Relational Schema

Account(email, fname, lname, password)

Admin(email[fk1])
fk1: email -> Account.email

Client(email[fk2], phone-number)
fk2: email -> Account.email

Owner(email[fk3])
fk3: email -> Client.email

Customer(email[fk4], credit-card-number, Expiration-date, CVV, Current-Location)
fk4: email -> Client.email

OwnerRatesCustomer(Owner-Email[fk5], Customer-Email[fk6], Score)
fk5: Owner-Email -> Owner.email
fk6: Customer-Email -> Customer.email

CustomerRatesOwner(Owner-Email[fk7], Customer-Email[fk8], Score)
fk7: Owner-Email -> Owner.email
fk8: Customer-Email -> Customer.email

Airline(name, rating)

Airport(Airport-ID, name, time-zone, street, city, state, zip)

Attractions(Airport-ID[fk9], Attraction-Name)
fk9: Airport-ID -> Airport.Airport-ID

Flight(Airline-Name[fk10], flight-number, departure-time, arrival-time, date, cost-per-seat, capacity, From-Airport-ID[fk11], To-Airport-ID[fk12])
fk10: Airline-Name -> Airline.name
fk11: From-Airport-ID -> Airport.Airport-ID
fk12: To-Airport-ID -> Airport.Airport-ID

Property(Owner-Email[fk13], name, description, cost-per-night-per-person, capacity, street, city, state, zip)
fk13: Owner-Email -> Owner.email

Amenities(Property-Owner, Property-Name[fk14], Amenity-Name)
fk14: Property-Owner, Property-Name -> Property.owner-email, Property.name

Review(Customer-Email[fk15], Property-Owner, Property-Name[fk16], content, score)
fk15: Customer -> Customer.email
fk16: Property-Owner-Email, Property-Name -> Property.Owner-Email, Property.name

Reserve(Customer-Email[fk17], Property-Owner, Property-Name[fk18], start-date, end-date, number-of-guests)
fk17: Customer-Email -> Customer.email
fk18: Property-Owner, Property-Name -> Property.Owner-Email, Property.name

Book(Customer-Email[fk19], Flight-Airline-Name, Flight-Number[fk20], number-of-seats)
fk19: Customer-Email -> Customer.email
fk20: Flight-Airline-Name, Flight-Number -> Flight.Airline-Name, Flight.flight-number

IsCloseTo(Airport-ID[fk21], Property-Owner, Property-Name[fk22], distance)
fk21: Airport-ID -> Airport.Airport-ID
fk22: Property-Owner, Property-Name -> Property.Owner-Email, Property.name

Unhandled Constraints:

- Ensure that all Accounts have exactly one reference from an Admin or a Client's foreign key
- Ensure that customers review a property only after their reservation
- Ensure that owners rate customers only after their reservation
- Ensure that customers rate owners only after staying in one of their properties
- Ensure the "is close to" relationship's distance column must have values less than 50
- Ensure all reviews are at least 10 characters (the maximum of 300 is already handled)
- Ensure that flights can only be booked if the number of seats left on the flight is less than or equal to the number of seats being booked
- Ensure that properties can only be booked if the number of guests does not exceed the capacity of the property in the duration of the stay
- Ensure that seats remaining on flights is adjusted when a flight reservation is cancelled
- Ensure that all ratings are in the range of 1 to 5
- Ensure flights are identified by strings of exactly (no less) 5 characters that are sequences of letters and numbers (no other characters are allowed)
- Ensure that customers are charged 20% of the original flight or property booking if they cancel at any time before their flights or stay begins, but the rest of their money will be returned
- Ensure that all the seats that a customer previously booked are canceled once the customer cancels a flight reservation
- Ensure that all airports have exactly (no less) 3-letter abbreviation