



Project Report: FlyNova

1. Project Information

Project Name:

FlyNova

Developers:

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Nabid Ahmad

2. Project Details

Project Description

FlyNova is a comprehensive web-based platform designed to simplify the travel experience. It serves as a one-stop solution for booking flights, hotels, and holiday packages. The system bridges the gap between travelers and service providers by offering a seamless, user-friendly interface for searching, comparing, and booking travel services. With a robust backend and a modern frontend, FlyNova ensures reliability and ease of use for both customers and administrators.

Project Objectives

Centralized Booking: To provide a single platform for flight, hotel, and holiday package bookings.

User Convenience: To enable users to easily search, filter, and book travel options with real-time availability.

Efficiency: To streamline the booking process with instant confirmation and PDF ticket generation.

Accessibility: To ensure the platform is accessible and responsive across various devices.

Transparency: To provide clear pricing, dynamic price categorization (Low/Mid/High), and real-time status updates.

Technologies Used

Backend Framework: Django 5.2.8

(Python) Database: SQLite

(Development) / PostgreSQL

(Production ready)

Frontend: HTML5, CSS3, Bootstrap

JavaScript Authentication:

django-allauth (includes Google OAuth)

PDF Generation: ReportLab

Image Processing: Pillow

Version Control: Git

3. Key Features

1. Multi-Service Booking Engine: Integrated search and booking for Flights, Hotels, and Holiday Packages. Unified booking management system handling multiple content types.

2. Advanced Flight Search & Filtering: Search by Origin, Destination, Date, and Passenger count. Dynamic Price Categorization: Automatically categorizes prices as "Low", "Mid", "High" based on statistical analysis of current listings.

3. Real-Time Airport Dashboard:

Displays live flight status (Scheduled, On Time, Landing Soon, Landed) for the next 24 hours.

4. Secure Authentication System:

User registration and login.

Google OAuth Integration: One-click sign-in using Google accounts.

5. User Dashboard & Ticket Management:

Personalized dashboard for viewing booking history.

Instant PDF Tickets: Users can download professional PDF tickets associated with their bookings.

6. Admin Management Panel:

Comprehensive tools for administrators to manage flights, airports, airlines, hotels, and packages.

4. User Experience (UX)

Overall User Experience

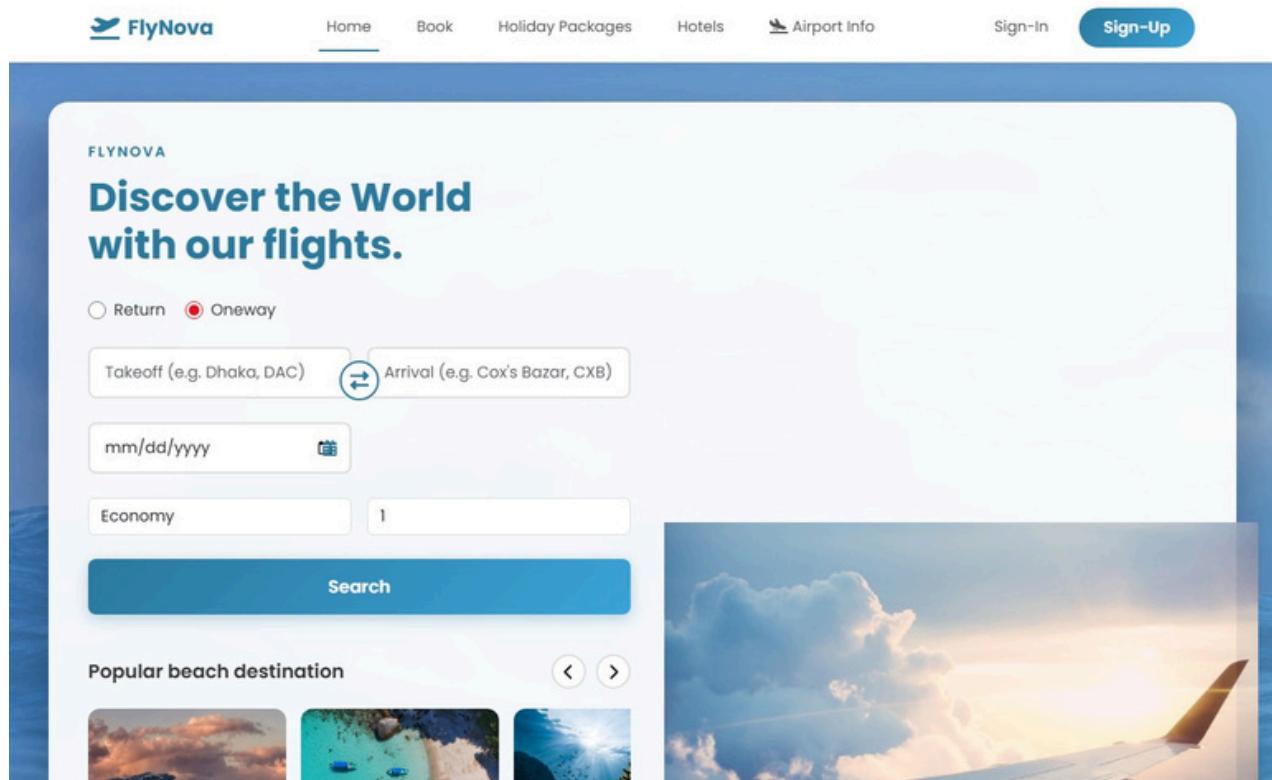
FlyNova offers a clean, modern, and intuitive user interface. The design prioritizes ease of navigation, with clear calls-to-action and a structured layout. The use of Bootstrap ensures responsiveness, making the site usable on desktops, tablets, and mobile phones. Visual cues, such as color-coded price tags and status indicators, help users make informed decisions quickly.

Ease of Use and Navigation

The navigation bar is consistent across all pages, providing quick access to Home, Flights, Hotels, Packages, and My Bookings. The flow from search to booking is linear and guided, minimizing user error. Forms are designed with validation to ensure correct data entry.

Page-wise Description

Home Page



Screenshot of Home Page *The Home Page serves as the central hub, featuring a prominent search bar where users can toggle between Flights, Hotels, and Packages. It also displays featured destinations and current offers to inspire travelers.*

Flight Booking Page

The screenshot shows the FlyNova flight search results page. At the top, there's a navigation bar with links for Home, Book (which is underlined), Holiday Packages, Hotels, Airport Info, My Bookings, and a user account section. Below the navigation is a search bar with fields for 'From' (empty), 'To' (empty), 'mm/dd/yyyy' (empty), and '1' (empty), followed by a blue 'Update Search' button. A 'Filter by Price:' section includes a 'All Prices' button and three color-coded buttons for price levels: 'Low' (blue), 'Mid' (yellow), and 'High' (red). A note below says 'Showing prices for 1 passenger'. The main content area displays three flight options in a grid:

Airline	Date	Time	Duration	Date	Time	Airline	Price
Nova Air	28 Dec, 2025	15:13	1h 30m	28 Dec, 2025	16:13	CXB	BDT 4500 per person
Novoair	26 Dec, 2025	17:00	1h 30m	26 Dec, 2025	18:00	DAC	BDT 3800 per person
US-Bangla Airlines	26 Dec, 2025	16:00	1h 30m	26 Dec, 2025	17:00	CGP	BDT 3200 per person

Each flight row includes the airline name, flight number, departure date and time, arrival date and time, destination, and a 'Select Flight' button.

Screenshot of Flight Search Results *This page displays the available flights matching the user's search criteria. It lists essential details like Airline, Flight Number, Times, and Price. Users can filter results and click "Book Now" to proceed.* Flight Page (Details & Airport Info)

Real-Time Airport Information

The screenshot shows the FlyNova website interface. At the top, there is a navigation bar with links for Home, Book, Holiday Packages, Hotels, and Airport Info (which is underlined, indicating it is the active page). To the right of the navigation are links for My Bookings and a user account labeled admin_flynova.

The main content area is titled "Real-Time Airport Information" and features a sub-header "Live flight arrival information for all airports". Below this, a section is displayed for "Cox's Bazar Airport (CXB)" located in "Cox's Bazar, Bangladesh".

A table provides flight details:

Flight Number	Airline	From	Scheduled Arrival	Status
NV101	Nova Air	DAC - Dhaka	28 Dec, 2025 16:13	On Time

Screenshot of Airport Information *The Airport Information page provides real-time updates on flight arrivals and departures, helping users track flight status (e.g., On Time, Landed) directly from the platform.* Hotel Page

Hotels Page

Screenshot of Hotel Search Results

The Hotel page lists available accommodations in the selected city. Each listing shows the hotel name, star rating, price per night, and an image, allowing users to compare options easily.

Sea Pearl Beach Resort
Cox's Bazar | 5-star luxury resort with sea view.
Starts from BDT 3000.00 per night
Select Room

Hotel The Cox Today
Cox's Bazar | Premium hotel near the beach.
Starts from BDT 3000.00 per night
Select Room

Pan Pacific Sonargaon
Dhaka | Luxury hotel in the heart of Dhaka.
Starts from

Filter Results
Price Range:
Low (< 10k)
Mid (10k-50k)
High (> 50k)
Location: e.g. Cox's Bazar
Search

*The Hotel page lists available accommodations in the selected city. Each listing shows the hotel name, star rating, price per night, and an image, allowing users to compare options easily.

*Payment Page (Checkout) *The Checkout page is the final step before confirmation. It displays a summary of the booking, traveler details, and total price. Users can select their preferred payment method (Credit Card, bKash, Nagad) to complete the transaction.

* Google Authentication / Login Page

Holiday Packages

[Home](#)[Book](#)[Holiday Packages](#)[Hotels](#)[Airport Info](#)[My Bookings](#)[admin_flynova](#)

Holiday Packages

[Low](#)[Mid](#)[High](#)

Destination

[Search](#)

Cox's Bazar Beach Holiday

[Cox's Bazar](#)

⌚ 3 Days / {{ package.duration_nights }}
Nights

Enjoy the world's longest natural sea beach with hotel and sightseeing.

Starting from

BDT 15000.00

[View Details](#)[Book Now](#)

Sylhet Tea Garden Tour

[Sylhet](#)

⌚ 4 Days / {{ package.duration_nights }}
Nights

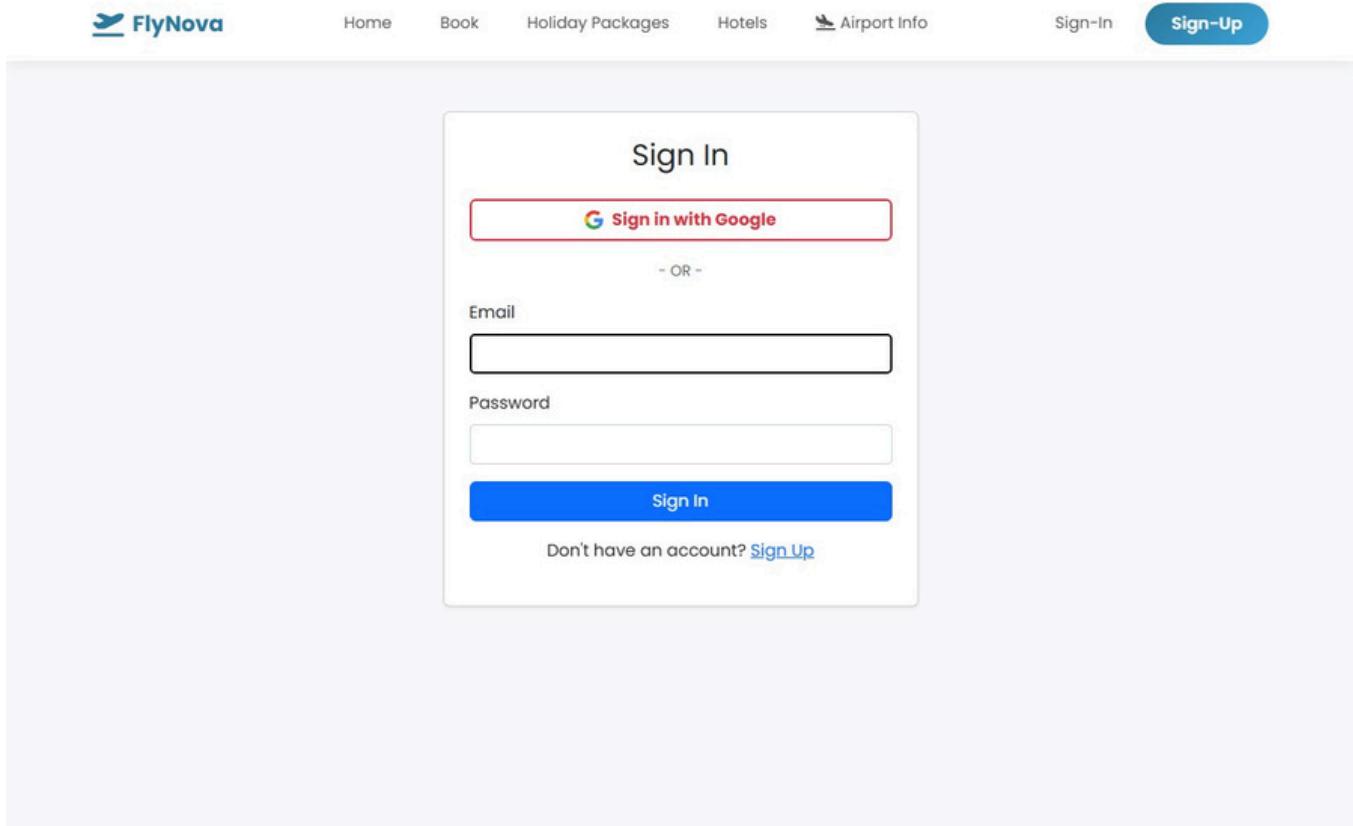
Explore the beautiful tea gardens and waterfalls of Sylhet.

Starting from

BDT 12000.00

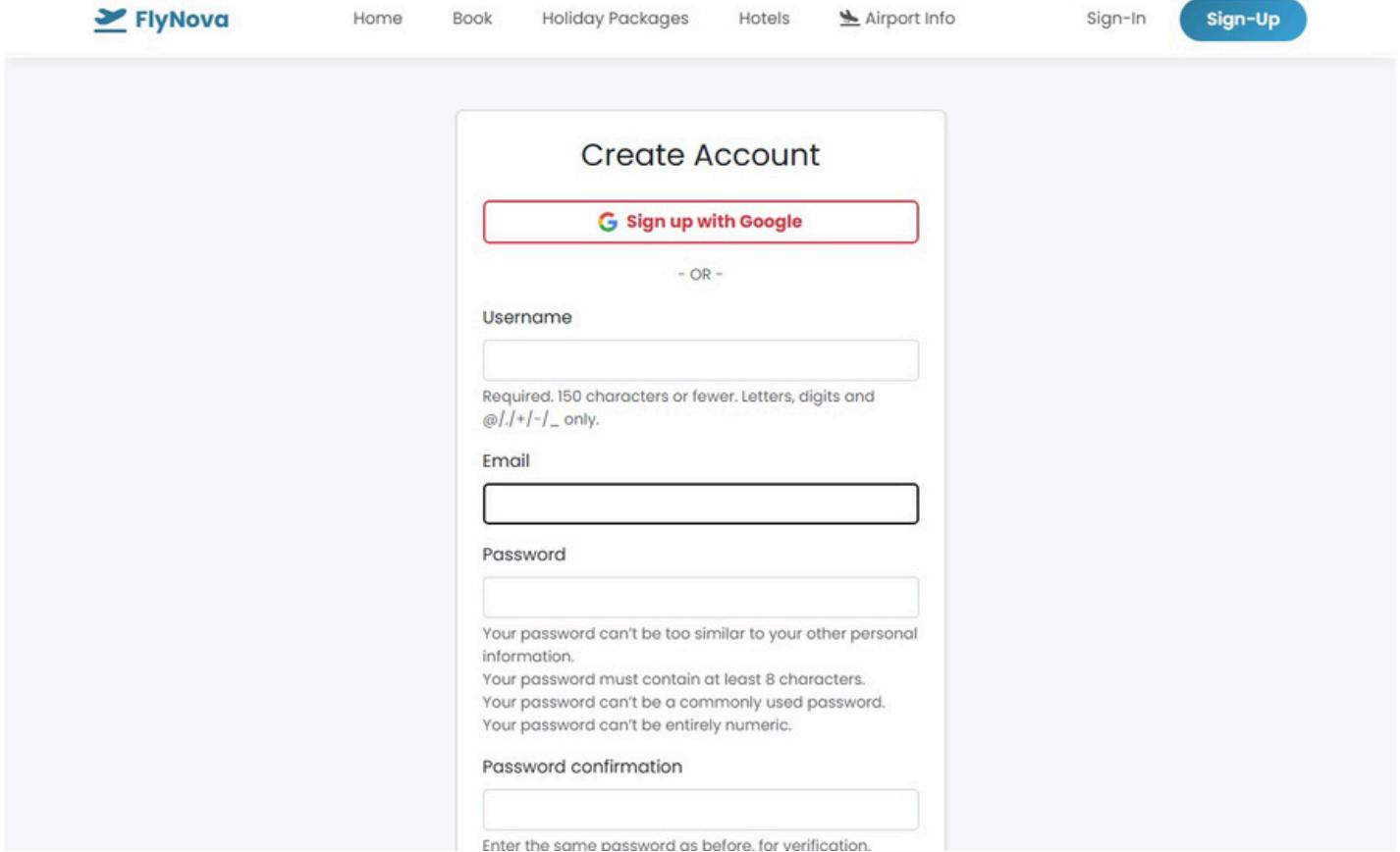
[View Details](#)[Book Now](#)

Login Page



Screenshot of Login Page *The Login page offers a secure entry point for users. It features standard email/password login and a prominent "Sign in with Google" button for quick access without remembering new passwords.* Registration Page

Signup Page



The screenshot shows the FlyNova website's registration page. At the top, there is a navigation bar with links for Home, Book, Holiday Packages, Hotels, Airport Info, Sign-In, and a prominent blue "Sign-Up" button. The main content area is titled "Create Account". It features a "Sign up with Google" button with a red border. Below it is a "Username" field with a placeholder and a note about character limits. An "Email" field follows, with a note about password requirements. A "Password" field is present with validation notes. Finally, a "Password confirmation" field is shown with a note asking to enter the same password again.

Create Account

[G Sign up with Google](#)

- OR -

Username

Required. 150 characters or fewer. Letters, digits and @./+/-/_ only.

Email

Password

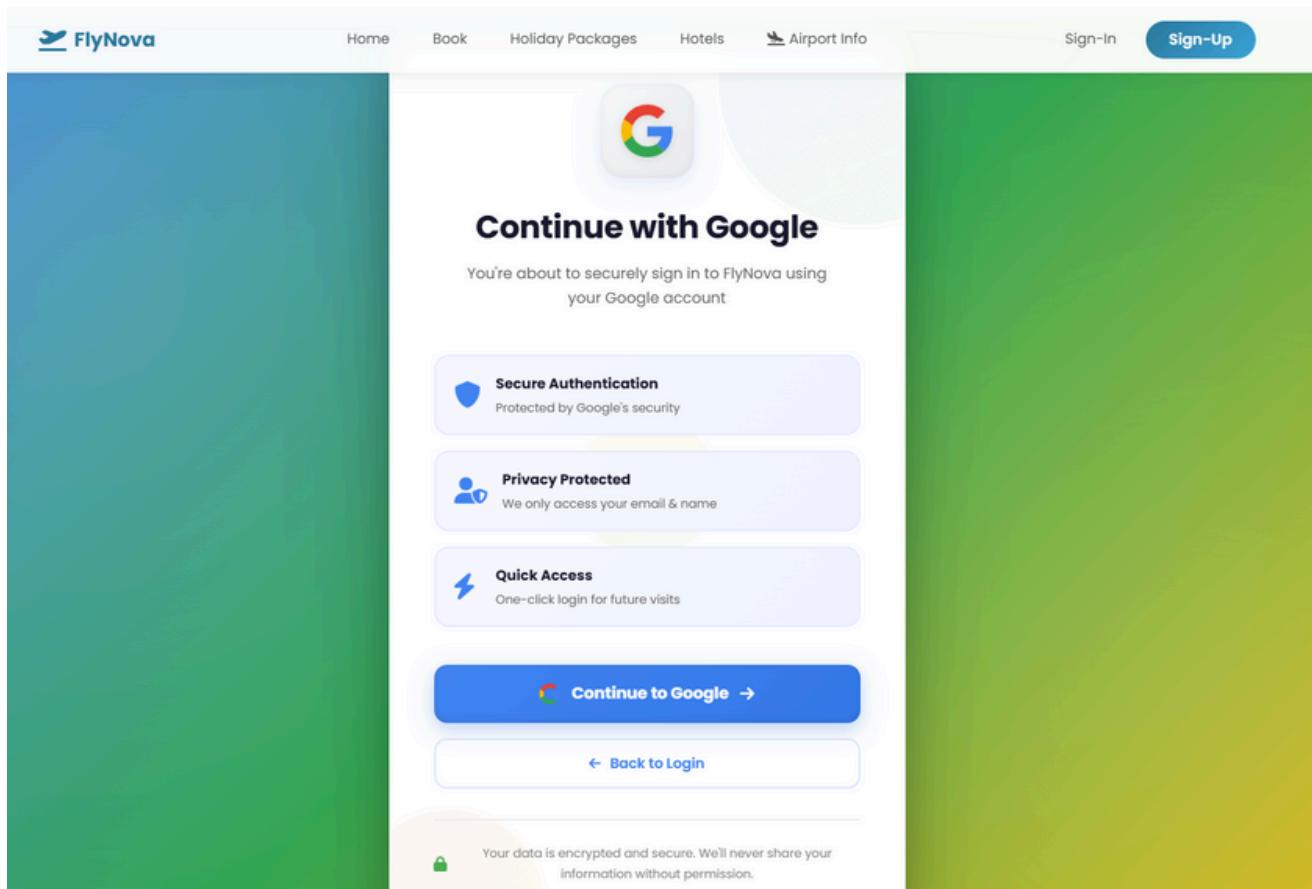
Your password can't be too similar to your other personal information.
Your password must contain at least 8 characters.
Your password can't be a commonly used password.
Your password can't be entirely numeric.

Password confirmation

Enter the same password as before, for verification.

Screenshot of Signup Page *The Registration page allows new users to create an account by providing their name, email, and password, ensuring they can manage their bookings efficiently.*

Google Authentication



The Login page offers a secure entry point for users. It features standard email/password login and a prominent "Sign in with Google" button for quick access without remembering new passwords.

Confirm Your Booking And Payment Method

FlyNova Home Book Holiday Packages Hotels Airport Info My Bookings admin_flynova

Confirm Your Booking

Booking Summary

Package: Cox's Bazar Beach Holiday (3 Days)

Traveler Name admin_flynova	Total Price BDT 15000.00
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Select payment method

Preferred method with secure transactions.

VISA Pay with Visa

Mastercard Pay with Mastercard

Pay with bKash

Nagad Pay with Nagad

Continue

Cancel

FlyNova Home Book Holiday Packages Hotels Airport Info My Bookings admin_flynova

Confirm Your Booking

Booking Summary

Package: Cox's Bazar Beach Holiday (3 Days)

Traveler Name admin_flynova	Total Price BDT 15000.00
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Payment Details

Secure Transaction via BKASH

Your Mobile Number
01XXXXXXXX

Your bKash/Nagad account number.

Transaction ID
Enter Transaction ID

Enter the transaction ID received after payment.

Pay & Confirm Booking

Booking Successful! Your Booking ID is #10



Booking Confirmed!

Thank you for booking with FlyNova.

Booking ID: #10

A confirmation email has been sent to flynova12@gmail.com.[View My Bookings](#)[Back to Home](#)

My Bookings

My Bookings

ID	Service	Date	Status	Price	Action
#10	Cox's Bazar Beach Holiday	Dec 27, 2025	CONFIRMED	BDT 15000	 Print  PDF
#9	Nova Test Air TEST_PAY_99: DAC -> CXB	Dec 27, 2025	CONFIRMED	BDT 1500	 Print  PDF
#8	Hotel The Cox Today - Single	Dec 27, 2025	CONFIRMED	BDT 3000	 Print  PDF
#7	Sea Pearl Beach Resort - Single	Dec 27, 2025	CONFIRMED	BDT 3000	 Print  PDF
#5	Sea Pearl Beach Resort - Single	Dec 27, 2025	CONFIRMED	BDT 3000	 Print  PDF
#4	Nova Air NVI01: DAC -> CXB	Dec 27, 2025	CONFIRMED	BDT 4500	 Print  PDF

Confirmed Booking

 FlyNova

Home Book Holiday Packages Hotels  Airport Info

 My Bookings  admin_flynova


Travel Booking Confirmation

BOOKING ID: #4

CONFIRMED

Passenger Name:	admin_flynova
Email:	flynova12@gmail.com
Booking Date:	December 27, 2025 - 04:56 PM
Service:	Nova Air NV10: DAC -> CXB
Departure:	December 28, 2025 - 03:13 PM
Route:	Dhaka → Cox's Bazar

BDT 4500
Total Amount Paid

Barcode
0 0 0 0 0 0 4

Important: Please carry a printed copy or digital copy of this ticket.
For any queries, contact us at support@flynova.com
Thank you for choosing FlyNova!

[!\[\]\(89cac312b110b7fb7c9b11d04e3b4406_img.jpg\) Print Ticket](#) [!\[\]\(fc124685ddf7ebf1530f67f9e1b13bb1_img.jpg\) Back to My Bookings](#)