

1. Account = (username, fname, lname, password)
2. Admin = (username [fk1])
fk1: a_username → Account.username
3. Client = (username[fk2], phone number)
fk2: username → Account.username
4. Owner = (username[fk3])
fk3: username → client.username
5. Property = (username[fk4], name, description, street, city, state, zip, cost per night per person, capacity)
fk4: username → Owner.username, not null
6. Amenity = (username, name[fk8], amenity_name)
fk8: username → Property.username, name → property.name
7. Customer = (username [fk5], credit card #, Exp. date, CVV, Current Location)
fk5: email → Client.username
8. Airline = (name, rating)
9. Flight = (name [fk6], flight #, from[fk9], to [fk10], departure time, arrival time, date, cost per seat, capacity)
fk6: name → Airline.name, not null
fk9: from → Airport.AirportID, from is non-null
fk10: to → Airport.AirportID, to is non-null
10. Airport = (AirportID, name, time zone, Street, City, State, Zip)
11. Attraction = (AirportID[fk7], attraction_name)
fk7: AirportID → Airport.AirportID
12. Book = (username[fk11], name, flight #[fk12], # seats)
fk11: username → Customer.username
fk12 : name → Airline.name, flight # → Flight. flight #
13. Is Rated by = (customer_username[fk13], owner_username[fk14], Score)
fk13: customer_username → Customer.username
fk14: owner_email → Owner.username
14. Rate = ((customer_username[fk15], owner_username[fk16], Score))
fk15: customer_username → Customer.username
fk16: owner_username → Owner.username
15. Reserve = (customer_username[fk17], owner_username, name [fk18], start_date, end_date, # of guests)
fk17: customer_username → Customer.username
fk18: owner_username → Property.username, name → Property.name
16. Review = (customer_username[fk19], owner_username, name [fk20], content, score)
fk19: customer_email → Customer.email
fk20: owner_email → Property.username, name → Property.name
17. Is close to = (airportID[fk21], owner_username, name [fk22], distance)
fk21: airportID → Airport. airportID
fk22: owner_username → Property.username, name → Property.name

LIST OF UNHANDLED EXCEPTIONS:

1. All derived attributes have to be calculated from queries only: Average Rating, Cancellation Fee (2 attributes), Total Cost (2 attributes), Seats Left
2. After every reservation, a customer must review a property (timeframe cannot be enforced)
3. Guarantee that Admin users cannot be added to the system
4. Customers can only book flights that have enough capacity for them
5. Ratings attribute of Airline can only be populated by Admin (cannot enforce that level of security)
6. Convert flight times from military time into "AM" "PM" designation times (need a query)
7. Ensure distance in isCloseTo table is less than 50 miles
8. Ensure that all monetary transactions and listings are in only one currency for standardization (US dollars)
9. Make sure that the property being booked is relatively near to the airport the flight is arriving in
10. Flight seats of customers who pay a cancellation fee are automatically cancelled
11. It might be beneficial to check the credit card expiration date with the current date to validate if the card is valid today