

## RELATIONAL SCHEMA – Team 45

airline = (airlineID, revenue)

airplane = (airline\_ID [fk1], tail\_num, seat\_cap, speed, plane\_type, skids, props, jets, loc\_ID [fk2])

fk1: airline\_ID -> airline.airlineID

fk2: loc\_ID -> location.locID

location = (locID)

airport = (airportID, name, city, state, country, airport\_location [fk3])

fk3: airport\_location -> location.locID

route = (routeID)

leg = (legID, distance, origin [fk4], destination [fk5])

fk4: depart -> airport.airportID

fk5: arrive -> airport.airportID

flight = (flightID, routeID [fk6], support\_airline, support\_tail [fk7], progress, airplane\_status, next\_time, cost)

fk6: routeID -> route.routeID

fk7: (support\_airline, support\_tail) -> (airplane.airline\_ID, airplane.tail\_num)

person = (personID, first\_name, last\_name, locationID [fk8])

fk8: locationID -> location.locID

pilot = (person\_ID [fk9], taxID, experience, flying\_airline, flying\_tail [fk10])

fk9: person\_ID -> person.personID

fk10: (flying\_airline, flying\_tail) -> (airplane.airline\_ID, airplane.tail\_num)

\*taxID is a unique key

license = (pilotID [fk11], license\_type)

fk11: pilotID -> pilot.personID

passenger = (person\_ID [fk12], miles, funds)

fk12: person\_ID -> person.personID

contain = (routeID [fk13], legID [fk14], sequence)

fk13: route\_ID -> route.routeID

fk14: leg\_ID -> leg.legID

vacation = (passengerID [fk15], destination, sequence)

**fk15: passengerID -> passenger.personID**

**Unhandled Constraints:**

1. Ensure that each airline has at least one airplane associated with it.
2. Ensure that each leg has at least one airport associated with it.
3. Ensure that each route has at least one leg associated with it.
4. Ensure that each flight is associated with a valid route.
5. Ensure that each flight is associated with a valid airline.
6. Ensure that each flight is associated with a valid airplane.
7. Ensure that each person is associated with a valid location.
8. Ensure that each pilot is associated with a valid person.
9. Ensure that each passenger is associated with a valid person.
10. Ensure that each pilot in license is associated with a valid pilot.
11. Ensure that each passenger in vacation is associated with a valid passenger.