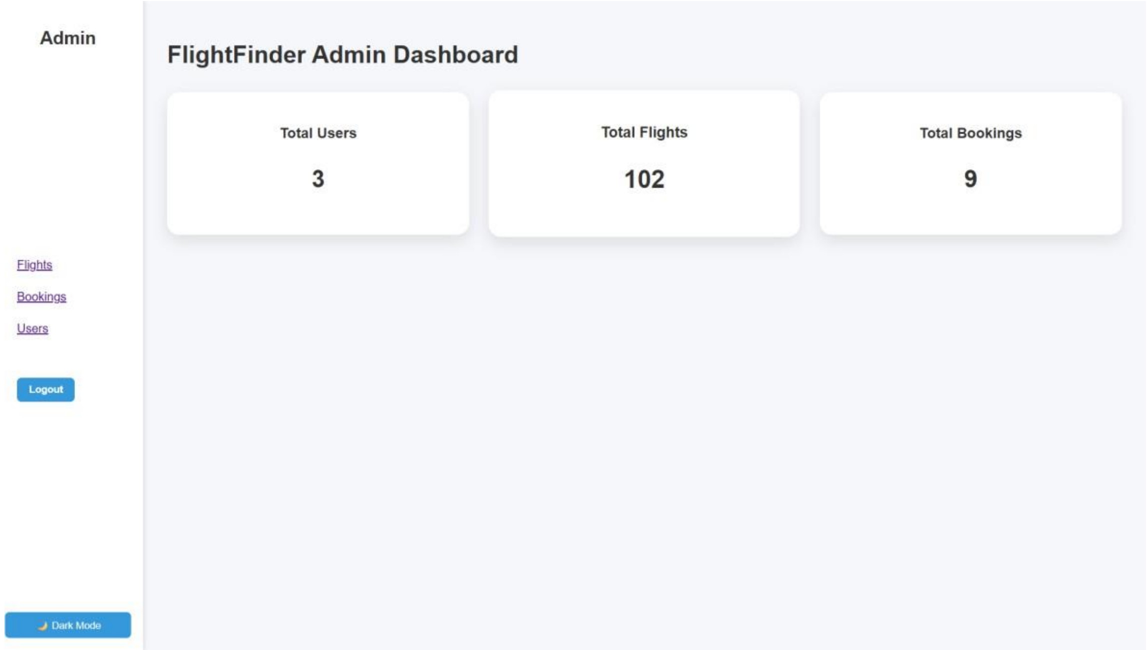
9. my bookings page



My Flight Bookings

Flight	From	To	Date	Seat	Status
Emirates	New York	Paris	4/10/2025	1	Confirmed
Emirates	New York	Paris	4/10/2025	1	Confirmed
GoAir	Hyderabad	Delhi	7/7/2025	1	Confirmed
Emirates	New York	Paris	4/10/2025	1	Confirmed
Emirates	New York	Paris	4/10/2025	1	Confirmed
GoAir	Hyderabad	Delhi	7/7/2025	1	Confirmed
Air India	Hyderabad	Delhi	7/2/2025	1	Confirmed
Singapore Airlines	Hyderabad	Delhi	6/29/2025	1	Confirmed
Emirates	New York	Paris	4/10/2025	1	Confirmed

10. admin dashboard page



FlightFinder Admin Dashboard

Total Users 3

Total Flights 102

Total Bookings 9

Demo Instructions

1. Set up environment variables

- Create a `.env` file in `/server` and `/client` (if needed)

2. Install dependencies

```
cd server && npm install

cd ../client && npm install
```

3. Run locally

```
cd server && npm run dev

cd ../client && npm start
```

4. Open http://localhost:3000 in browser

Future Improvements

- Flight filters (duration, airline, stops)

- Email ticket confirmations

- Mobile responsive redesign

- Admin notifications

- Chat support

Contributors

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