

Project Proposal

Web Engineering

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Table of Content

1. Introduction	3
2. Modules	3
3. Work Division	6

1. Introduction

Our project aims to develop a comprehensive Airline Reservation System using the MERN (MongoDB, Express, React, Node.js) stack, designed to streamline the booking and management processes for passengers, flight operations, and administrative tasks. The system will consist of several modules, each serving specific functionalities to ensure a seamless and efficient experience for both users and airline staff.

2. Modules

1. User Panel

→ Flight Booking

- Search Flights
- View Flight Details
- Create new Booking
- View Booking detail
- Update Booking
- Cancel Booking
- View Seat Reservation
- Create Seat Reservation
- Payments
- Feedback option
- Generate invoice
- Process payment
- Create new refund
- Remove reservation after some time if payment is not done

→ My Account

- Profile Information
- Change Password
- Booking History

→ Session Management

- Login
- Forgot Password
- Sign Up

2. Flight Management Panel

→ Manage Flights

- Add new Flight
- Update Flight Information
- Delete Flight
- View Flight List

→ Manage Routes

- Add new Route
- Update Route Information
- Delete Route
- View Route List

→ Manage AirCraft

- Add new Aircraft
- Update Aircraft Information
- Delete Aircraft
- View Aircraft List

3. Admin Panel - Passenger and Booking Management

→ Manage Users

- View users List
- Add new user
- Search user
- Update user Information
- Delete user

→ Manage Refunds

- View Refund Record
- Update Refund Record
- Delete Refund Record

→ Manage Bookings

- View Bookings
- Update Booking Information
- Cancel Booking
- Create Booking
- Generate Booking Reports

→ Payment and Invoicing

- Process Payment
- View Payment History

4. Super Admin Panel - Crew and Maintenance Management

→ Manage Crew

- Add New Crew Members
- Update Crew Members Information
- Delete Crew Members
- View Crew List

→ Aircraft Maintenance

- Schedule Maintenance
- Update Maintenance Information
- Maintenance History
- View Maintenance Schedule
- Add Maintenance Information

→ Report and Analytics

- View Reports
- Analyze Crew Data
- Payment history
- Flight history
- View feedback

3. Work Division

Name	Work Division
Omer Hashmi	Super Admin Panel
Hamayal Sheikh	User Panel
Umar Farooq	Flight Management Panel
Nuzhat Rubab Zahra	Admin Panel