

# **DBMS Project**

## **Flight Booking Management System**

**Name: Priyanshu Gupta**

**Roll No: BT23CSE187**

**Class: CSE C2**

**Semester: 5th**

```
mysql> CREATE DATABASE IF NOT EXISTS FlightBookingDB;  
Query OK, 1 row affected (0.00 sec)
```

```
mysql> USE FlightBookingDB;  
Database changed
```

```

mysql> CREATE TABLE Airline (
->   AirlineID INT PRIMARY KEY,
->   Name VARCHAR(255) NOT NULL,
->   ContactInfo VARCHAR(255)
-> );
Query OK, 0 rows affected (0.04 sec)

mysql> INSERT INTO Airline VALUES (1, 'IndiGo', 'indi_go@air.com');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Airline VALUES (2, 'Air India', 'air_india@air.com');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airline VALUES (3, 'SpiceJet', 'spicejet@air.com');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airline VALUES (4, 'Vistara', 'vistara@air.com');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airline VALUES (5, 'GoAir', 'goair@air.com');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airline VALUES (6, 'AirAsia', 'airasia@air.com');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airline VALUES (7, 'Jet Airways', 'jetairways@air.com');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airline VALUES (8, 'Alliance Air', 'allianceair@air.com');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airline VALUES (9, 'TruJet', 'trujet@air.com');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airline VALUES (10, 'Air Odisha', 'airodisha@air.com');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM Airline;
+-----+-----+-----+
| AirlineID | Name      | ContactInfo          |
+-----+-----+-----+
|      1 | IndiGo    | indi_go@air.com     |
|      2 | Air India  | air_india@air.com   |
|      3 | SpiceJet   | spicejet@air.com    |
|      4 | Vistara   | vistara@air.com     |
|      5 | GoAir     | goair@air.com       |
|      6 | AirAsia   | airasia@air.com     |
|      7 | Jet Airways| jetairways@air.com |
|      8 | Alliance Air| allianceair@air.com |
|      9 | TruJet    | trujet@air.com      |
|     10 | Air Odisha| airodisha@air.com  |
+-----+-----+-----+
10 rows in set (0.01 sec)

```

```

mysql> CREATE TABLE Airport (
    ->     AirportID INT PRIMARY KEY,
    ->     Code VARCHAR(10) UNIQUE NOT NULL,
    ->     Name VARCHAR(255) NOT NULL,
    ->     Location VARCHAR(255)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> INSERT INTO Airport VALUES (1, 'DEL', 'Indira Gandhi International Airport', 'Delhi');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airport VALUES (2, 'BOM', 'Chhatrapati Shivaji Maharaj Airport', 'Mumbai');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airport VALUES (3, 'BLR', 'Kempegowda International Airport', 'Bangalore');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airport VALUES (4, 'HYD', 'Rajiv Gandhi International Airport', 'Hyderabad');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airport VALUES (5, 'MAA', 'Chennai International Airport', 'Chennai');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airport VALUES (6, 'PNQ', 'Pune Airport', 'Pune');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airport VALUES (7, 'COK', 'Cochin International Airport', 'Kochi');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airport VALUES (8, 'GOI', 'Dabolim Airport', 'Goa');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airport VALUES (9, 'AMD', 'Sardar Vallabhbhai Patel International Airport', 'Ahmedabad');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Airport VALUES (10, 'LKO', 'Chaudhary Charan Singh Airport', 'Lucknow');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM Airport;
+-----+-----+-----+-----+
| AirportID | Code | Name | Location |
+-----+-----+-----+-----+
| 1 | DEL | Indira Gandhi International Airport | Delhi |
| 2 | BOM | Chhatrapati Shivaji Maharaj Airport | Mumbai |
| 3 | BLR | Kempegowda International Airport | Bangalore |
| 4 | HYD | Rajiv Gandhi International Airport | Hyderabad |
| 5 | MAA | Chennai International Airport | Chennai |
| 6 | PNQ | Pune Airport | Pune |
| 7 | COK | Cochin International Airport | Kochi |
| 8 | GOI | Dabolim Airport | Goa |
| 9 | AMD | Sardar Vallabhbhai Patel International Airport | Ahmedabad |
| 10 | LKO | Chaudhary Charan Singh Airport | Lucknow |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

```

mysql> CREATE TABLE Flight (
    ->     FlightID INT PRIMARY KEY,
    ->     FlightNumber VARCHAR(16) NOT NULL,
    ->     AirlineID INT,
    ->     DepartureAirport INT,
    ->     ArrivalAirport INT,
    ->     DepartureDateTime DATETIME,
    ->     ArrivalDateTime DATETIME,
    ->     AvailableSeats INT,
    ->     FOREIGN KEY (AirlineID) REFERENCES Airline(AirlineID),
    ->     FOREIGN KEY (DepartureAirport) REFERENCES Airport(AirportID),
    ->     FOREIGN KEY (ArrivalAirport) REFERENCES Airport(AirportID)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> INSERT INTO Flight VALUES (1, '6E123', 1, 1, 2, '2025-11-12 14:00:00', '2025-11-12 16:10:00', 150);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Flight VALUES (2, 'AI101', 2, 2, 3, '2025-11-13 09:00:00', '2025-11-13 11:20:00', 200);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Flight VALUES (3, 'SG204', 3, 3, 4, '2025-11-14 06:30:00', '2025-11-14 08:45:00', 180);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Flight VALUES (4, 'UK450', 4, 4, 5, '2025-11-15 18:15:00', '2025-11-15 20:30:00', 160);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Flight VALUES (5, 'GB632', 5, 5, 1, '2025-11-16 21:00:00', '2025-11-17 23:15:00', 170);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Flight VALUES (6, 'AI202', 2, 1, 3, '2025-11-17 07:45:00', '2025-11-17 10:05:00', 220);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Flight VALUES (7, '6E789', 1, 6, 7, '2025-11-18 12:00:00', '2025-11-18 14:05:00', 140);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Flight VALUES (8, 'SG303', 3, 7, 8, '2025-11-19 15:30:00', '2025-11-19 17:45:00', 130);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Flight VALUES (9, 'UK555', 4, 9, 10, '2025-11-20 19:00:00', '2025-11-20 21:10:00', 150);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Flight VALUES (10, 'AI303', 2, 10, 6, '2025-11-21 08:00:00', '2025-11-21 10:15:00', 165);
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM Flight;

```

FlightID	FlightNumber	AirlineID	DepartureAirport	ArrivalAirport	DepartureDateTime	ArrivalDateTime	AvailableSeats
1	6E123	1	1	2	2025-11-12 14:00:00	2025-11-12 16:10:00	150
2	AI101	2	2	3	2025-11-13 09:00:00	2025-11-13 11:20:00	200
3	SG204	3	3	4	2025-11-14 06:30:00	2025-11-14 08:45:00	180
4	UK450	4	4	5	2025-11-15 18:15:00	2025-11-15 20:30:00	160
5	GB632	5	5	1	2025-11-16 21:00:00	2025-11-17 23:15:00	170
6	AI202	2	1	3	2025-11-17 07:45:00	2025-11-17 10:05:00	220
7	6E789	1	6	7	2025-11-18 12:00:00	2025-11-18 14:05:00	140
8	SG303	3	7	8	2025-11-19 15:30:00	2025-11-19 17:45:00	130
9	UK555	4	9	10	2025-11-20 19:00:00	2025-11-20 21:10:00	150
10	AI303	2	10	6	2025-11-21 08:00:00	2025-11-21 10:15:00	165

10 rows in set (0.00 sec)

```

mysql> CREATE TABLE Passenger (
    ->   PassengerID INT PRIMARY KEY,
    ->   Name VARCHAR(255),
    ->   Contact VARCHAR(16),
    ->   PassportNumber VARCHAR(32)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> INSERT INTO Passenger VALUES (1, 'Rahul Sharma', '9811123456', 'P1233456');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Passenger VALUES (2, 'Priya Verma', '9822045678', 'P7894562');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Passenger VALUES (3, 'Amit Singh', '9833127890', 'P9081726');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Passenger VALUES (4, 'Deepa Nair', '9844234567', 'P2468135');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Passenger VALUES (5, 'Karan Mehta', '9855123459', 'P3579246');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Passenger VALUES (6, 'Neha Gupta', '9866012345', 'P8642097');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Passenger VALUES (7, 'Sunil Roy', '9877123450', 'P7531598');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Passenger VALUES (8, 'Anita Desai', '9888123451', 'P1357911');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Passenger VALUES (9, 'Vikram Patel', '9899234562', 'P2468024');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Passenger VALUES (10, 'Sunita Joshi', '9900345673', 'P9753186');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM Passenger;
+-----+-----+-----+-----+
| PassengerID | Name      | Contact    | PassportNumber |
+-----+-----+-----+-----+
|      1 | Rahul Sharma | 9811123456 | P1233456      |
|      2 | Priya Verma  | 9822045678 | P7894562      |
|      3 | Amit Singh   | 9833127890 | P9081726      |
|      4 | Deepa Nair   | 9844234567 | P2468135      |
|      5 | Karan Mehta  | 9855123459 | P3579246      |
|      6 | Neha Gupta   | 9866012345 | P8642097      |
|      7 | Sunil Roy    | 9877123450 | P7531598      |
|      8 | Anita Desai  | 9888123451 | P1357911      |
|      9 | Vikram Patel | 9899234562 | P2468024      |
|     10 | Sunita Joshi | 9900345673 | P9753186      |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

```

mysql> CREATE TABLE Booking (
->   BookingID INT PRIMARY KEY,
->   PassengerID INT,
->   FlightID INT,
->   TravelClass VARCHAR(32),
->   BookingDate DATETIME,
->   PaymentStatus VARCHAR(20),
->   FOREIGN KEY (PassengerID) REFERENCES Passenger(PassengerID),
->   FOREIGN KEY (FlightID) REFERENCES Flight(FlightID)
-> );
Query OK, 0 rows affected (0.03 sec)

mysql> INSERT INTO Booking VALUES (1, 1, 1, 'Economy', '2025-11-10 10:00:00', 'Paid');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Booking VALUES (2, 2, 2, 'Business', '2025-11-11 11:15:00', 'Unpaid');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Booking VALUES (3, 3, 1, 'Economy', '2025-11-11 12:45:00', 'Paid');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Booking VALUES (4, 4, 3, 'Economy', '2025-11-12 14:30:00', 'Paid');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Booking VALUES (5, 5, 4, 'First Class', '2025-11-12 15:00:00', 'Paid');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Booking VALUES (6, 6, 5, 'Economy', '2025-11-13 16:20:00', 'Unpaid');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Booking VALUES (7, 7, 6, 'Business', '2025-11-14 18:55:00', 'Paid');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Booking VALUES (8, 8, 3, 'Economy', '2025-11-15 09:30:00', 'Paid');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Booking VALUES (9, 9, 7, 'Economy', '2025-11-16 20:00:00', 'Paid');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Booking VALUES (10, 10, 8, 'Business', '2025-11-17 15:45:00', 'Unpaid');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM Booking;
+-----+-----+-----+-----+-----+-----+
| BookingID | PassengerID | FlightID | TravelClass | BookingDate | PaymentStatus |
+-----+-----+-----+-----+-----+-----+
|      1 |        1 |      1 | Economy    | 2025-11-10 10:00:00 | Paid          |
|      2 |        2 |      2 | Business   | 2025-11-11 11:15:00 | Unpaid        |
|      3 |        3 |      1 | Economy    | 2025-11-11 12:45:00 | Paid          |
|      4 |        4 |      3 | Economy    | 2025-11-12 14:30:00 | Paid          |
|      5 |        5 |      4 | First Class| 2025-11-12 15:00:00 | Paid          |
|      6 |        6 |      5 | Economy    | 2025-11-13 16:20:00 | Unpaid        |
|      7 |        7 |      6 | Business   | 2025-11-14 18:55:00 | Paid          |
|      8 |        8 |      3 | Economy    | 2025-11-15 09:30:00 | Paid          |
|      9 |        9 |      7 | Economy    | 2025-11-16 20:00:00 | Paid          |
|     10 |       10 |      8 | Business   | 2025-11-17 15:45:00 | Unpaid        |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

```

mysql> CREATE TABLE Payment (
    ->     PaymentID INT PRIMARY KEY,
    ->     BookingID INT,
    ->     Amount DECIMAL(10,2),
    ->     Method VARCHAR(32),
    ->     Status VARCHAR(20),
    ->     FOREIGN KEY (BookingID) REFERENCES Booking(BookingID)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> INSERT INTO Payment VALUES (1, 1, 5500.00, 'Card', 'Completed');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Payment VALUES (2, 2, 12000.00, 'Cash', 'Pending');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Payment VALUES (3, 3, 5500.00, 'UPI', 'Completed');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Payment VALUES (4, 4, 6000.00, 'Card', 'Completed');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Payment VALUES (5, 5, 18000.00, 'NetBanking', 'Completed');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Payment VALUES (6, 6, 5000.00, 'Cash', 'Pending');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Payment VALUES (7, 7, 12500.00, 'Card', 'Completed');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Payment VALUES (8, 8, 6000.00, 'UPI', 'Completed');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Payment VALUES (9, 9, 5500.00, 'NetBanking', 'Completed');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Payment VALUES (10, 10, 12000.00, 'Card', 'Pending');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM Payment;
+-----+-----+-----+-----+-----+
| PaymentID | BookingID | Amount | Method | Status |
+-----+-----+-----+-----+-----+
|      1 |        1 | 5500.00 | Card   | Completed |
|      2 |        2 | 12000.00 | Cash   | Pending   |
|      3 |        3 | 5500.00 | UPI    | Completed |
|      4 |        4 | 6000.00 | Card   | Completed |
|      5 |        5 | 18000.00 | NetBanking | Completed |
|      6 |        6 | 5000.00 | Cash   | Pending   |
|      7 |        7 | 12500.00 | Card   | Completed |
|      8 |        8 | 6000.00 | UPI    | Completed |
|      9 |        9 | 5500.00 | NetBanking | Completed |
|     10 |       10 | 12000.00 | Card   | Pending   |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

```

mysql> SELECT BookingID, Passenger.Name, FlightNumber, TravelClass, BookingDate
-> FROM Booking
-> JOIN Passenger ON Booking.PassengerID = Passenger.PassengerID
-> JOIN Flight ON Booking.FlightID = Flight.FlightID;
+-----+-----+-----+-----+-----+
| BookingID | Name      | FlightNumber | TravelClass | BookingDate |
+-----+-----+-----+-----+-----+
| 1 | Rahul Sharma | 6E123       | Economy     | 2025-11-10 10:00:00 |
| 2 | Priya Verma   | AI101       | Business    | 2025-11-11 11:15:00 |
| 3 | Amit Singh    | 6E123       | Economy     | 2025-11-11 12:45:00 |
| 4 | Deepa Nair    | SG204       | Economy     | 2025-11-12 14:30:00 |
| 5 | Karan Mehta   | UK450       | First Class | 2025-11-12 15:00:00 |
| 6 | Neha Gupta    | G8632       | Economy     | 2025-11-13 16:20:00 |
| 7 | Sunil Roy     | AI202       | Business    | 2025-11-14 18:55:00 |
| 8 | Anita Desai   | SG204       | Economy     | 2025-11-15 09:30:00 |
| 9 | Vikram Patel  | 6E789       | Economy     | 2025-11-16 20:00:00 |
| 10 | Sunita Joshi  | SG303       | Business    | 2025-11-17 15:45:00 |
+-----+-----+-----+-----+-----+
10 rows in set (0.02 sec)

```

```

mysql> SELECT FlightNumber, AvailableSeats FROM Flight;
+-----+-----+
| FlightNumber | AvailableSeats |
+-----+-----+
| 6E123        | 150          |
| AI101        | 200          |
| SG204        | 180          |
| UK450        | 160          |
| G8632        | 170          |
| AI202        | 220          |
| 6E789        | 140          |
| SG303        | 130          |
| UK555        | 150          |
| AI303        | 165          |
+-----+-----+
10 rows in set (0.00 sec)

```

```
mysql> SELECT FlightNumber FROM Flight
-> WHERE DepartureAirport = (SELECT AirportID FROM Airport WHERE Code = 'DEL');
+-----+
| FlightNumber |
+-----+
| 6E123      |
| AI202      |
+-----+
2 rows in set (0.01 sec)
```

```
mysql> SELECT DISTINCT Passenger.Name
-> FROM Booking
-> JOIN Passenger ON Booking.PassengerID = Passenger.PassengerID
-> WHERE TravelClass = 'Business';
+-----+
| Name      |
+-----+
| Priya Verma |
| Sunil Roy   |
| Sunita Joshi |
+-----+
3 rows in set (0.00 sec)
```

```
mysql> SELECT FlightNumber, COUNT(*) AS TotalBookings
-> FROM Booking
-> JOIN Flight ON Booking.FlightID = Flight.FlightID
-> GROUP BY FlightNumber;
+-----+-----+
| FlightNumber | TotalBookings |
+-----+-----+
| 6E123        |          2 |
| 6E789        |          1 |
| AI101        |          1 |
| AI202        |          1 |
| G8632        |          1 |
| SG204        |          2 |
| SG303        |          1 |
| UK450        |          1 |
+-----+-----+
8 rows in set (0.01 sec)
```

```
mysql> SELECT Method, SUM(Amount) AS TotalAmount
    -> FROM Payment
    -> WHERE Status = 'Completed'
    -> GROUP BY Method;
+-----+-----+
| Method | TotalAmount |
+-----+-----+
| Card   | 24000.00 |
| NetBanking | 23500.00 |
| UPI    | 11500.00 |
+-----+-----+
3 rows in set (0.01 sec)
```

```
mysql> SELECT Passenger.Name, Booking.PaymentStatus
    -> FROM Booking
    -> JOIN Passenger ON Booking.PassengerID = Passenger.PassengerID
    -> WHERE PaymentStatus = 'Unpaid';
+-----+-----+
| Name | PaymentStatus |
+-----+-----+
| Priya Verma | Unpaid |
| Neha Gupta | Unpaid |
| Sunita Joshi | Unpaid |
+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> SELECT FlightNumber FROM Flight
    -> WHERE DepartureAirport = (SELECT AirportID FROM Airport WHERE Code = 'DEL')
    -> AND ArrivalAirport = (SELECT AirportID FROM Airport WHERE Code = 'BOM');
+-----+
| FlightNumber |
+-----+
| 6E123      |
+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT Passenger.Name, SUM(Payment.Amount) AS TotalPaid
-> FROM Passenger
-> JOIN Booking ON Passenger.PassengerID = Booking.PassengerID
-> JOIN Payment ON Booking.BookingID = Payment.BookingID
-> WHERE Payment.Status = 'Completed'
-> GROUP BY Passenger.Name
-> HAVING TotalPaid > 10000;
+-----+-----+
| Name      | TotalPaid |
+-----+-----+
| Karan Mehta | 18000.00 |
| Sunil Roy   | 12500.00 |
+-----+-----+
2 rows in set (0.01 sec)
```

```
mysql> SELECT FlightNumber, AvailableSeats
-> FROM Flight
-> WHERE AvailableSeats > 100;
+-----+-----+
| FlightNumber | AvailableSeats |
+-----+-----+
| 6E123        | 150          |
| AI101         | 200          |
| SG204         | 180          |
| UK450         | 160          |
| G8632         | 170          |
| AI202         | 220          |
| 6E789         | 140          |
| SG303         | 130          |
| UK555         | 150          |
| AI303         | 165          |
+-----+-----+
10 rows in set (0.00 sec)
```

```

mysql> SELECT Airline.Name, COUNT(Flight.FlightID) AS NumberOfFlights
    -> FROM Airline
    -> LEFT JOIN Flight ON Airline.AirlineID = Flight.AirlineID
    -> GROUP BY Airline.Name;
+-----+-----+
| Name      | NumberOfFlights |
+-----+-----+
| Air India   |            3 |
| Air Odisha  |            0 |
| AirAsia     |            0 |
| Alliance Air |            0 |
| GoAir       |            1 |
| IndiGo      |            2 |
| Jet Airways |            0 |
| SpiceJet    |            2 |
| TruJet      |            0 |
| Vistara     |            2 |
+-----+-----+
10 rows in set (0.00 sec)

```

```

mysql> SELECT BookingID, Passenger.Name, FlightNumber, BookingDate
    -> FROM Booking
    -> JOIN Passenger ON Booking.PassengerID = Passenger.PassengerID
    -> JOIN Flight ON Booking.FlightID = Flight.FlightID
    -> WHERE BookingDate = (SELECT MAX(BookingDate) FROM Booking);
+-----+-----+-----+-----+
| BookingID | Name      | FlightNumber | BookingDate      |
+-----+-----+-----+-----+
|      10   | Sunita Joshi | SG303       | 2025-11-17 15:45:00 |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

```

```

mysql> SELECT Airport.Name, COUNT(*) AS Departures
    -> FROM Airport
    -> JOIN Flight ON Airport.AirportID = Flight.DepartureAirport
    -> GROUP BY Airport.AirportID
    -> ORDER BY Departures DESC
    -> LIMIT 1;
+-----+-----+
| Name          | Departures |
+-----+-----+
| Indira Gandhi International Airport |        2 |
+-----+-----+
1 row in set (0.00 sec)

```

```
mysql> SELECT DISTINCT Passenger.Name
-> FROM Booking
-> JOIN Passenger ON Booking.PassengerID = Passenger.PassengerID
-> WHERE TravelClass = 'First Class';
+-----+
| Name      |
+-----+
| Karan Mehta |
+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT TravelClass, AVG(Payment.Amount) AS AvgPayment
-> FROM Booking
-> JOIN Payment ON Booking.BookingID = Payment.BookingID
-> GROUP BY TravelClass;
+-----+-----+
| TravelClass | AvgPayment   |
+-----+-----+
| Business    | 12166.666667 |
| Economy     | 5583.333333  |
| First Class | 18000.000000 |
+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> SELECT FlightNumber
-> FROM Flight
-> WHERE FlightID NOT IN (SELECT DISTINCT FlightID FROM Booking);
+-----+
| FlightNumber |
+-----+
| UK555       |
| AI303       |
+-----+
2 rows in set (0.00 sec)
```

```

mysql> SELECT Passenger.Name,
->           (SELECT SUM(P.Amount)
->             FROM Booking B
->             JOIN Payment P ON B.BookingID = P.BookingID
->             WHERE B.PassengerID = Passenger.PassengerID) AS TotalPaid
->   FROM Passenger
-> WHERE (SELECT SUM(P.Amount)
->             FROM Booking B
->             JOIN Payment P ON B.BookingID = P.BookingID
->             WHERE B.PassengerID = Passenger.PassengerID) <
-> (SELECT AVG(TotalAmount) FROM (
->               SELECT SUM(P2.Amount) AS TotalAmount
->                 FROM Booking B2
->                   JOIN Payment P2 ON B2.BookingID = P2.BookingID
->                     GROUP BY B2.PassengerID
->           ) AS Sub);
+-----+-----+
| Name | TotalPaid |
+-----+-----+
| Rahul Sharma | 5500.00 |
| Amit Singh | 5500.00 |
| Deepa Nair | 6000.00 |
| Neha Gupta | 5000.00 |
| Anita Desai | 6000.00 |
| Vikram Patel | 5500.00 |
+-----+
6 rows in set (0.01 sec)

```

```

mysql> SELECT DISTINCT Passenger.Name
->   FROM Passenger
-> WHERE Passenger.Name LIKE 'S%'
->   AND Passenger.PassengerID IN (
->     SELECT Booking.PassengerID
->       FROM Booking
->         JOIN Payment ON Booking.BookingID = Payment.BookingID
->           WHERE Payment.Status = 'Completed'
-> );
+-----+
| Name |
+-----+
| Sunil Roy |
+-----+
1 row in set (0.00 sec)

```

```

mysql> SELECT DISTINCT Passenger.Name
-> FROM Payment
-> JOIN Booking ON Payment.BookingID = Booking.BookingID
-> JOIN Passenger ON Booking.PassengerID = Passenger.PassengerID
-> WHERE Payment.Method = 'Card';
+-----+
| Name      |
+-----+
| Rahul Sharma |
| Deepa Nair   |
| Sunil Roy    |
| Sunita Joshi |
+-----+
4 rows in set (0.00 sec)

```

```

mysql> SELECT BookingID, Passenger.Name, FlightNumber, BookingDate
-> FROM Booking
-> JOIN Passenger ON Booking.PassengerID = Passenger.PassengerID
-> JOIN Flight ON Booking.FlightID = Flight.FlightID
-> WHERE BookingDate BETWEEN '2025-11-11' AND '2025-11-15';
+-----+-----+-----+-----+
| BookingID | Name      | FlightNumber | BookingDate      |
+-----+-----+-----+-----+
| 2 | Priya Verma | AI101       | 2025-11-11 11:15:00 |
| 3 | Amit Singh  | 6E123       | 2025-11-11 12:45:00 |
| 4 | Deepa Nair  | SG204       | 2025-11-12 14:30:00 |
| 5 | Karan Mehta | UK450       | 2025-11-12 15:00:00 |
| 6 | Neha Gupta  | G8632       | 2025-11-13 16:20:00 |
| 7 | Sunil Roy   | AI202       | 2025-11-14 18:55:00 |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

```

mysql> SELECT Name, PassportNumber
-> FROM Passenger
-> WHERE PassportNumber LIKE 'P1%';
+-----+-----+
| Name      | PassportNumber |
+-----+-----+
| Rahul Sharma | P1233456      |
| Anita Desai  | P1357911      |
+-----+-----+
2 rows in set (0.00 sec)

```

```

mysql> SELECT FlightNumber, DepartureDateTime, ArrivalDateTime
-> FROM Flight
-> WHERE FlightNumber LIKE '%AI%'
-> AND DepartureDateTime > '2025-11-15 00:00:00';
+-----+-----+-----+
| FlightNumber | DepartureDateTime | ArrivalDateTime |
+-----+-----+-----+
| AI202       | 2025-11-17 07:45:00 | 2025-11-17 10:05:00 |
| AI303       | 2025-11-21 08:00:00 | 2025-11-21 10:15:00 |
+-----+-----+-----+
2 rows in set (0.00 sec)

```

```

mysql> SELECT Passenger.Name,
->           COUNT(Booking.BookingID) AS TotalBookings,
->           SUM(Payment.Amount) AS TotalPayments
->     FROM Passenger
->   JOIN Booking ON Passenger.PassengerID = Booking.PassengerID
->   JOIN Payment ON Booking.BookingID = Payment.BookingID
-> GROUP BY Passenger.PassengerID
-> ORDER BY TotalPayments DESC, TotalBookings DESC;
+-----+-----+-----+
| Name      | TotalBookings | TotalPayments |
+-----+-----+-----+
| Karan Mehta |          1 |    18000.00 |
| Sunil Roy  |          1 |    12500.00 |
| Priya Verma |          1 |    12000.00 |
| Sunita Joshi |        1 |    12000.00 |
| Deepa Nair  |          1 |     6000.00 |
| Anita Desai |          1 |     6000.00 |
| Rahul Sharma |        1 |     5500.00 |
| Vikram Patel |        1 |     5500.00 |
| Amit Singh   |        1 |     5500.00 |
| Neha Gupta  |        1 |     5000.00 |
+-----+-----+-----+
10 rows in set (0.00 sec)

```

```

mysql> SELECT BookingID, Passenger.Name, FlightNumber, BookingDate, DepartureDateTime,
->           DATEDIFF(DepartureDateTime, BookingDate) AS DaysBetween
->     FROM Booking
->   JOIN Passenger ON Booking.PassengerID = Passenger.PassengerID
->   JOIN Flight ON Booking.FlightID = Flight.FlightID
-> WHERE DATEDIFF(DepartureDateTime, BookingDate) > 0
->   AND DATEDIFF(DepartureDateTime, BookingDate) < 3;
+-----+-----+-----+-----+-----+-----+
| BookingID | Name      | FlightNumber | BookingDate | DepartureDateTime | DaysBetween |
+-----+-----+-----+-----+-----+-----+
|      1 | Rahul Sharma | 6E123      | 2025-11-10 10:00:00 | 2025-11-12 14:00:00 |      2 |
|      2 | Priya Verma  | AI101      | 2025-11-11 11:15:00 | 2025-11-13 09:00:00 |      2 |
|      3 | Amit Singh   | 6E123      | 2025-11-11 12:45:00 | 2025-11-12 14:00:00 |      1 |
|      4 | Deepa Nair   | SG204      | 2025-11-12 14:30:00 | 2025-11-14 06:30:00 |      2 |
|      9 | Vikram Patel | 6E789      | 2025-11-16 20:00:00 | 2025-11-18 12:00:00 |      2 |
|     10 | Sunita Joshi | SG303      | 2025-11-17 15:45:00 | 2025-11-19 15:30:00 |      2 |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```