**Person** = (personID, fname, lname, location[fk]

fk: location → Location.locID

**Pilot** = (taxID, personID[fk], experience, flightID[fk]

fk: personID → Person.personID

fk: flightID → Flight.flightID

**Passenger** = (personID[fk] , miles,

fk: personID → Person.personID

**License** = (license, taxID, personID[fk]

fk: taxID → Pilot.taxID

fk: personID → Pilot.personID

**Vacation** = (destination, sequence, personID[fk]

fk: personID → Person.personID

**Airport** = (airportID, name, city, state, country, travelers, location[fk]

fk: location → Location.locID

**Leg** = (legID, distance, start\_ airport [fk], end\_airport[fk]

fk: start\_airport → Airport.airportID

fk: end\_airport → Airport.airportID

**Location** = (locID, airplaneID[fk], airportID[fk])

fk: airplaneID → Airplane.tail\_num, Airplane.airlineID

fk: airportID → Airport.airportID

**Route** = (routeID, legID[fk]

fk: legID → Leg.legID

**Flight** =(flightID, cost, routeID[fk], airplane[fk])

fk: routeID → Route.routeID

fk: airplane → Airplane.tail\_num

**Airline** = (airlineID, revenue

**Airplane** = (tail\_num, airlineID[fk], speed, seat\_cap, location[fk]

fk: location → Location.locID

fk: airlineID → Airline.airlineID

**Prop** = (airplaneID[fk], props, skids

**Jet** = (airplaneID[fk], engines

fk: airplaneID → Airplane.tail\_num, Airplane.airlineID

fk: airplaneID → Airplane.tail\_num, Airplane.airlineID

**Supports** = (flight[fk], airplaneID[fk], progress, status, next\_time)

fk: airplaneID → Airplane.tail\_num, Airplane.airlineID

**Contains** = (leg[fk], route[fk], sequence\_order)

fk: leg → Leg.legID

fk: route → Route.routeID

**Questions for Moss / Annabel:**

* Can there by multiple degrees of separation for foreign key references?
* Can one foreign key point reference a tuple? (i.e., airplaneID in **Supports**)
* Can a route do the same leg multiple times?
* What is the difference between a unique and primary key
* Can a unique key have null values?
* Route table - derived attribute derived from different table
* Airlines own one or more airplanes that can be used to accomplish these tasks
  + Why is the owns relationship not mandatory on the airlines side?

**Constraints:**

* must be able to manage fname and name that have up to 100 characters
* Only first name required