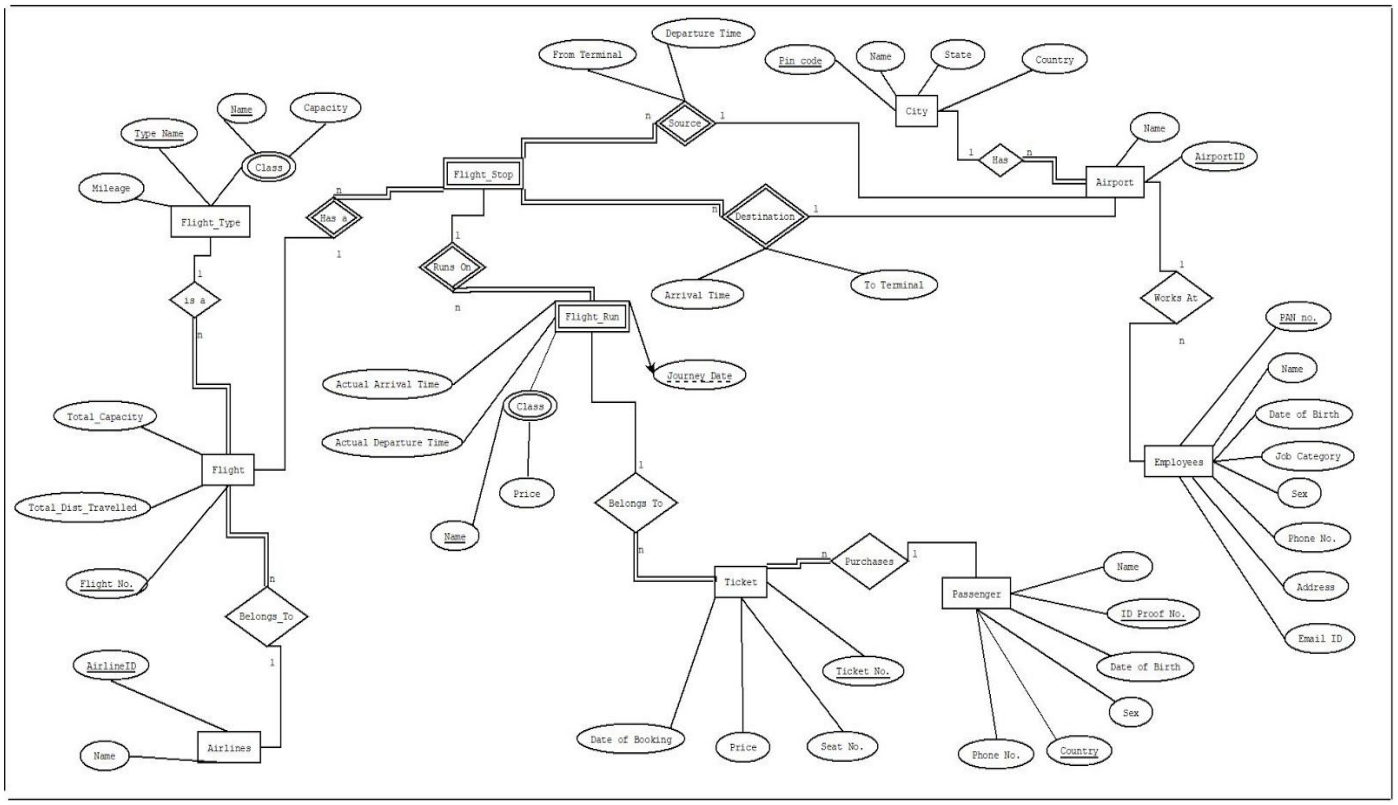
Domestic Airports and Airlines Database

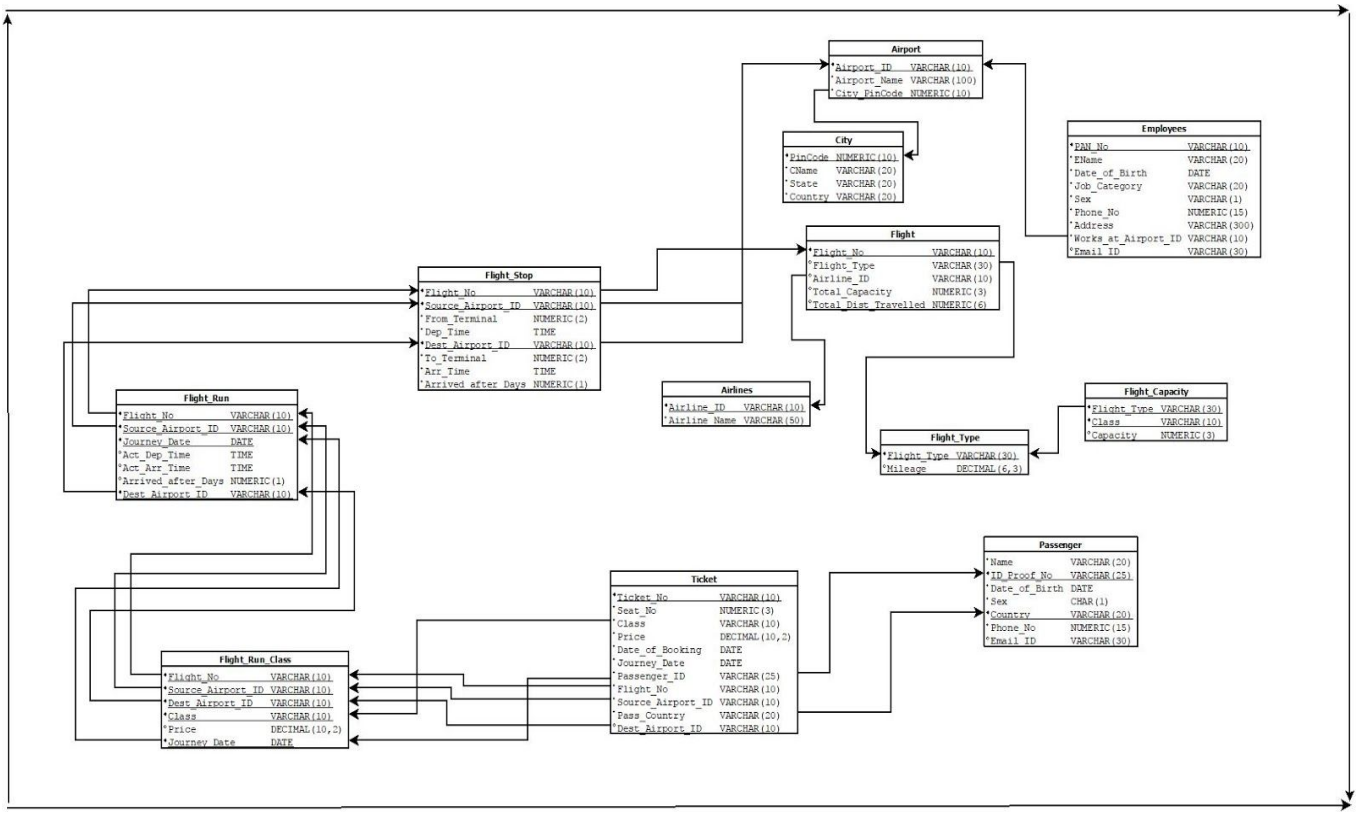
GROUP NO : 5.8

ID	NAME
201501037	Jay Goswami
201501189	Nirmal Patel
201501410	Smit Patel
201501450	Vishalkumar Shingala (Representative)

ER Diagram:


Departure Time
From Terminal
Pin code
Name
State
Country
Source
City
Name
Capacity
Type_Name
Class
Has
Airport
AirportID
Mileage
Flight_Type
Flight_Stop
Has a
Destination
Runs On
Arrival Time
To Terminal
Works At
is a
Flight_Run
PAN no.
Name
Actual Arrival Time
Journey_Date
Date of Birth
Total_Capacity
Class
Actual Departure Time
Job Category
Flight
Employees
Price
Sex
Total_Dist_Travelled
Belongs To
Phone No.
Name
Purchases
Address
Flight No.
Ticket
Passenger
Name
Belongs_To
ID Proof No.
AirlineID
Ticket No.
Date of Birth
Sex
Date of Booking
Price
Seat No.
Phone No.
Country
Name
Airlines

Relational Schema:



Normalization Proofs:

Canonical Form of FD's:

Table : Passenger

1. { ID_Proof_No , Country } ⟶ { Name, Date_of_Birth, Sex, Phone_No, Email_ID }

Key : { ID_Proof_No , Country }

Table : City

2. PinCode → {CName, State, Country}

Key : PinCode

Table : Airport

3. Airport_ID → {Airport_Name, City_PinCode}

Key : Airport_ID

Table : Employees

4. PAN_No → { EName, Date_of_Birth, Job_Category, Sex, Phone_No, Address,
Works_at_Airport_ID }

Key : PAN_No

Table : Airlines

5. Airline_ID → { Airline_Name }

Key : Airline_ID

Table : Flight_Type

6. Flight_Type → { Mileage }

Key : Flight_Type

Table : Flight_Capacity

7. { Flight_Type,Class } → { Capacity }

Key : { Flight_Type,Class }

Table : Flight

8. Flight_No → { Flight_Type, Airline_ID, Total_Capacity, Total_Dist_Travelled }

Key : Flight_No

Table : Flight_Stop

9. {Flight_No, Source_Airport_ID, Dest_Airport_ID} → {From_Terminal, To_Terminal, Dep_Time,

Arr_Time, Arrived_After_Days}

Key : {Flight_No, Source_Airport_ID, Dest_Airport_ID}

Table : Flight_Run

10. {Flight_No, Source_Airport_ID, Dest_Airport_ID, Journey_Date} → {Act_Arr_Time,

Act_Dep_Time, Act_Arrived_After_Days}

Key : {Flight_No, Source_Airport_ID, Dest_Airport_ID, Journey_Date}

Table : Flight_Run_Class

11. {Flight_No, Source_Airport_ID, Dest_Airport_ID, Journey_Date,Class} → {Price}

Key : {Flight_No, Source_Airport_ID, Dest_Airport_ID, Journey_Date,Class}

Table : Ticket

12. Ticket_No → {Seat_No, Class, Price, Date_of_Booking, Journey_Date, Passenger_ID,

Flight_No, Source_Airport_ID, Dest_Airport_ID, Pass_Country}

13. { Journey_Date, Passenger_ID, Flight_No, Source_Airport_ID, Dest_Airport_ID, Pass_Country}

→ {Ticket_No, Seat_No, Class, Price, Date_of_Booking}

Key :

1. Ticket_No

2. { Journey_Date, Passenger_ID, Flight_No, Source_Airport_ID, Dest_Airport_ID,

Pass_Country}

Brief Description about BCNF:

Here, for every FD A → B, mentioned above, that holds on relation R, A is its super-key. Hence all tables in schema are in BCNF.