FlyNova

Project Report: FlyNova

1. Project Information

Project Name:

FlyNova

Developers:

Md Shariful Islam Rony

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 5, 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
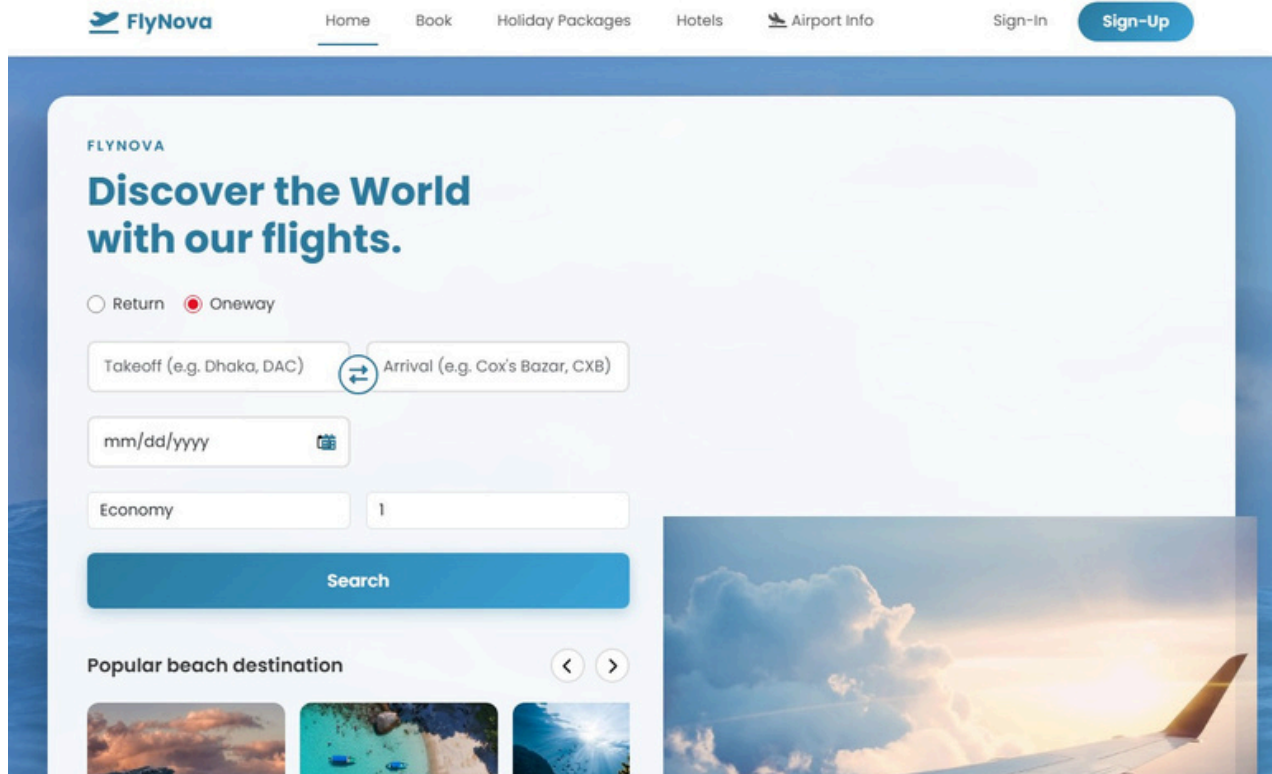
FlyNova offers a clean, modern, and intuitive user interface. The design prioritizes ease of navigation, with clear calls-to-action and a structured layout. The use of Bootstrap ensures responsiveness, making the site usable on desktops, tablets, and mobile phones. Visual cues, such as color-coded price 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

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

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
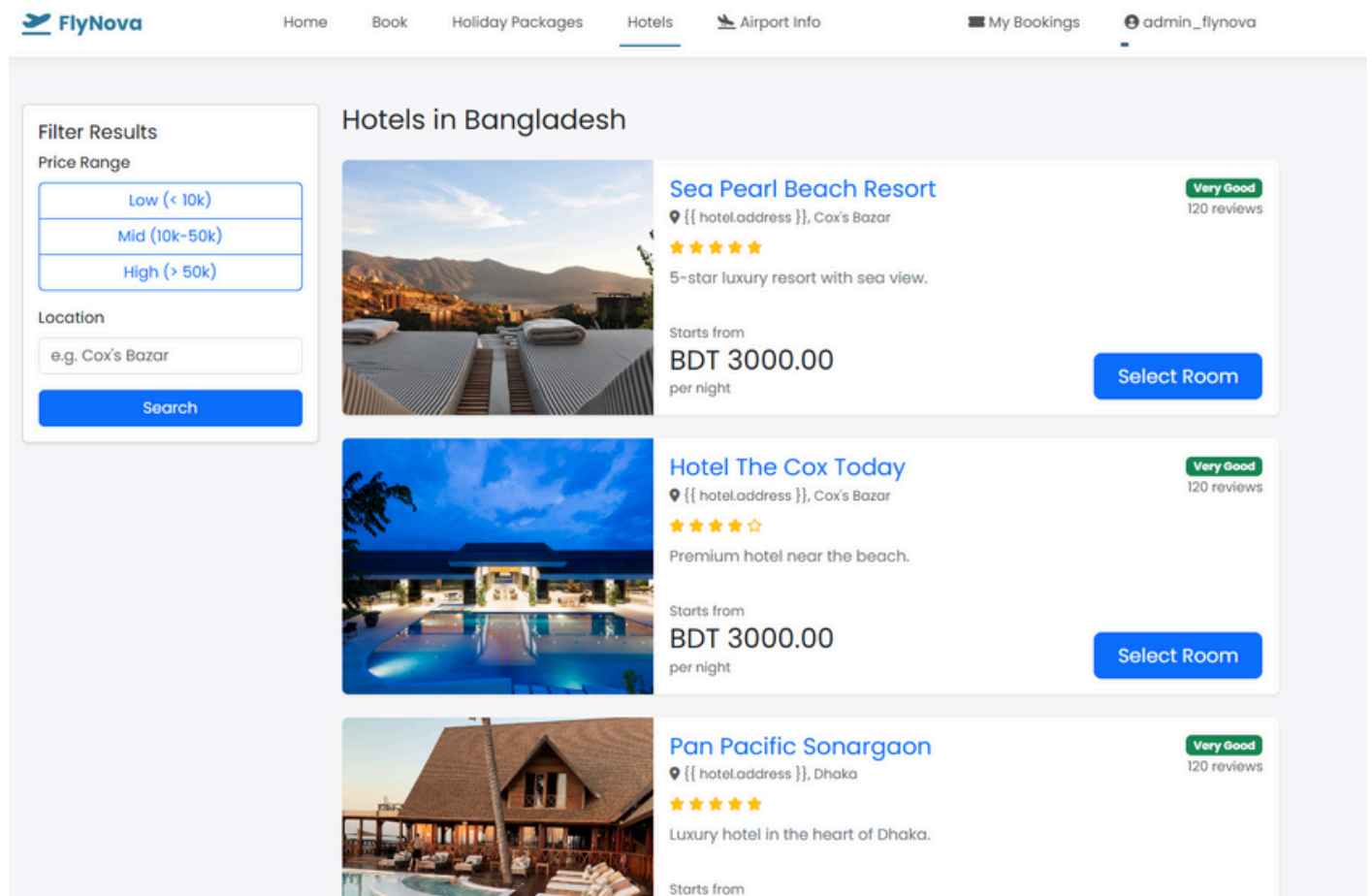
Screenshot of Hotel Search Results *The Hotel page lists available accommodations in the selected city. Each listing shows the hotel name, star rating, price per night, and an image, allowing users to compare options easily.* Payment Page (Checkout) *The Checkout page is the final step before confirmation. 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

Holiday Packages

| Low | Mid | High | Destination | Search |

Cox's Bazar Beach Holiday

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

📍 Cox's Bazar

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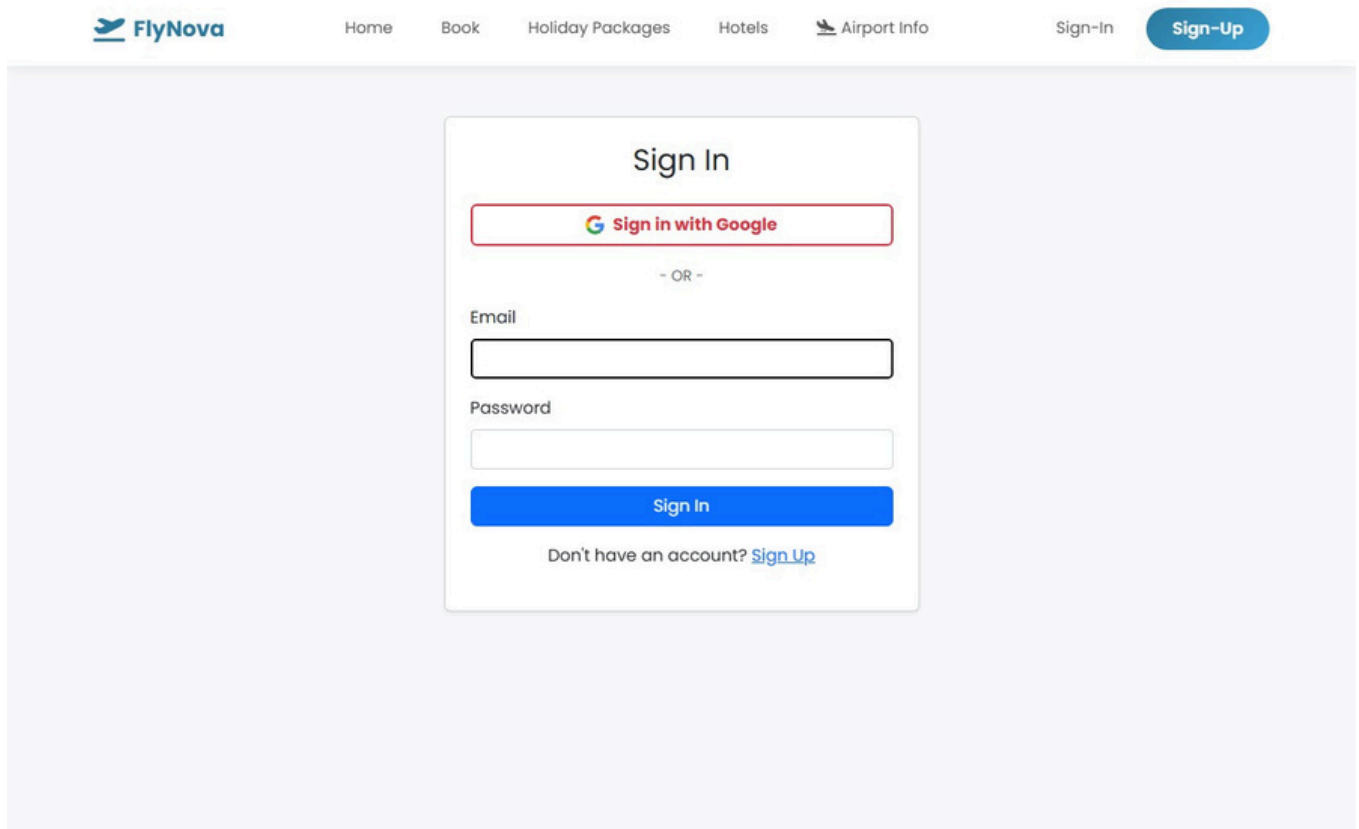
🕐 4 Days / {{ package.duration_nights }} Nights

📍 Sylhet

Explore the beautiful tea gardens and waterfalls of Sylhet.

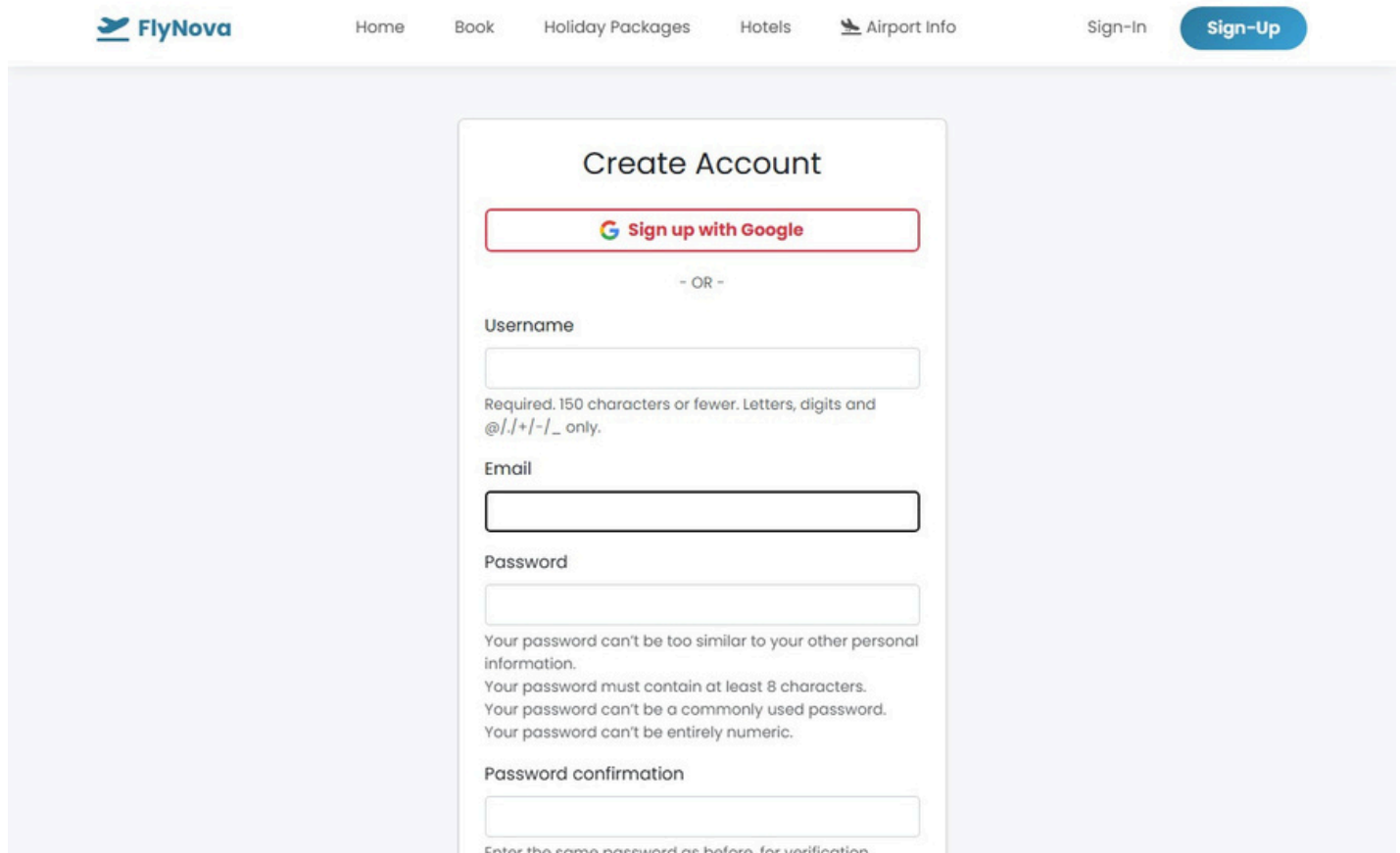Starting from

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

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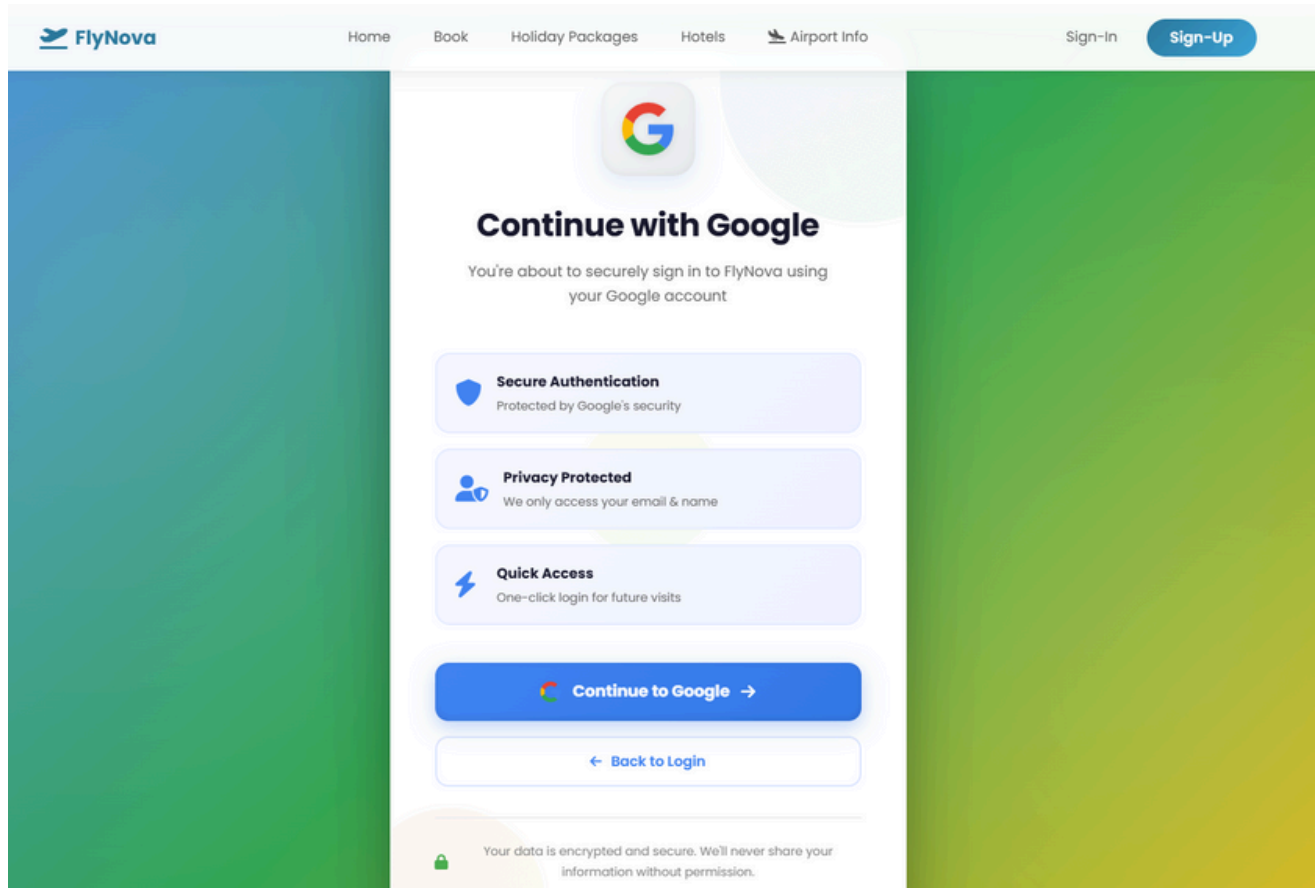
The Login page offers a secure entry point for users. It features standard email/password login and aprominent "Sign in with Google" button for quick access without remembering new passwords.

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

Select payment method
Preferred method with secure transactions.

VISA Pay with Visa

⬤ Pay with Mastercard

✈ Pay with bKash   ✔

⊙ 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

← **Payment Details**

🔒 Secure Transaction via **BKASH**

Your Mobile Number

01XXXXXXXXX

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 NV101: DAC -> CXB	Dec 27, 2025	CONFIRMED	BDT 4500	🖨 Print ⬇ PDF

Confirmed Booking

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 NV101: DAC -> CXB
Departure:	December 28, 2025 - 03:13 PM
Route:	Dhaka → Cox's Bazar

BDT 4500
Total Amount Paid

00000004

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!

🖨 Print Ticket   ← Back to My Bookings