

Relational Schema for the EERD

Account = (email, fname, lname, passwords)

Admins = (email [fk1])

fk1: email -> Account.email

Clients = (email [fk2], Phone number)

fk2: email -> Account.email

Owner = (email[fk3])

fk3: email -> Client.email

Customer = (email[fk4], credit card #, Exp.date, CVV, Current Location)

fk4: email -> Client.email

Airline = (airline_name, rating)

Airport = (AirportID, airport_name, time zone, street, city, state, zip)

Property = (email[fk5], name, description, street, city, state, zip, capacity, cost per night per person)

fk5: email -> Owner.email

flight = (name[fk6], flight_num, Departure time, Arrival time, travel_date, cost per seat, capacity, from_airport [fk7], to_airport [fk8])

fk6 = name -> Airline.name

fk7 = from_airport -> Airport.AirportID

fk8 = to_airport -> Airport.AirportID

Rates = (Owner_email[fk9], Customer_email[fk10], Score)

fk9 = Owner_email -> Owner.email

fk10 = Customer_email -> Customer.email

Is Rated by = (Owner_email[fk11], Customer_email[fk12], Score)

fk11 = Owner_email -> Owner.email

fk12 = Customer_email -> Customer.email

Review = (Customer_email[fk13], Owner_email, property_name [fk14], content, Score)

fk13 = Customer_email -> Customer.email

fk14 = Owner_email, property_name -> Property.email, Property.name

Reserve = (Customer_email[fk15], Owner_email, name [fk16], Start_date, end_date, num_guests)

fk15 = Customer_email -> Customer.email

fk16 = Owner_email, name -> Property.email, Property.name

Is_close_to = (AirportID[fk17], Owner_email, name [fk18], distance_in_miles)

fk17 = AirportID -> Airport.AirportID

fk18 = Owner_email, name -> Property.email, Property.name

book = (email[fk19], name, flight_num [fk20], num_seats)

fk19 = email -> Customer.email

fk20 = name, flight_num -> flight.name, flight.flight_num

Prop_amentities = (email, property_name[fk21], amenity_name)

fk21 = email, property_name -> Property.email , Property.name

attractions = (AirportID[fk22], attraction_name)

fk22 = AirportID -> Airport.AirportID

Unhandled Constraints

1. Derived attributes like average rating, total income, cancellation fee, total cost, seats left.
2. The email addresses will serve as usernames in the system.
3. Control the operations of Admins in the database.
4. Time of cancellation for property bookings and flights.
5. Population of Airline ratings by only Admins.
6. Customer can review a property only after reservation.
7. Customer can review only the property they stayed in.
8. Owner can rate only the customer who stayed in his/her property.
9. Customer can rate only the owner of the property they stayed in.
10. The system should be able to track the total income of an owner up to a given date - (current date is not stored).
11. Distance between Airport and closest Property is < 50 miles.
12. Minimum review length is 10 characters.
13. Bookings of Flight/Properties can only be done if Capacity > Number of Guests/seats to be booked.