

# Final Report – Flight Booking Website

Team ID	LTVIP2025TMID57633
Project Title	Flight finder: navigating your air travel options

## 1. INTRODUCTION

### 1.1 Project Overview

The Flight Booking Website is a comprehensive web-based application that allows users to search, book, and manage flight reservations with real-time seat selection and secure online payment integration. It supports one-way and round-trip bookings and generates downloadable PDF tickets.

### 1.2 Purpose

The purpose of the project is to simplify and modernize the flight booking experience for users while providing an efficient admin interface to manage flights and monitor statistics.

## 2. IDEATION PHASE

### 2.1 Problem Statement

Traditional flight booking systems often lack modern UX, seat selection, and instant ticket generation, causing inefficiencies and user dissatisfaction.

### 2.2 Empathy Map Canvas

User needs include ease of booking, clarity in seat selection, and secure payments. Pain points include hidden charges, complex interfaces, and lack of transparency.

### 2.3 Brainstorming

The team discussed features like live seat maps, Stripe integration, mobile responsiveness, admin panel, and PDF ticket generation.

### 3. REQUIREMENT ANALYSIS

#### 3.1 Customer Journey Map

Search → Select Flight → Choose Seats → Pay via Stripe → Download Ticket → View Bookings

#### 3.2 Solution Requirement

Functional: Search, book, manage flights, PDF ticket  
Non-Functional: Secure, responsive, scalable

#### 3.3 Data Flow Diagram

User → Frontend (React) → Backend (Node/Express) → MongoDB → Payment Gateway → Confirmation/Ticket

#### 3.4 Technology 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)
Deployment	Frontend: Vercel, Backend: Railway

### 4. PROJECT DESIGN

#### 4.1 Problem Solution Fit

The platform directly addresses the issue of complex flight booking by offering real-time interaction and simplified UI.

#### 4.2 Proposed Solution

An integrated booking system with real-time seat selection, online payment, admin dashboard, and downloadable tickets.

#### 4.3 Solution Architecture

Client (React) → API Layer (Express) → DB (MongoDB) + Payment (Stripe) + PDF Service

## 5. PROJECT PLANNING & SCHEDULING

### 5.1 Project Planning

Sprint 1: Auth + Search

Sprint 2: Booking + Stripe    Sprint

3: Admin + Polish

## 6. FUNCTIONAL AND PERFORMANCE TESTING

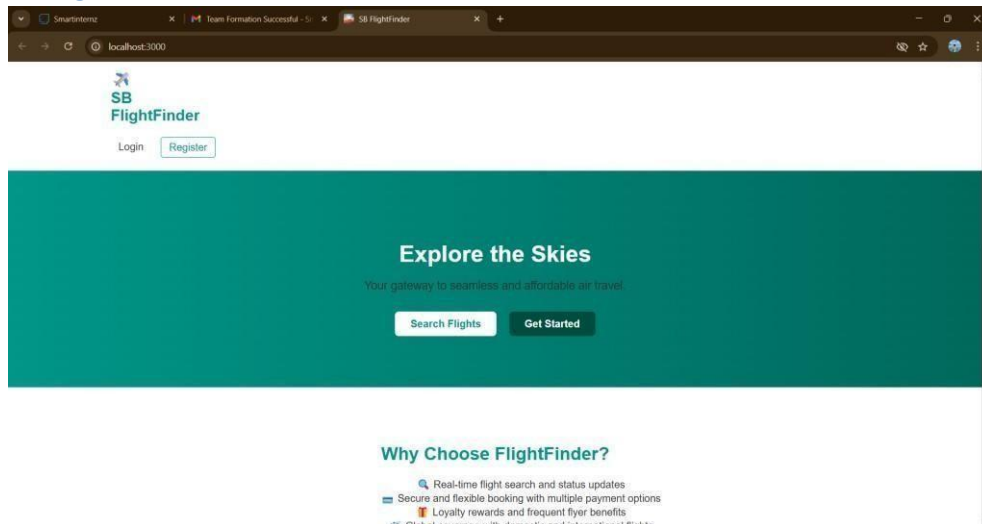
### 6.1 Performance Testing

Tested the app under load using sample user data. Verified API response times and payment success rates.

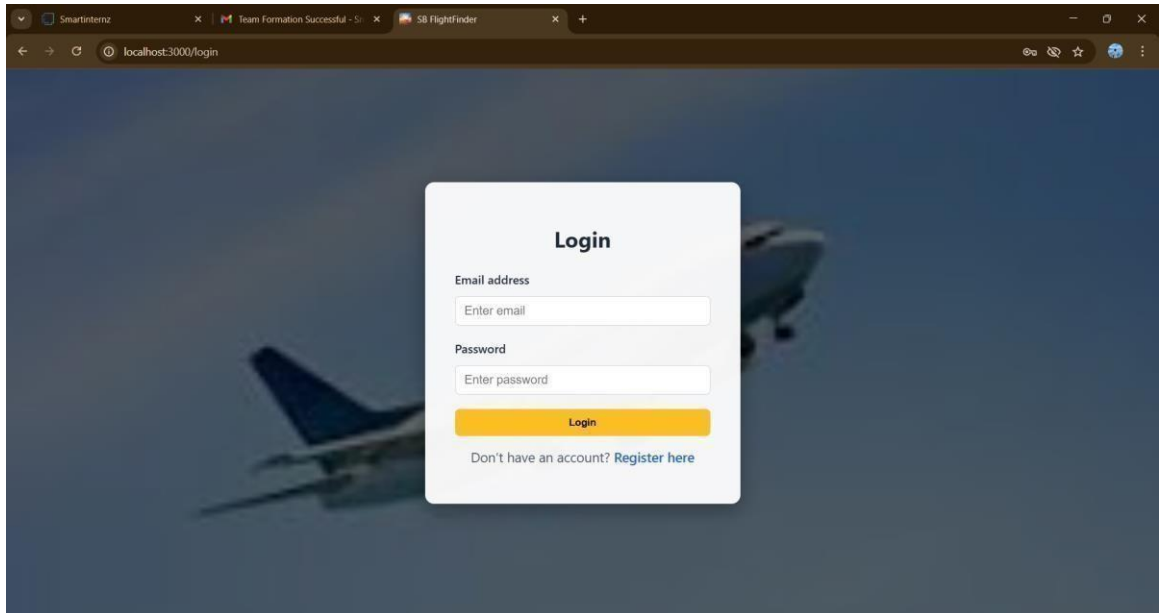
## 7. RESULTS

### 7.1 Output Screenshots

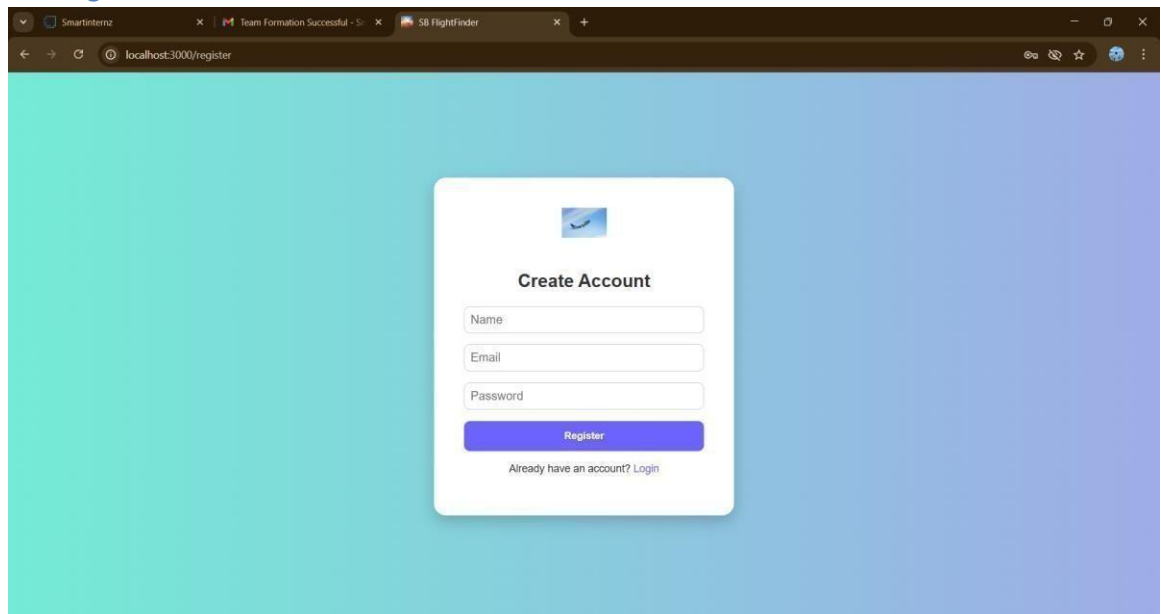
#### 1. Home Page



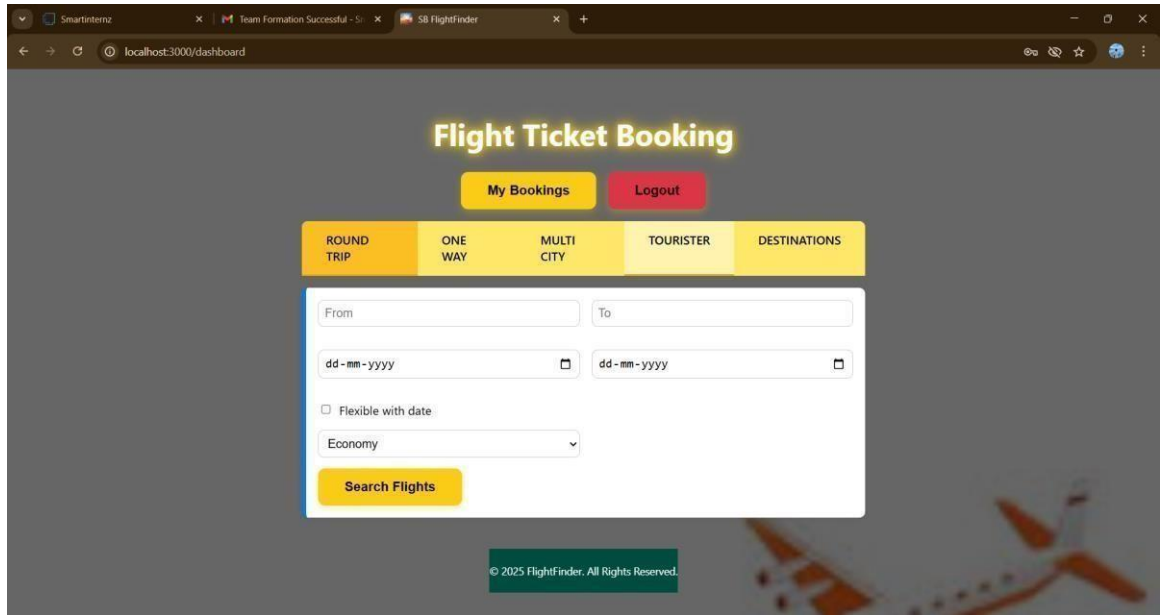
#### 2. Login Page



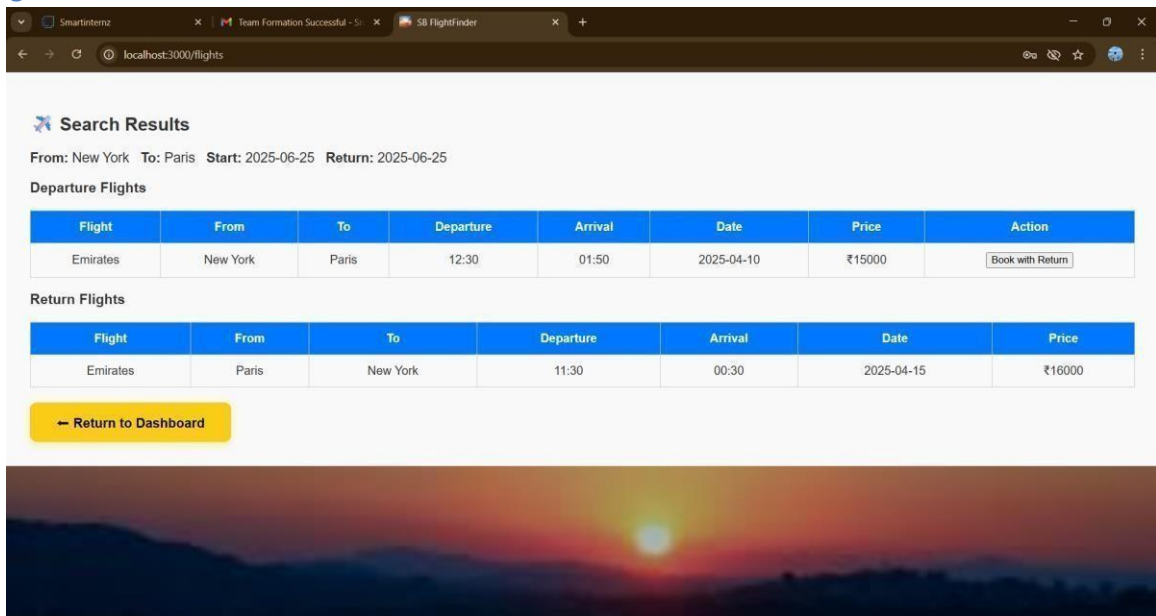
### 3.Register Page



### 4. Dashboard



## 5. Flight search



## 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: 03:30  
Price: ₹16000

**Passenger 1**  
Name:   
Age:   
Gender:   
Email:   
Class:   
Number of Seats:   
**Select Seats & Continue**

6.seat selection page

To exit full screen, press and hold **Esc**

**Select Seats (Business)**  
Select 1 seat for Departure Flight

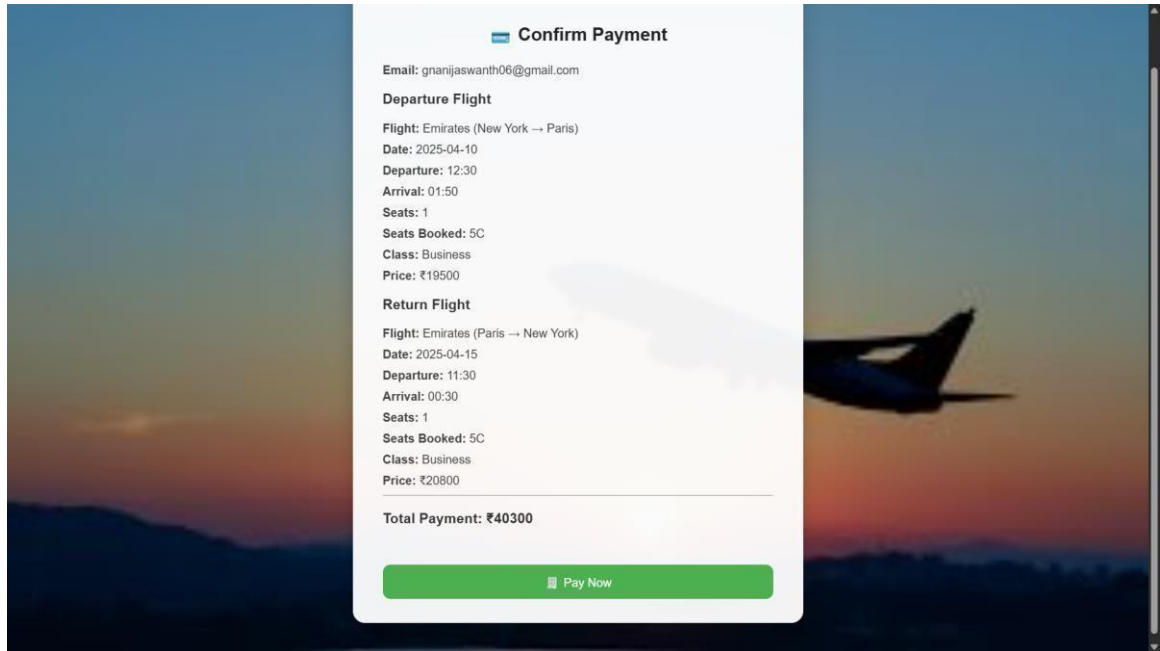
● Available ● Selected ● Booked

1A	1B	1C	1D	1E
2A	2B	2C	2D	2E
3A	3B	3C	3D	3E
4A	4B	4C	4D	4E
5A	5B	5C	5D	5E
6A	6B	6C	6D	6E

Selected Seats (0/1): None

**Confirm & Continue**

7.payment page



## 7.transaction page

← New business sandbox Sandbox To exit full screen, press and hold Esc Card

Flight: Emirates (New York → Paris)  
₹40,300.00

Email gnanijaswanth06@gmail.com

Card information  
4242 4242 4242 4242 VISA  
06 / 28 123  
Cardholder name  
jhon  
Country or region  
India

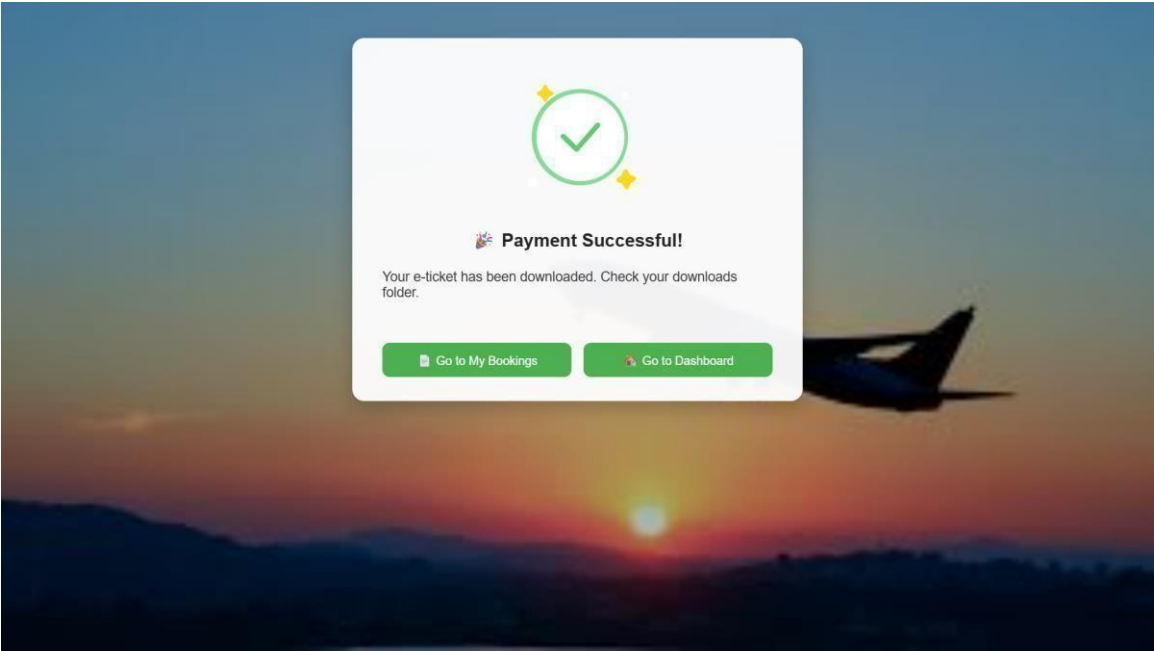
☐ Save my information for faster checkout  
Pay faster on New business sandbox and everywhere Link is accepted.

Pay

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

Powered by stripe Terms Privacy

## 8.confirmation page

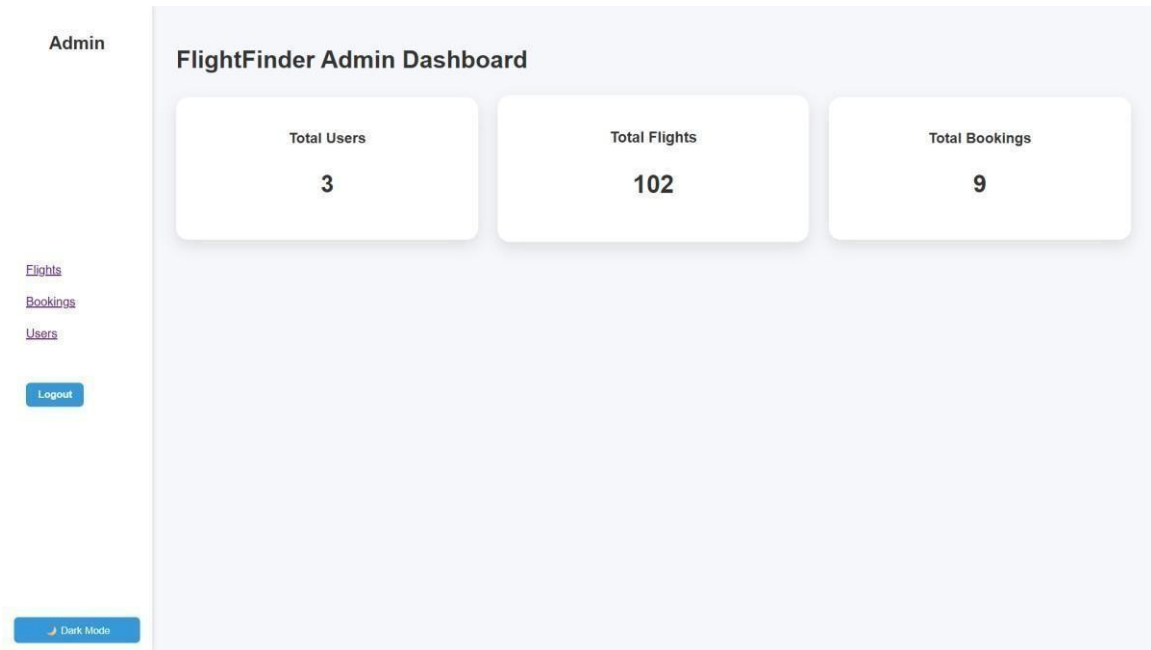


9.my bookings page

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
Back to Dashboard					

10.admin dashboard page





## 8. ADVANTAGES & DISADVANTAGES

Advantages:

- Live seat selection
- Secure payment via Stripe
- Admin dashboard with stats

Disadvantages:

- Requires internet
- Stripe may not be supported in all regions

## 9. CONCLUSION

The project demonstrates how a modern web-based flight booking platform can simplify travel planning and management for users and airline staff.

## 10. FUTURE SCOPE

- Add email ticket delivery
- Offer travel insurance add-ons
- Support international payment options

## 11. APPENDIX

Source Code: Included in GitHub repository

Dataset: Not applicable

GitHub Link: [https://github.com/Manaswini-2004/FlightFinder\\_Navigation-App.git](https://github.com/Manaswini-2004/FlightFinder_Navigation-App.git)

Demo Link: [https://drive.google.com/open?id=1VxQx-53SpCgL-AUvU-P-xPAJS1utQ0-M&usp=drive\\_copy](https://drive.google.com/open?id=1VxQx-53SpCgL-AUvU-P-xPAJS1utQ0-M&usp=drive_copy)