

DATABASE MANAGEMENT SYSTEM

# AIRLINES RESERVATION SYSTEM

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## PROBLEM STATEMENT

We plan to build an Airline Reservation System, much like the websites Yatra or MakeMyTrip. Our database contains information about Airline Companies, Aeroplanes, Flightrips, users, seats, travellers and fare.

We conceptualise that an Airline Company owns multiple Aeroplanes, which arrive at and depart from an airport at a certain time and stop at different airports on their journey. An aeroplane can be identified by its id no. Any Airport in this database has a name, a unique airport code and a composite valued attribute called address. An Aeroplane has multiple seats, which have a unique number, availability status, location and class.

A seat can be reserved by 1 traveller who has a unique id number [pnr] to identify him/her. Other details captured about any given traveller are his first name, last name and phone number. The traveler may or maynot travel.

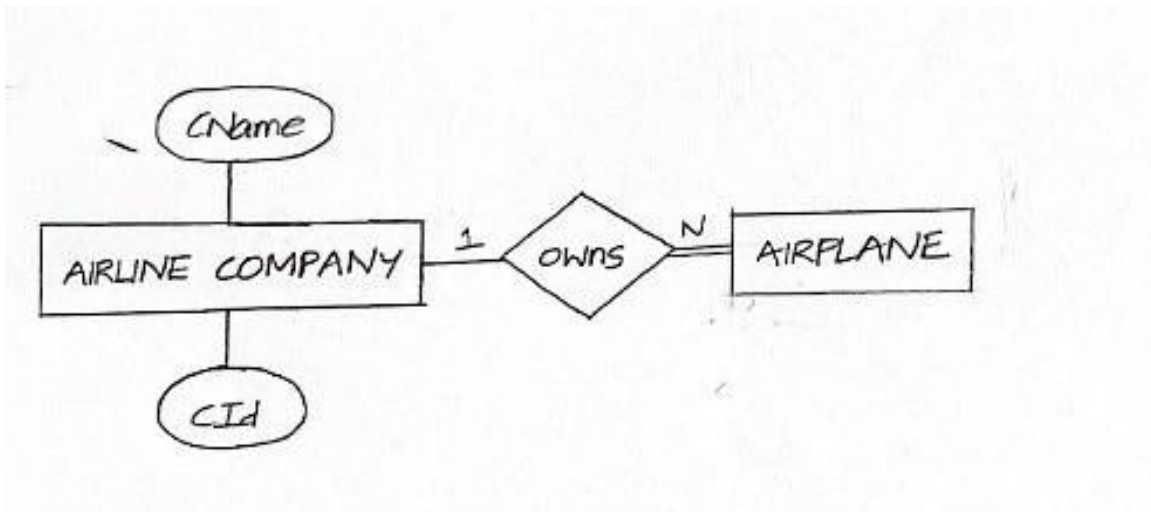
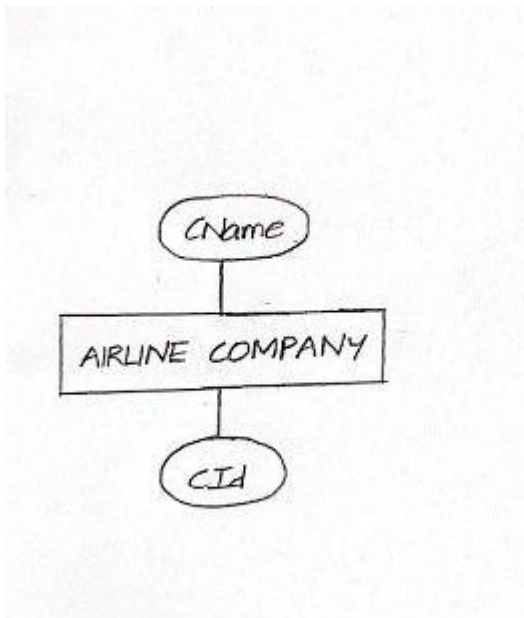
Now, Any user who wishes to book a flight trip must provide his first and last name, email and phone number. These details will be logged in the database and email is used to identify him/her.

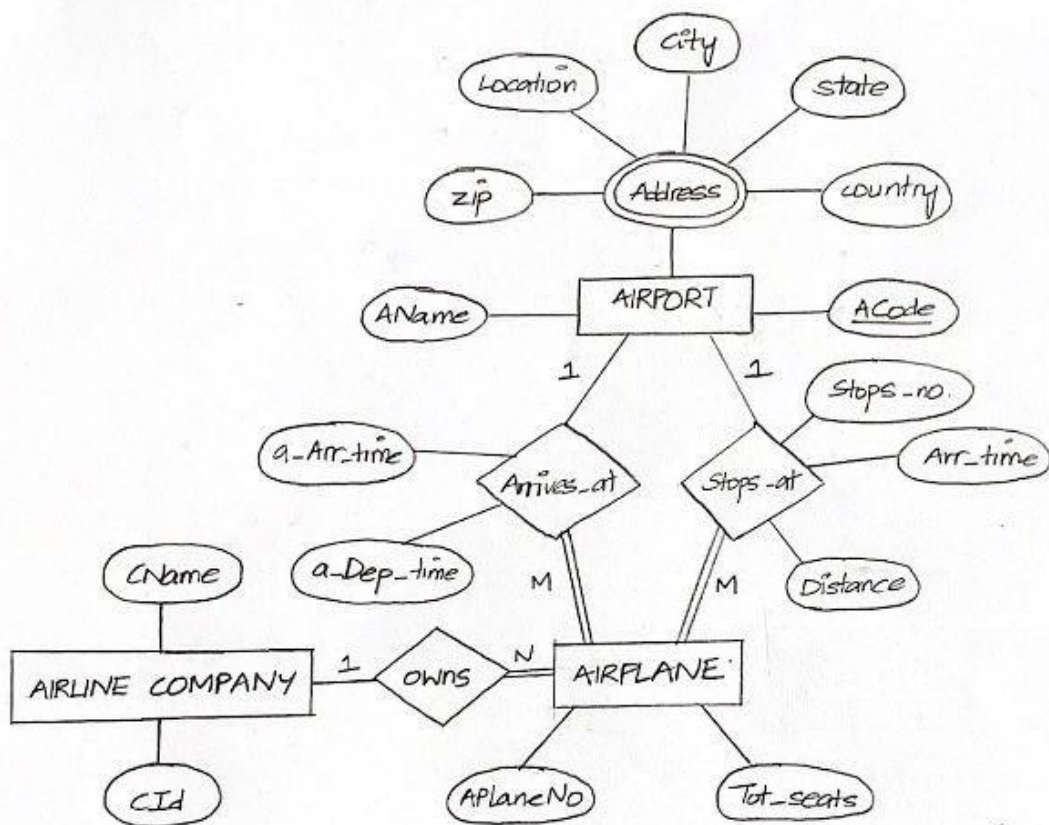
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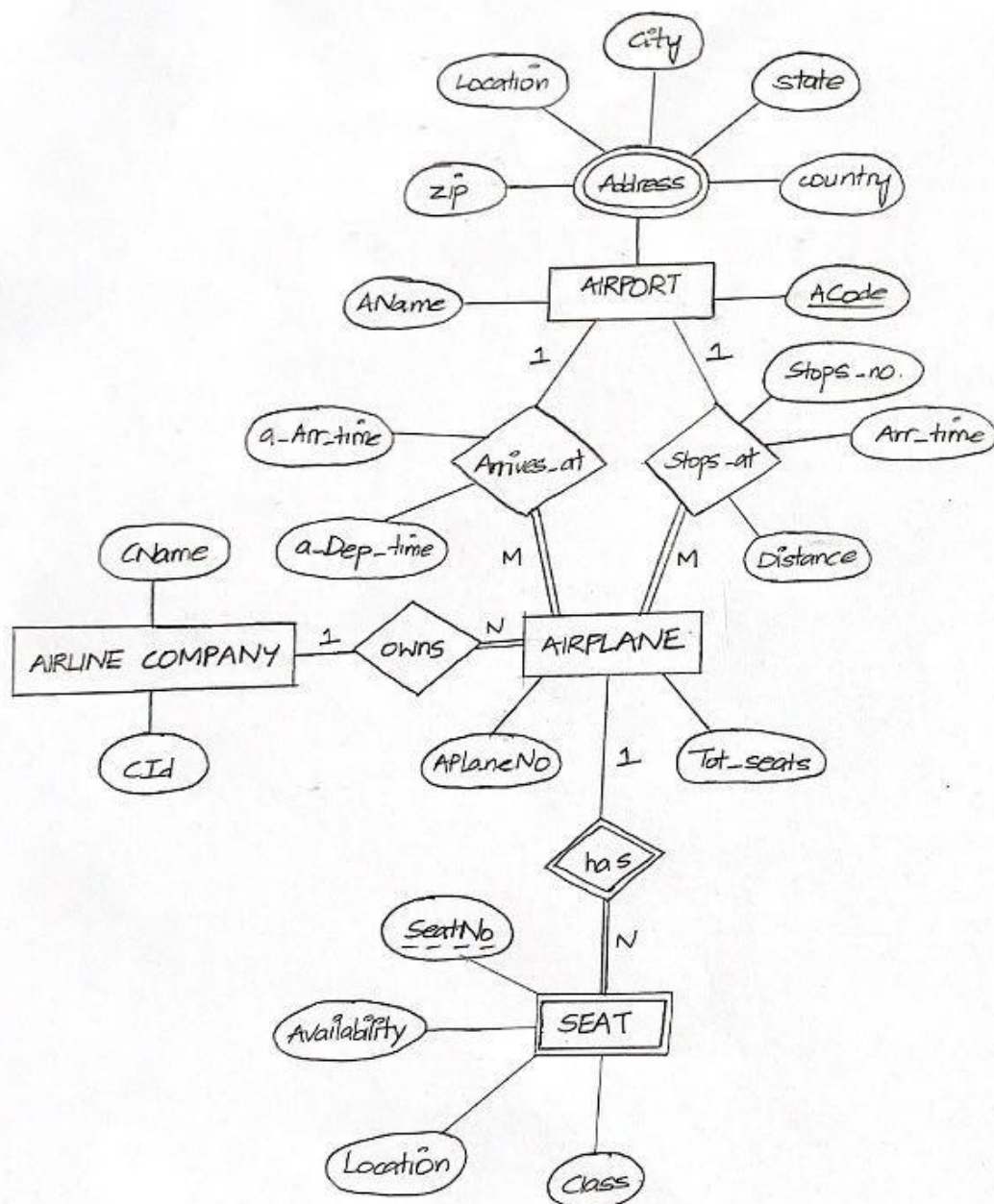
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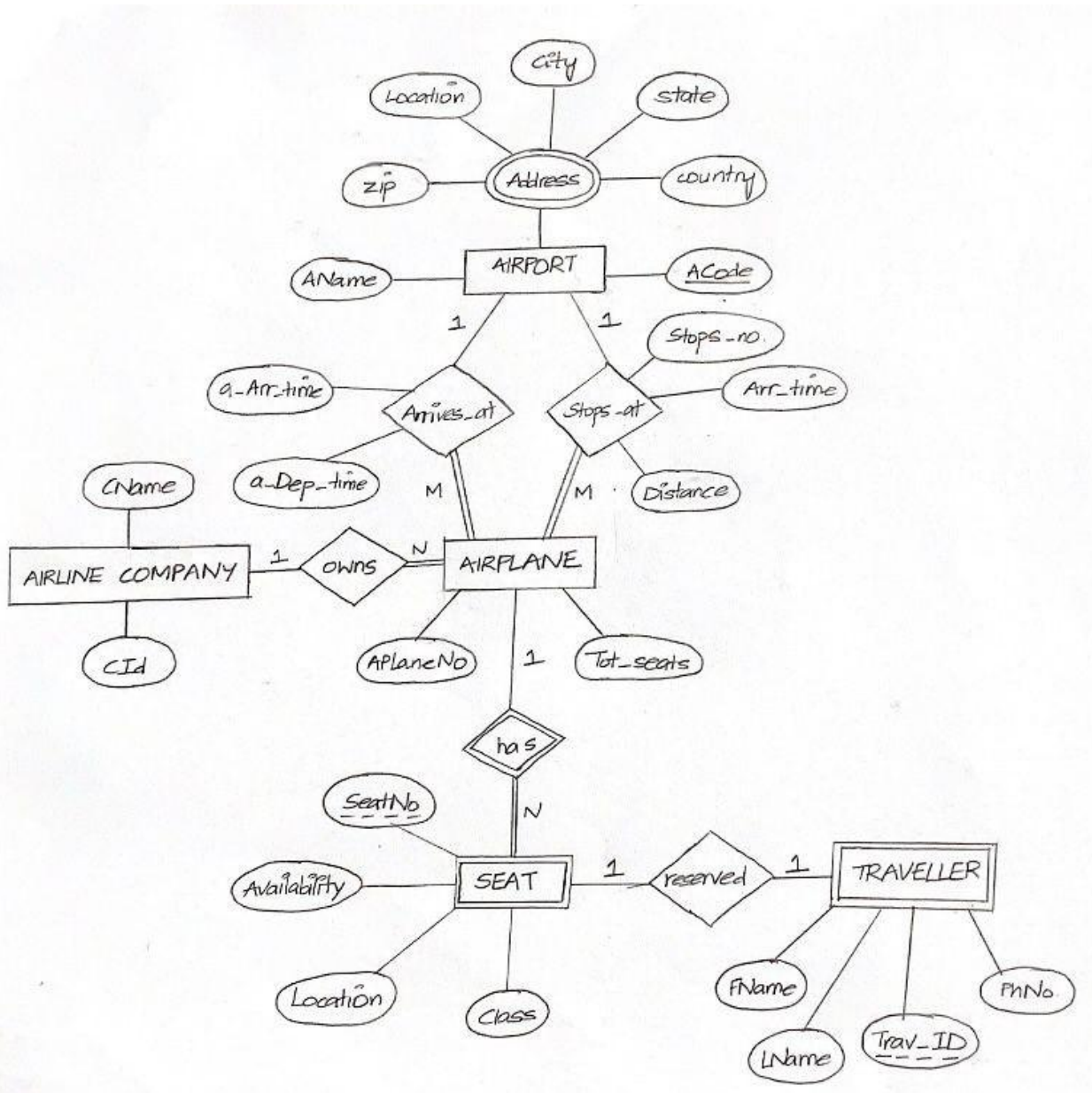
Every Flightrip costs some fare which can be broken down into tax, Tot\_amt, currency, discount and a transaction id. All flight trips must be facilitated by aeroplanes and all aeroplanes in the database must undertake flight trips.

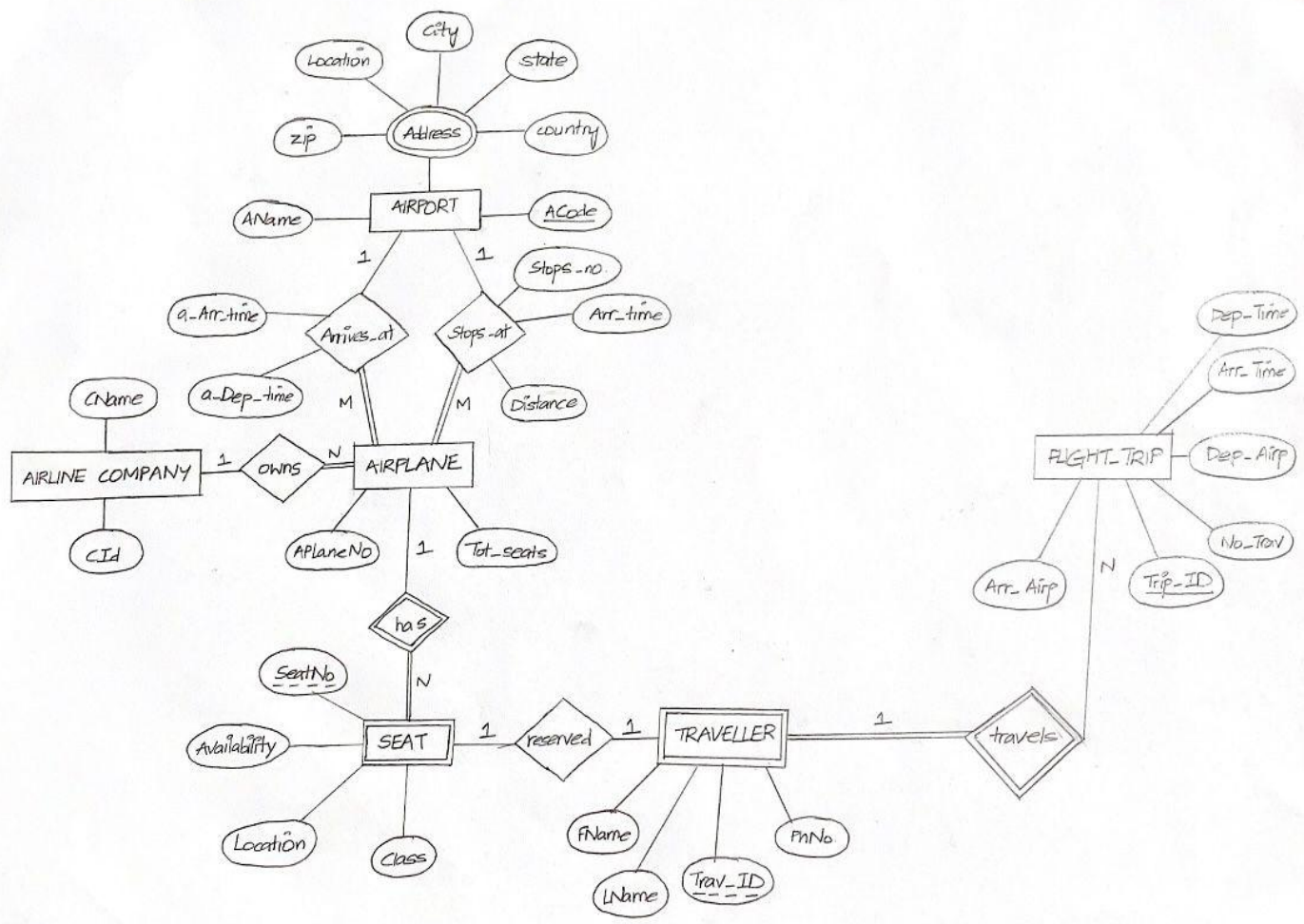
### **ER DIAGRAM (HAND-DRAWN)**



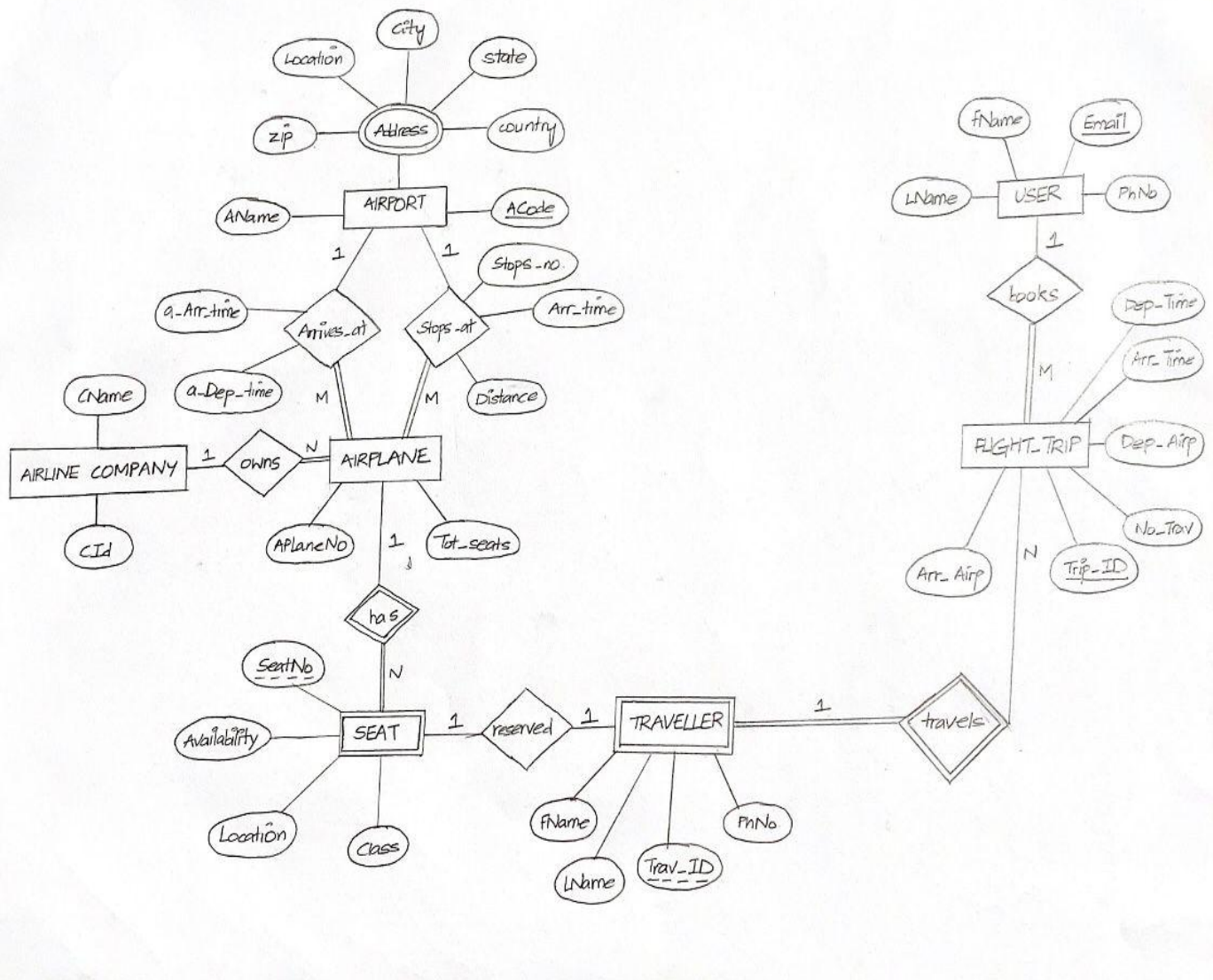






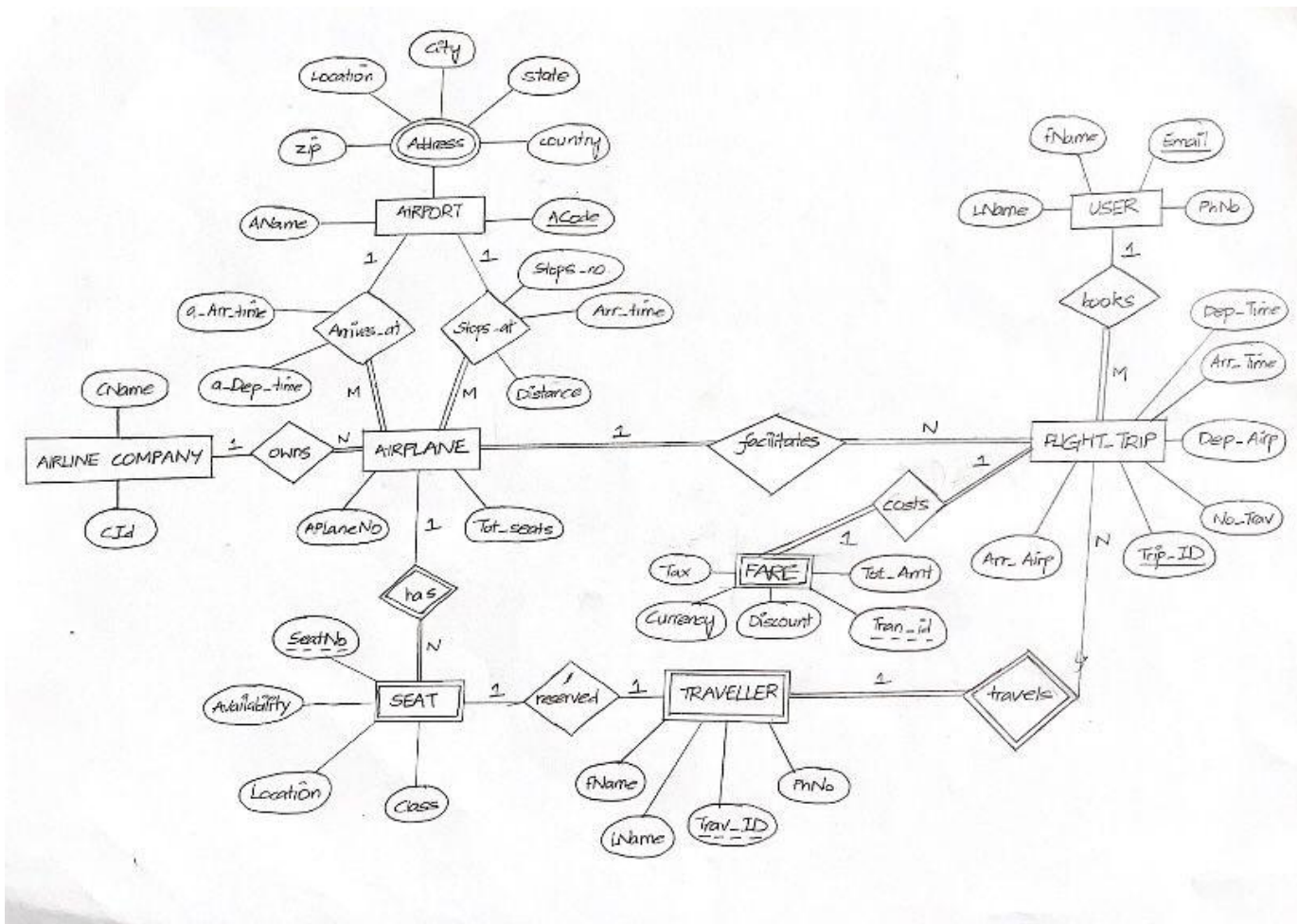












## **ER TOOL**

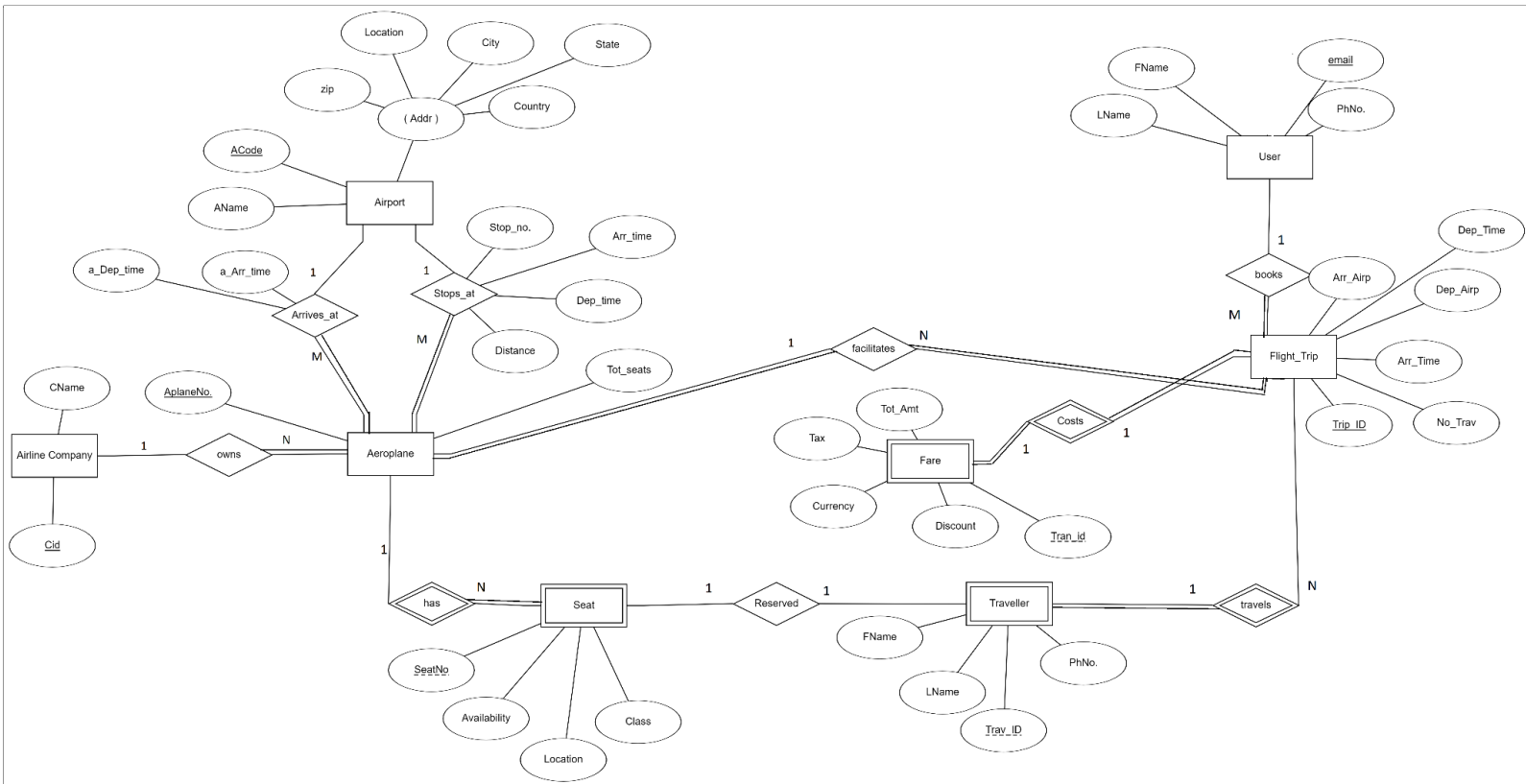
The ER tool we have used for our assignment is ERDplus. ERDPlus is a web-based database modeling tool that lets us create Entity Relationship Diagrams (ERDs). This enables us to draw standard ERD attributes such as entities, attributes and relationships. This supports drawing weak and regular entities, various types of attributes and all possible cardinality constraints of relationships.

## **Reference links**

- <https://www.geeksforgeeks.org/introduction-of-er-model/>
- [https://www.tutorialspoint.com/dbms/er\\_model\\_basic\\_concepts.htm](https://www.tutorialspoint.com/dbms/er_model_basic_concepts.htm)
- <https://drive.google.com/file/d/1I386ASN8qu7F84vfkFN5GpXc0oa5qDYs/view>
- <https://www.makemytrip.com/flights/flight-ticket-reservation.htm>

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## FINAL ER DIAGRAM



## Contributions

Rithika Pai

Final Report Write Up

2 hours

Rithika Shankar

Hand Drawn ER Diagram

4 hours

Ramya Prabhu

Choosing appropriate ER Tool and Final ER Diagram

4 hours