EER Diagram

Let's just use the email as the username.

Potential logical constraints:
After every reservation, a customer must review a property.
The "is close to" relationship must have a distance of < 50 miles.
Any review must be between 10-300 characters.
Customers can only book flights/properties that have enough capacity for them (ie, capacity > guests)

populated by admins on the system (not guests)

fname, lname, email, name, password

Account

d

Admin

Client

Phone number, average Rating

o

Rates

total income

Owner

M

N

is Rated by

M

Score

Score

Exp. date, credit card #, CVV, Credit Card, Current Location

Customer

N

N

total cost

cancellation fee

book

seats

M

N

offers

Airline

name, rating

flight #, Departure time, Arrival time, Date, cost per seat, capacity, seats left

flight

N

N

from

to

1

1

Airport

Address: street, city, state, zip

Airport ID, time zone, name, attractions

Owns

1

N

content, Score

review

N

M

end date, start date

reserve

total cost

cancellation fee, # guests

M

Property

description, name

street, city, state, zip, address

cost per night per person, capacity, Amenities

M

distance
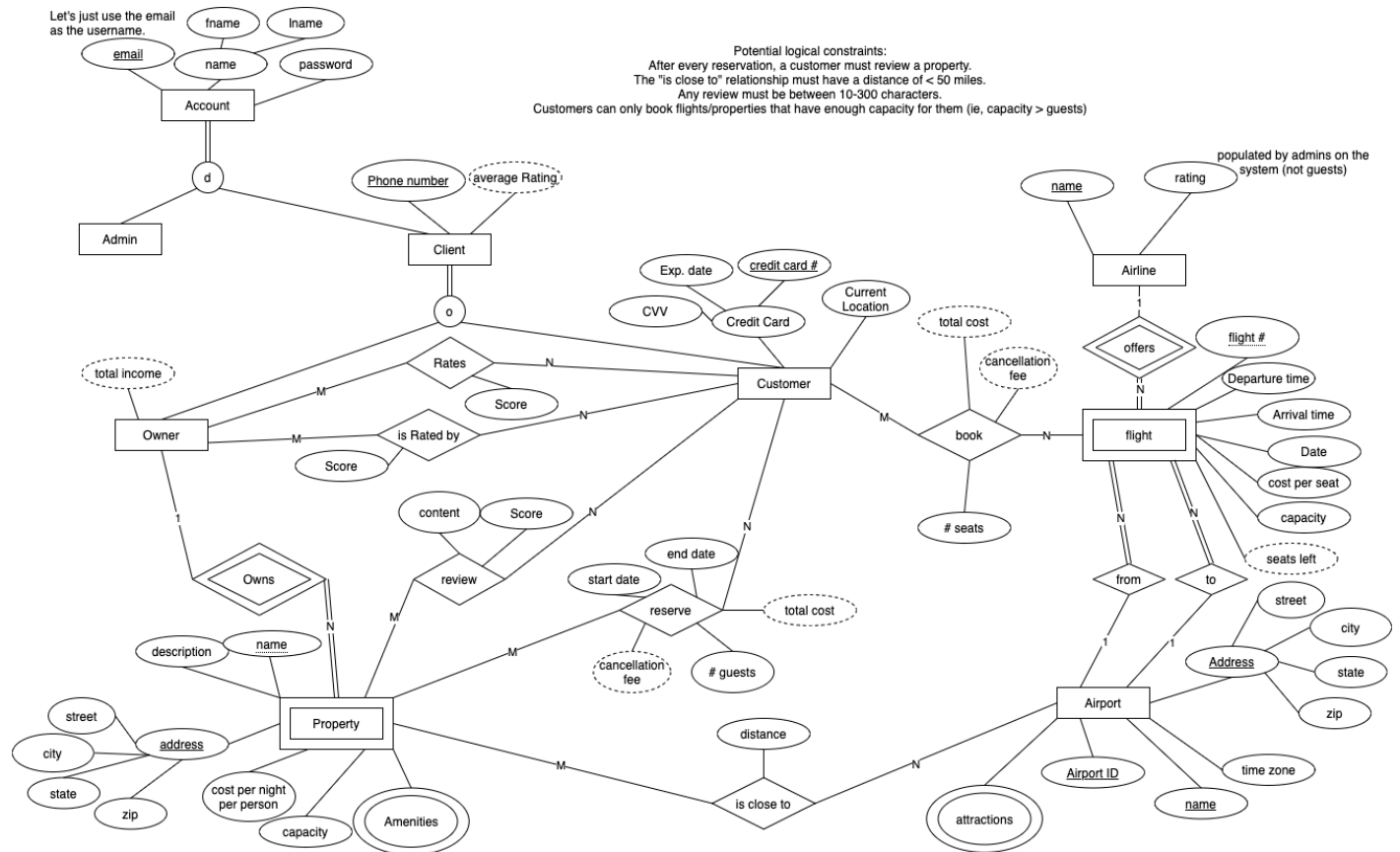
is close to

N

Final Relational Schema

account = (<u>email</u>, fname, lname, password)

admin = (<u>admin_email</u> [fk1])
fk1: admin_email -> **account** (email)

client = (<u>phone_number</u>, client_email [fk2])
fk2: client_email -> **account** (email)

owner = (<u>owner_email</u> [fk3])
fk3: owner_email -> **client** (client_email)

customer = (<u>credit_card_no</u>, exp_date, cvv, current_location, customer_email [fk4])
fk4: customer_email -> **client** (client_email)

airline = (<u>name</u>, rating)

airport = (<u>airport_id</u>, name, street, city, state, zip, time_zone)

property = (<u>name</u>, <u>owner_email</u> [fk5], street, city, state, zip, description, cost_per_night_per_person, capacity)
fk5: owner_email -> **owner** (owner_email)

flight = (<u>airline_name</u> [fk6], <u>flight_num</u>, departure_time, arrival_time, date, cost_per_seat, capacity, departure_airport_id, arrival_airport_id)

fk6: airline_name -> **airline** (name)

rates = (owner_email [fk7], customer_email [fk8], score)

fk7: owner_email -> **owner** (owner_email)

fk8: customer_email -> **customer** (customer_email)

is_rated_by = (owner_email [fk9], customer_email [fk10], score)

fk9: owner_email -> **owner** (owner_email)

fk10: customer_email -> **customer** (customer_email)

review = (property_name [fk11], customer_email [fk12], owner_email [fk13], content, score)

fk11: property_name -> **property** (name)

fk12: customer_email -> **customer** (customer_email)

fk13: owner_email -> **owner** (owner_email)

reserve = (property_name [fk14], customer_email [fk15], owner_email [fk16], start_date, end_date, num_guests)

fk14: property_name -> **property** (name)

fk15: customer_email -> **customer** (customer_email)

fk16: owner_email -> **owner** (owner_email)

is_close_to = (property_name [fk17], owner_email [fk18], airport_id [fk19], distance)

fk17: property_name -> **property** (name)

fk18: owner_email -> **owner** (owner_email)

fk19: airport_id -> **airport** (airport_id)

book = (airline_name [fk20], flight_num [fk21], customer_email [fk22], num_seats)

fk20: airline_name -> **flight** (airline_name)

fk21: flight_num -> **flight** (flight_num)

fk22: customer_email -> **customer** (customer_email)

property_amenity = (property_name [fk23], property_owner [fk24], amenity_name)

fk23: property_name -> **property** (name)

fk24: property_owner -> **property** (owner_email)

airport_attraction = (airport_id [fk25], attraction_name)

fk25: airport_id -> **airport** (airport_id)