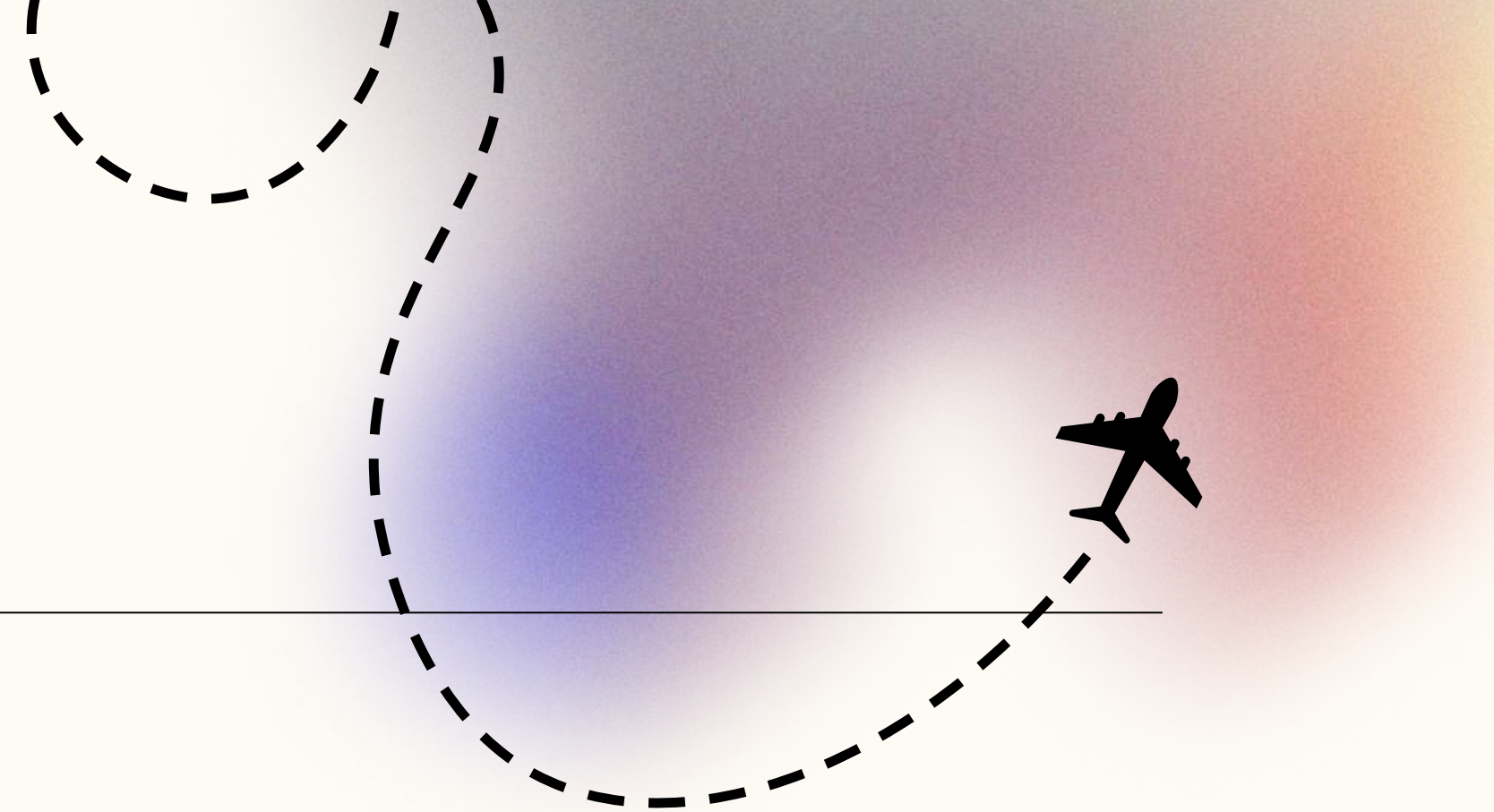# Falcon

Flight Management System
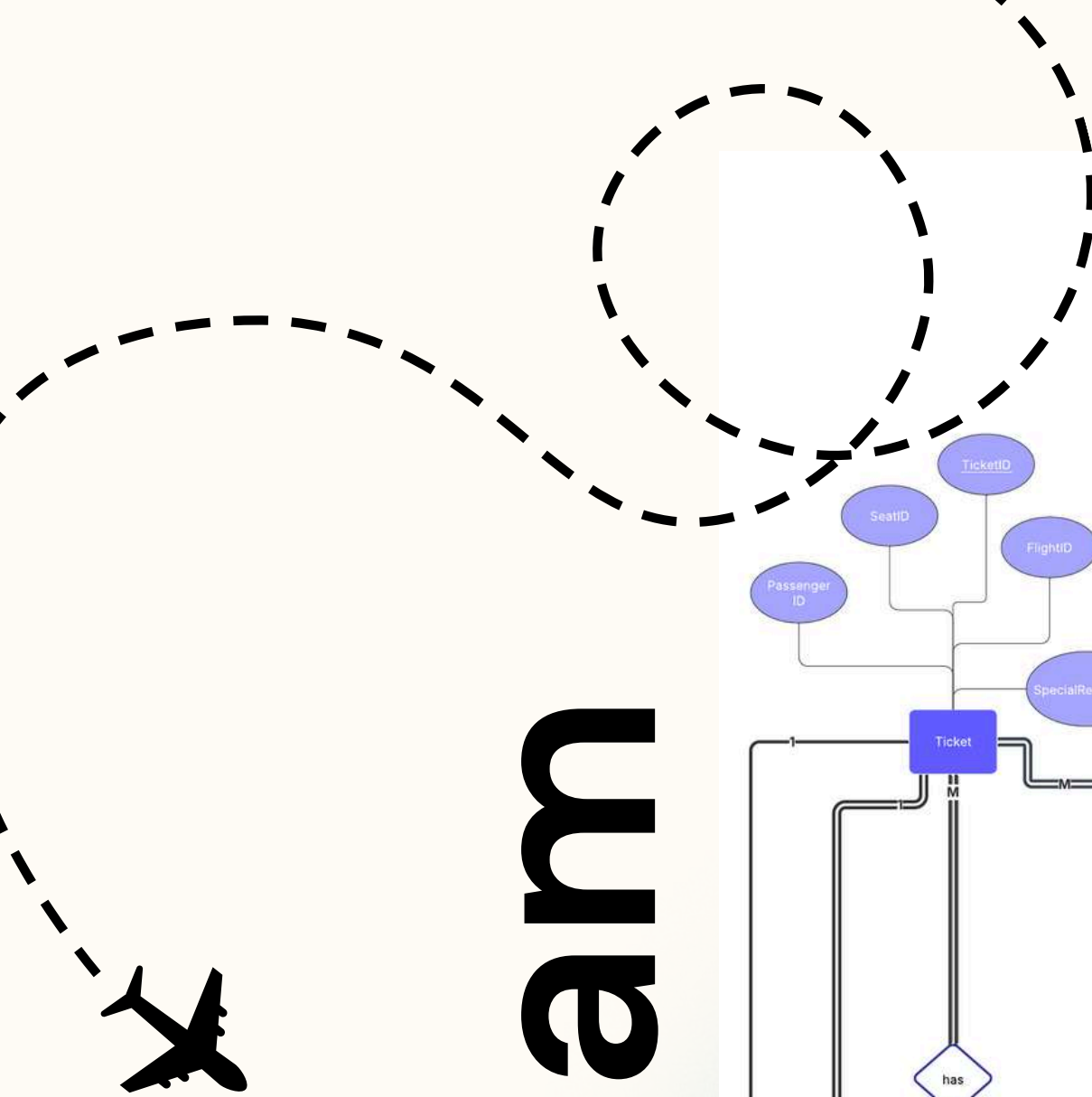
Khushi Rana 2023285
Jaitrika Reddy 2023333

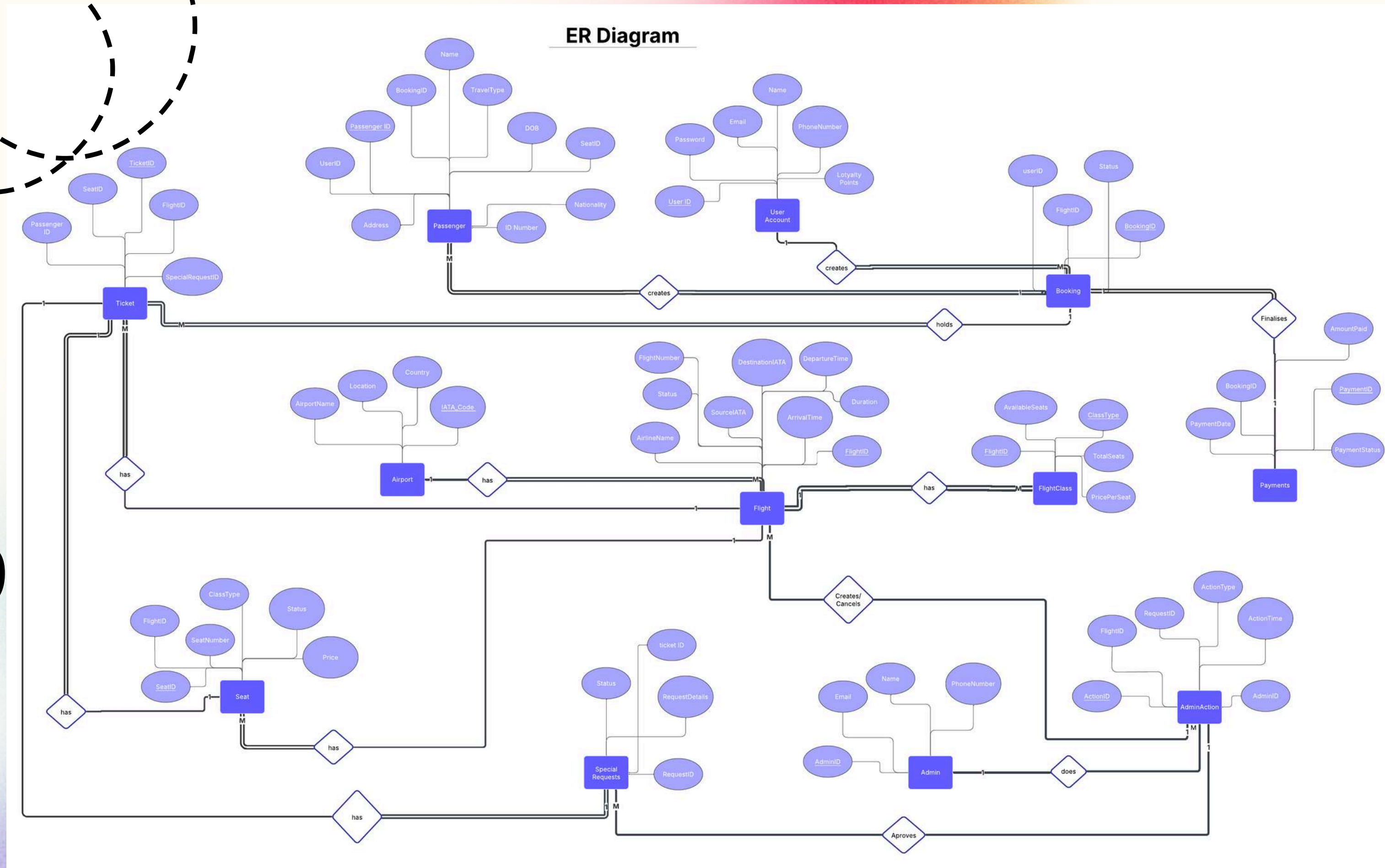Nirvika Gupta 2023351
Beas Bishnu 2023167
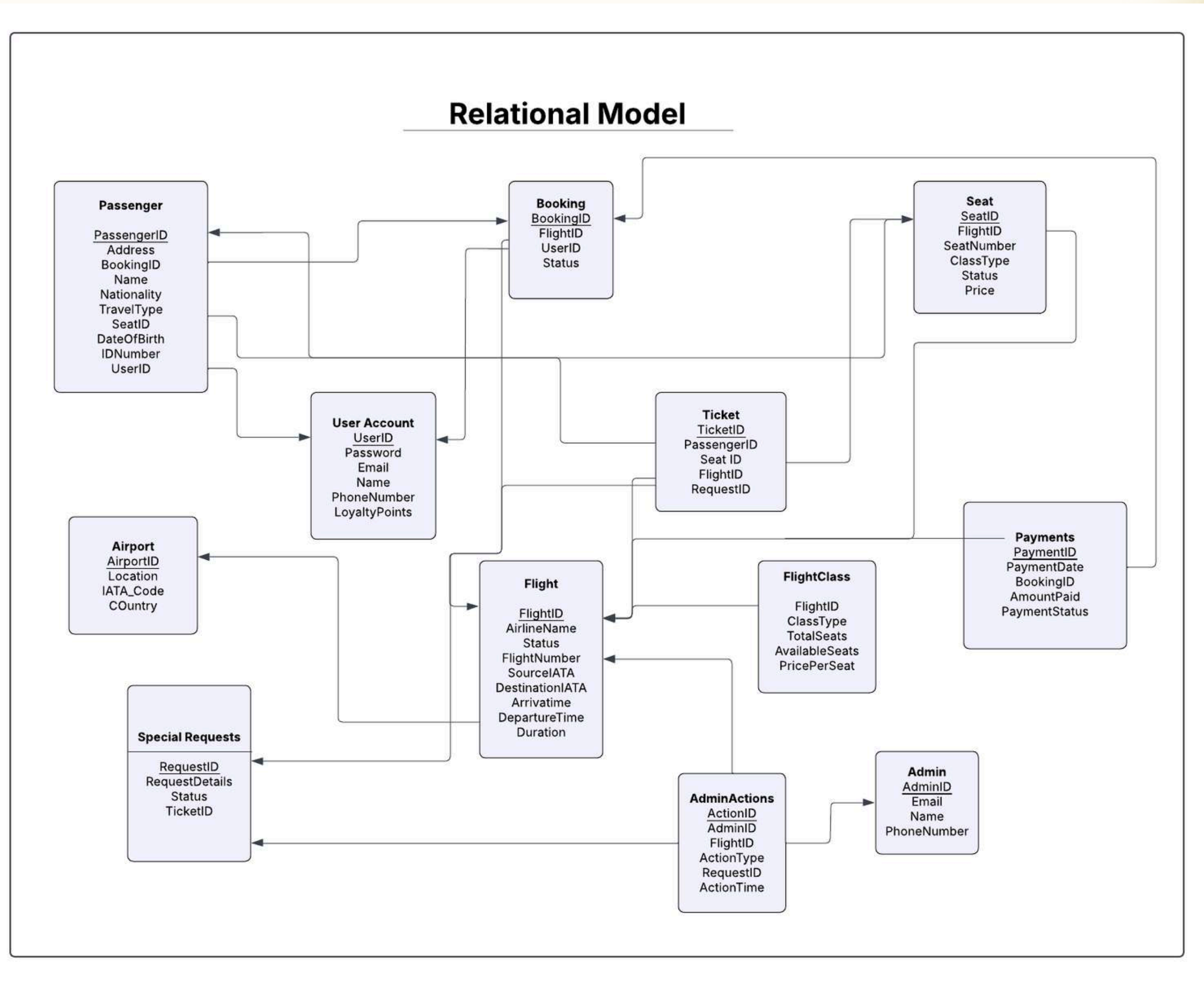
How it Works:

The System Aims to:

- Allow **users** to create accounts, book flights based on location and date
- Allow **users** to choose seats, mention special requests, and make payments
- Show ticket details to users
- Allow **users** to book multiple tickets for multiple passengers

- Allow **admin** to create accounts, view booking details, and manage flights
- Allow **admin** to view different data, such as monthly revenue
- Allow **admin** to view special requests
- Allow **admin** to view pending payments

ER Diagram

Relational Model

Passenger

PassengerID
Address
BookingID
Name
Nationality
TravelType
SeatID
DateOfBirth
IDNumber
UserID

Booking
BookingID
FlightID
UserID
Status

Seat
SeatID
FlightID
SeatNumber
ClassType
Status
Price

User Account
UserID
Password
Email
Name
PhoneNumber
LoyaltyPoints

Ticket
TicketID
PassengerID
Seat ID
FlightID
RequestID

Airport
AirportID
Location
IATA_Code
COuntry

Flight

FlightID
AirlineName
Status
FlightNumber
SourceIATA
DestinationIATA
Arrivatime
DepartureTime
Duration

FlightClass

FlightID
ClassType
TotalSeats
AvailableSeats
PricePerSeat

Payments
PaymentID
PaymentDate
BookingID
AmountPaid
PaymentStatus

Special Requests

RequestID
RequestDetails
Status
TicketID

AdminActions
ActionID
AdminID
FlightID
ActionType
RequestID
ActionTime

Admin
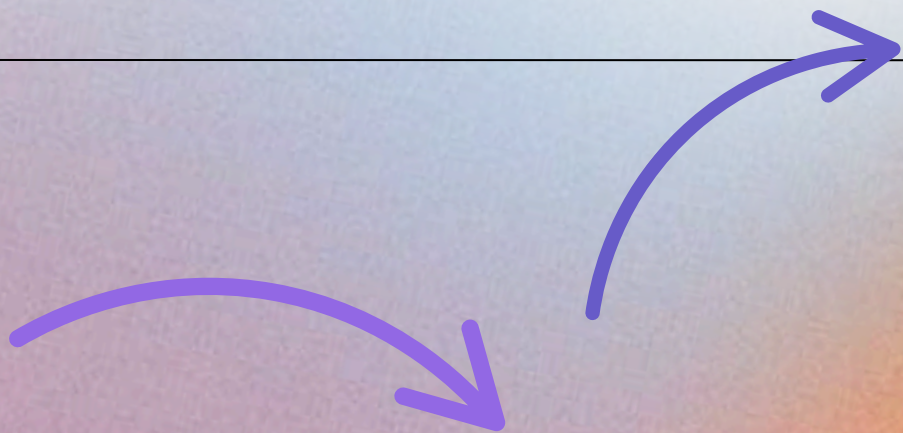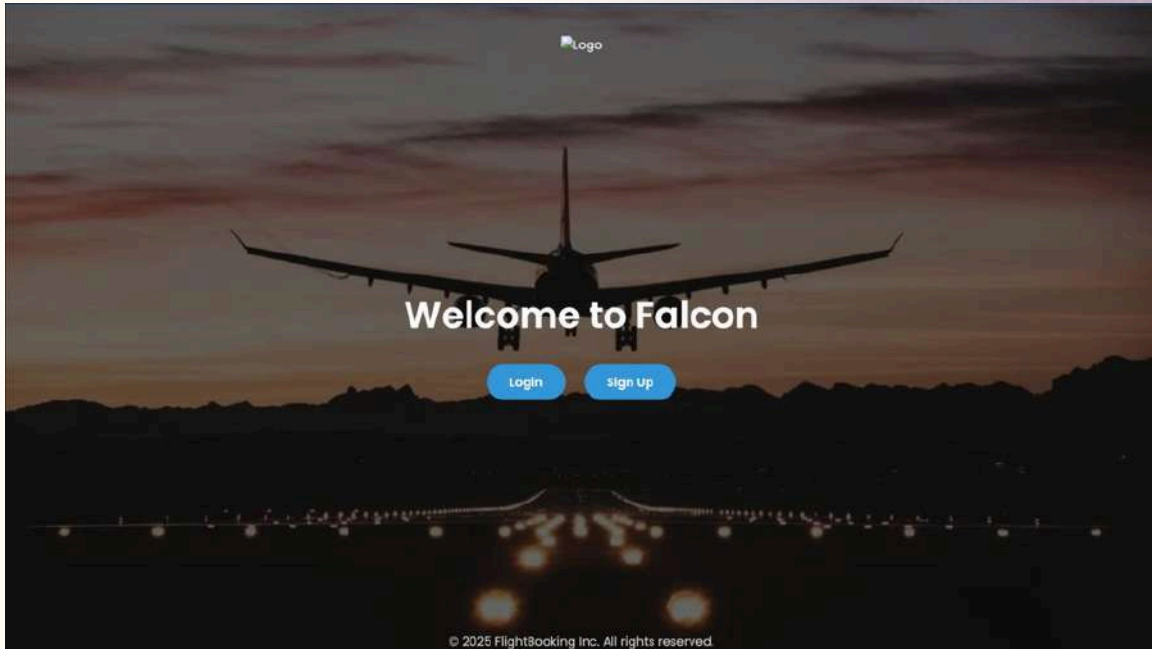AdminID
Email
Name
PhoneNumber

SQL Queries Used:

These are the SQL queries we used

• • •

- Retrieve all bookings for a given user
- Find all tickets booked for a specific flight
- Get the user's booking details and payment status
- Retrieve all pending payments for a user
- Get the total revenue generated from all bookings for a given month
- List all special requests made for a particular flight
- Find flights between two cities on a specific date, sorted by price
- Find the flights with the lowest bookings
- Approve special requests made by users
- Find the most frequent users of Falcon
- Get all user account details for a particular user
- Add and cancel flights via Admin

Our GUI

Our GUI

Confirm Payment

Flight: 1

Amount: ₹12000.00

Confirm Payment

Admin Login

Login as User instead? Login now

Email Address

AdminID

Login

Welcome, Admin!

You are now on the Admin Dashboard. Choose what you want to manage below:

✈ Manage Flights   Booking Details

1. Retrieve all bookings for a user

User ID   Run Query

Booking ID	Flight ID	Airline	Flight Number	Source	Destination	Departure	Status
1	1	IndiGo	6E101	Delhi	Mumbai	2025-02-20 06:30:00	Confirmed

Booking Details

Booking ID: 31

Flight: IndiGo (6E101)

From: Delhi | **To:** Mumbai

Departure: 2025-02-20 06:30:00 | **Arrival:** 2025-02-20 08:45:00

Delhi ✈ Mumbai

Passenger
Hi
Nationality: India

Flight	Seat	Class	Price	Special Request
6E101	13C	Business	₹12000.00	MEOWWWWW

Feb-20-2025 at 06:30AM

Disclaimer: This is a digital boarding pass. Please arrive at the gate 45 minutes before departure.

2. Find tickets for a flight

Flight ID   Run Query

User ID	Passenger Name	Ticket ID	Booking ID	Passenger ID
1	Aarav Sharma	40	1	1
23	hi	59	24	20

3. Get booking & payment details

User ID   Run Query

Booking ID	Payment ID	Amount	Method	Status
1	46	$7500.00	Credit Card	Success

4. List flight special requests

Flight ID [   ] **Run Query**

Request ID	Booking ID	Details	Status
1	1	Require Wheelchair assistance from check-in to boarding	Pending
6	24	food	Pending

5. Approve Special Request

[7 ⏶⏷] **Approve**

| 7 | 29 | MEOWWW | Approved |

1. Monthly Revenue

[2] [25] **Run Query**

Total Revenue for 2/2025: $54850.00

2. Flights with Low Bookings

Run Query

Flight ID	Flight Number	Airline	Source	Destination	Total Bookings
2	AI202	Air India	Mumbai	London	1
3	SG303	SpiceJet	Bangalore	Chennai	1

4. View Pending Payments

hi@gmail.com **Run Query**

No pending payments found for this user

3. Frequent Users

Run Query

User ID	Name	Email	Total Bookings
23	hi	hi@gmail.com	11