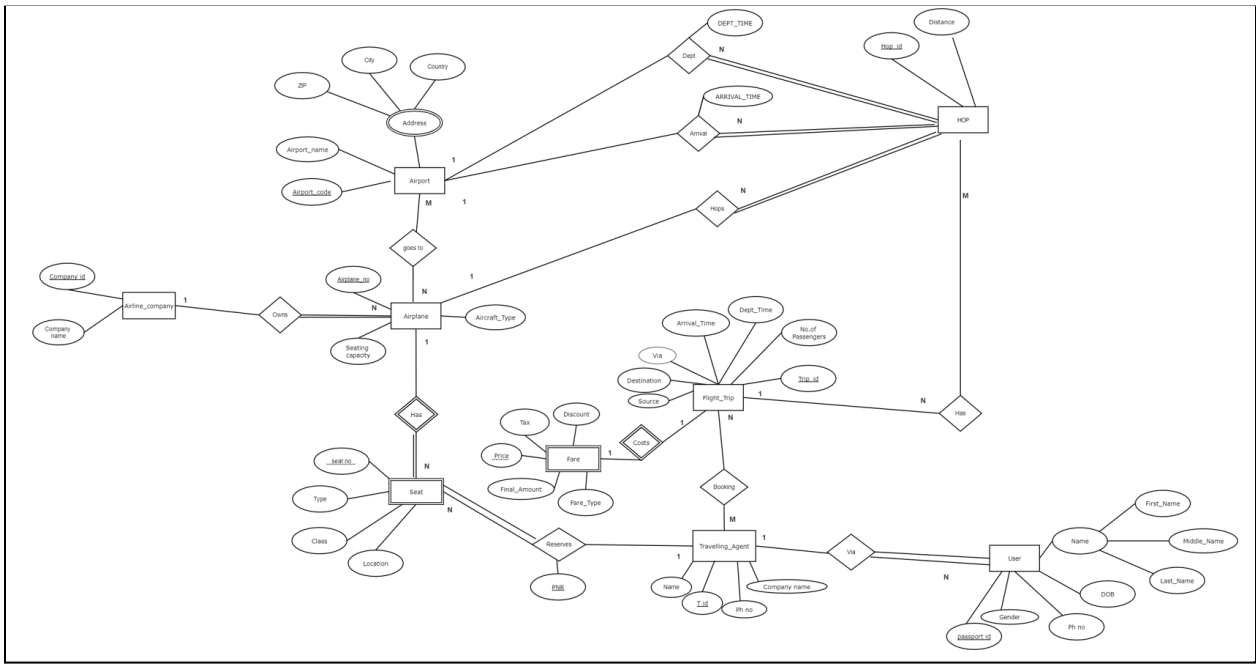
AIRLINES BOOKING SYSTEM:

We have used the following **Entities** in our model:

0. **Reserves:** It is an association that stores a unique PNR number for every reservation.
1. **Airport:** Stores airport name and code
2. **Airline Company:** Stores company name and id
3. **Airplane:** Contains airline number, seating capacity, and aircraft type
4. **Seat:** Contains a unique seat number, type of seat, class(business or economic), and location of the seat.
5. **Hop:** Stores, a unique hop id, distance, arrival airport, departure airport, arrival time, and departure time.
6. **User:** Stores passport id, gender of the passenger, phone number, date of birth, their name(a multi-value attribute).
7. **Traveling Agent:** Stores a unique id, contact number, name, and company name.
8. **Flight Trip:** Stores a unique trip id, number of passengers, departure time, arrival time, source, intermediate destination, and destination
9. **Fare:** Stores price as primary key, tax, discount, fare type, and final amount.

Here, we depict basic transactions of an Aircraft booking. An Airport company can produce any number of Airplanes depending on their revenue. An Airplane can have any number of Seats(for example A Cargo Plane doesn't contain a seat). Any number of Airplanes can go to an Airport. The Airport can be both the source of travel and the destination. For an intermediate destination, we use the term 'Hop', for example: If a traveler has to travel from Bangalore to Delhi, he/she can book a flight via Mumbai with a separate base fare. The traveler can have any number of hops, so each hop is given a unique id. Details regarding Arrival Airport and Departure Airport are stored in the HOP entity. All the payment details are stored in the Fare entity for each Flight trip. A User/Traveler approaches a traveling agent, who reserves a seat.

ER-Diagram:


DEPT_TIME
Distance
Dept
N
Hop_id
City
Country
ZIP
Address
ARRIVAL_TIME
Arrival
N
HOP
Airport_name
Airport
1
Airport_code
M
1
N
Hops
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Company id
Airline_no
1
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Airplane
Aircraft_Type
Company name
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Seating capacity
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Arrival_Time
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No.of Passengers
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Destination
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Travelling_Agent
1
Via
First_Name
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Middle_Name
1
PNR
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Company name
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User
Last_Name
DOB
Gender
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passport id