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**TERM PROJECT - Airport Database : Part 2**

**ENGLISH DESCRIPTIONS:**

* An airport is a place where flights arrive to and depart from.
* A flight crew member is a person hired by an airline to work on a flight.
* A non-flight crew member is a person hired by an airline to work at an airport.
* A pilot is a flight crew member, who operates the plane.
* A navigator is a person hired to guide the flight on its route.
* A flight assistant is a flight crew member, who serves the passengers on the plane.
* A flight crew is a group of flight crew members who comprise the entire staff for a specific flight.
* An airline is a company which manages flights.
* A service area is a region which has multiple airports.
* A plane is a vehicle that transports people in the air.
* A flight is a trip from one place to another in an airplane.
* An incidence report is a statement about something that happened on a flight.
* A route is a path from one airport to another

**ASSOCIATIONS**

* Airport <-> Airport Employee
  + One airport employs zero to many airport employees
  + One airport employee is employed by one and only one airport
* Airport <-> Service Area
  + An airport has one and only one service area
  + A service area has one to many airports
* Airline <-> Flight
  + An airline has zero to many flights
  + A flight belongs to one and only one airline
* Airport <-> Route
  + A route goes from one and only one airport
  + An airport has one to many routes
* Airport <-> Route
  + A route arrives to one and only one airport
  + An airport has one to many routes
* Route <-> Flight
  + A Route has zero to many flights
  + A flight has one and only one route
* Flight Crew <-> Flight Attendant
  + A flight crew has two to five flight attendants
  + A flight attendant is part of one and only one flight crew
* Flight Crew <-> Pilot
  + A flight crew has two pilots
  + A pilot belongs to one and only one flight crew
* Flight Crew <-> Navigator
  + A flight crew has one navigator
  + A navigator belongs to one and only one flight crew
* Flight <-> Plane
  + A flight uses one and only one plane
  + A plane is used on zero to many flights
* Flight <-> Incident Report
  + A Flight has zero to many incident reports
  + An incident report concerns one and only one flight
* Incident Report <-> Crew Member
  + A crew member files zero to many incident reports
  + An incident report is filed by one and only one crew member
* Flight <-> Flight Crew
  + A flight is worked on by one and only one crew
  + A flight crew works on one to many flights
* Crew Member <-> Flight crew
  + A crew member is part of one and only one flight crew
  + A flight crew has zero to many crew members

**DDL & DML**

DROP DATABASE mifly\_test;

CREATE DATABASE mifly\_test;

use mifly\_test;

CREATE TABLE serviceArea (

area varchar(20) NOT NULL,

CONSTRAINT pk\_service\_area PRIMARY KEY (area)

);

INSERT INTO serviceArea (area) VALUES ('Los Angeles');

INSERT INTO serviceArea (area) VALUES ('Orlando');

INSERT INTO serviceArea (area) VALUES ('New York');

INSERT INTO serviceArea (area) VALUES ('Long Beach');

INSERT INTO serviceArea (area) VALUES ('Chicago');

CREATE TABLE plane (

tailNum varchar(10) NOT NULL,

modelID varchar(20),

capacity INTEGER,

manufacturer varchar(15),

name varchar(20),

CONSTRAINT pk\_plane PRIMARY KEY (tailNum)

);

INSERT INTO plane(tailNum, modelID , capacity, manufacturer, name) VALUES ('T1000', 'Boeing 777

',314, 'Boeing','Blue Bird');

INSERT INTO plane(tailNum, modelID , capacity, manufacturer, name) VALUES ('T2000', 'Boeing 787

',242, 'Boeing','Green Bird');

INSERT INTO plane(tailNum, modelID , capacity, manufacturer, name) VALUES ('T3000', 'Airbus A350

',500, 'Airbus','Yellow Bird');

INSERT INTO plane(tailNum, modelID , capacity, manufacturer, name) VALUES ('T4000', 'Tupolev 154

',256, 'Tupolev','Red Bird');

INSERT INTO plane(tailNum, modelID , capacity, manufacturer, name) VALUES ('T5000', 'Boeing 777

',262, 'Boeing','White Bird');

CREATE TABLE airport(

aID CHAR(3) NOT NULL,

airportName varchar(30) NOT NULL,

alocation varchar(20) NOT NULL,

area varchar(20) NOT NULL,

CONSTRAINT pk\_airport PRIMARY KEY (aID),

CONSTRAINT area\_fk

FOREIGN KEY (area) REFERENCES serviceArea (area)

);

INSERT INTO airport (aID, airportName, alocation, area) VALUES ('LAX', 'Los Angeles International','Los Angeles, CA','Los Angeles');

INSERT INTO airport (aID, airportName, alocation, area) VALUES ('LGB', 'Long Beach','Long Beach, CA','Long Beach');

INSERT INTO airport (aID, airportName, alocation, area) VALUES ('MCO', 'Orlando International','Los Angeles, CA','Orlando');

INSERT INTO airport (aID, airportName, alocation, area) VALUES ('JFK', 'John F. Kennedy International','New York, NY','New York');

INSERT INTO airport (aID, airportName, alocation, area) VALUES ('ORD', 'Chicago O\'Hare','Chicago, IL','Chicago');

CREATE TABLE route (

rID char(7) NOT NULL,

departureTime TIME,

arrivalTime TIME,

departureID CHAR(3) NOT NULL,

arrivalID CHAR(3) NOT NULL,

CONSTRAINT pk\_route PRIMARY KEY (rID),

CONSTRAINT route\_departure\_fk

FOREIGN KEY (departureID) REFERENCES airport (aID),

CONSTRAINT route\_arrival\_fk

FOREIGN KEY (arrivalID) REFERENCES airport (aID)

);

INSERT INTO route (rID, departureTime,arrivalTime, departureID, arrivalID) VALUES ('LGB\_MCO', '6:30:00', '14:30:00', 'LGB', 'MCO');

INSERT INTO route (rID, departureTime,arrivalTime, departureID, arrivalID) VALUES ('LGB\_ORD','10:00:00', '18:30:00', 'LGB', 'ORD');

INSERT INTO route (rID, departureTime,arrivalTime, departureID, arrivalID) VALUES ('ORD\_LGB', '3:00:00', '18:30:00', 'ORD', 'LGB');

INSERT INTO route (rID, departureTime,arrivalTime, departureID, arrivalID) VALUES ('LAX\_JFK', '8:15:00', '13:30:00', 'LAX', 'JFK');

INSERT INTO route (rID, departureTime,arrivalTime, departureID, arrivalID) VALUES ('JFK\_ORD', '10:00:00', '18:30:00', 'JFK', 'ORD');

INSERT INTO route (rID, departureTime,arrivalTime, departureID, arrivalID) VALUES ('ORD\_JFK', '10:00:00', '18:30:00', 'ORD', 'JFK');

INSERT INTO route (rID, departureTime,arrivalTime, departureID, arrivalID) VALUES ('JFK\_LAX', '8:15:00', '13:30:00', 'JFK', 'LAX');

INSERT INTO route (rID, departureTime,arrivalTime, departureID, arrivalID) VALUES ('LGB\_JFK', '8:15:00', '13:30:00', 'LGB', 'JFK');

CREATE TABLE airline(

arID INTEGER NOT NULL AUTO\_INCREMENT,

aName varchar(20),

aHeadquarters varchar(20),

CONSTRAINT pk\_airline PRIMARY KEY (arID)

);

INSERT INTO airline (arID, aName, aHeadquarters) VALUES (1, 'Southwest', 'Dallas, TX');

INSERT INTO airline (arID, aName, aHeadquarters) VALUES (2, 'Alaska Airlines' , 'Seattle, WA');

INSERT INTO airline (arID, aName, aHeadquarters) VALUES (3, 'Jet Blue', 'Long Island, NY');

INSERT INTO airline (arID, aName, aHeadquarters) VALUES (4, 'American Airlines', 'Fort Worth, TX');

CREATE TABLE employee(

eID INTEGER NOT NULL,

eFirstName varchar(20),

eLastName varchar(20),

CONSTRAINT pk\_employee PRIMARY KEY (eID)

);

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (101, 'Joe', 'Johnson');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (102, 'Becky', 'Wilson');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (103, 'Albert', 'Barnes');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (104, 'Edward', 'O\'Malley');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (105, 'Thomas', 'Sullivan');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (106, 'Alice', 'Gorham');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (107, 'Madison', 'Fillmore');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (108, 'Frederick', 'Whitney');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (109, 'Phil', 'Soma');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (110, 'Owen', 'Potter');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (111, 'David', 'Myers');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (112, 'Lola', 'Smith');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (113, 'Hector', 'Bran');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (114, 'Derek', 'Wade');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (115, 'LeBron', 'James');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (116, 'Amy', 'Yonemoto');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (117, 'Emily', 'Nguyen');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (118, 'Shalyn', 'Patel');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (119, 'Anthony', 'Nguyen');

INSERT INTO employee (eID, eFirstName, eLastName) VALUES (120, 'Robert', 'Carr');

CREATE TABLE employee\_titles(

eID INTEGER NOT NULL,

eTitle VARCHAR(20) NOT NULL,

CONSTRAINT pk\_employee\_titles PRIMARY KEY (eID, eTitle),

CONSTRAINT title\_employee\_fk

FOREIGN KEY (eID) REFERENCES employee(eID)

);

INSERT INTO employee\_titles (eID, eTitle) VALUES (101, 'Pilot');

INSERT INTO employee\_titles (eID, eTitle) VALUES (103, 'Pilot');

INSERT INTO employee\_titles (eID, eTitle) VALUES (112, 'Pilot');

INSERT INTO employee\_titles (eID, eTitle) VALUES (113, 'Pilot');

INSERT INTO employee\_titles (eID, eTitle) VALUES (102, 'Navigator');

INSERT INTO employee\_titles (eID, eTitle) VALUES (104, 'Navigator');

INSERT INTO employee\_titles (eID, eTitle) VALUES (105, 'Flight Attendant');

INSERT INTO employee\_titles (eID, eTitle) VALUES (106, 'Flight Attendant');

INSERT INTO employee\_titles (eID, eTitle) VALUES (107, 'Flight Attendant');

INSERT INTO employee\_titles (eID, eTitle) VALUES (108, 'Flight Attendant');

INSERT INTO employee\_titles (eID, eTitle) VALUES (109, 'Flight Attendant');

INSERT INTO employee\_titles (eID, eTitle) VALUES (110, 'Flight Attendant');

INSERT INTO employee\_titles (eID, eTitle) VALUES (111, 'Flight Attendant');

INSERT INTO employee\_titles (eID, eTitle) VALUES (112, 'Flight Attendant');

INSERT INTO employee\_titles (eID, eTitle) VALUES (113, 'Flight Attendant');

INSERT INTO employee\_titles (eID, eTitle) VALUES (114, 'Flight Attendant');

INSERT INTO employee\_titles (eID, eTitle) VALUES (115, 'Flight Attendant');

CREATE TABLE flight\_crew(

fcID INTEGER NOT NULL AUTO\_INCREMENT,

CONSTRAINT pk\_flight\_crew PRIMARY KEY (fcID),

);

INSERT INTO flight\_crew VALUES (301);

INSERT INTO flight\_crew VALUES (302);

INSERT INTO flight\_crew VALUES (303);

INSERT INTO flight\_crew VALUES (304);

INSERT INTO flight\_crew VALUES (305);

INSERT INTO flight\_crew VALUES (306);

INSERT INTO flight\_crew VALUES (307);

INSERT INTO flight\_crew VALUES (308);

INSERT INTO flight\_crew VALUES (309);

INSERT INTO flight\_crew VALUES (310,);

INSERT INTO flight\_crew VALUES (311);

INSERT INTO flight\_crew VALUES (312);

INSERT INTO flight\_crew VALUES (313);

INSERT INTO flight\_crew VALUES (314);

INSERT INTO flight\_crew VALUES (315);

CREATE TABLE flight (

flightID INTEGER NOT NULL AUTO\_INCREMENT,

flightDate Date,

flightCharge Boolean,

tailNum varchar(10) NOT NULL,

arID INTEGER NOT NULL,

rID char(7),

fcID INTEGER NOT NULL,

CONSTRAINT pk\_flight PRIMARY KEY (flightID),

CONSTRAINT flight\_plane\_fk

FOREIGN KEY (tailNum) REFERENCES plane(tailNum),

CONSTRAINT flight\_airline\_fk

FOREIGN KEY (arID) REFERENCES airline(arID),

CONSTRAINT flight\_route\_fk

FOREIGN KEY (rID) REFERENCES route(rID),

CONSTRAINT flight\_crew\_fk

FOREIGN KEY (fcID) REFERENCES flight\_crew(fcID)

);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(1, '2014-01-01', TRUE, 'T1000', 1, 'LGB\_MCO', 301);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(2, '2014-02-02', TRUE, 'T2000', 2, 'LGB\_MCO', 301);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(3, '2014-03-03', FALSE, 'T3000', 3, 'LGB\_MCO', 301);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(4, '2014-04-04', FALSE, 'T4000', 4, 'ORD\_LGB', 302);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(5, '2014-05-05', TRUE, 'T5000', 1, 'ORD\_LGB', 302);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(6, '2014-05-05', TRUE, 'T5000', 1, 'ORD\_LGB', 302);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(7, '2014-05-05', TRUE, 'T5000', 1, 'LAX\_JFK', 303);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(8, '2014-05-05', TRUE, 'T5000', 1, 'LAX\_JFK', 304);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(9, '2014-05-05', TRUE, 'T5000', 1, 'LAX\_JFK', 305);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(10, '2014-05-05', TRUE, 'T5000', 1, 'JFK\_ORD', 306);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(11, '2014-05-05', TRUE, 'T5000', 1, 'JFK\_ORD', 306);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(12, '2014-05-05', TRUE, 'T5000', 1, 'ORD\_JFK', 307);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(13, '2014-05-05', TRUE, 'T5000', 1, 'JFK\_LAX', 308);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(14, '2014-05-05', TRUE, 'T5000', 2, 'JFK\_LAX', 309);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(15, '2014-05-05', TRUE, 'T5000', 2, 'LGB\_JFK', 310);

INSERT INTO flight (flightID, flightDate, flightCharge, tailNum, arID, rID, fcID) VALUES(16, '2014-05-05', TRUE, 'T5000', 2, 'LGB\_JFK',311);

CREATE TABLE crew\_member(

cmID INTEGER NOT NULL auto\_increment,

eID INTEGER NOT NULL,

cmFAA VARCHAR(20) NOT NULL,

fcID INTEGER NOT NULL,

CONSTRAINT pk\_crew\_member PRIMARY KEY (cmID),

CONSTRAINT cm\_employee\_fk

FOREIGN KEY (eID) REFERENCES employee(eID),

CONSTRAINT cm\_fc\_fk

FOREIGN KEY (fcID) REFERENCES flight\_crew(fcID)

);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (201, 'N-00001', 101, 301);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (202, 'N-00002', 102, 301);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (203, 'N-00003', 103, 301);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (204, 'N-00004', 104, 302);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (205, 'N-00005', 105, 301);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (206, 'N-00006', 106, 301);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (207, 'N-00007', 107, 301);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (208, 'N-00008', 108, 301);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (209, 'N-00009', 109, 302);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (210, 'N-00010', 110, 302);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (211, 'N-00011', 111, 302);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (212, 'N-00012', 112, 302);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (213, 'N-00013', 113, 302);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (214, 'N-00014', 114, 302);

INSERT INTO crew\_member (cmID, cmFAA, eID, fcID) VALUES (215, 'N-00015', 115, 302);

CREATE TABLE airport\_employee(

eID INTEGER NOT NULL,

aID CHAR(3) NOT NULL,

CONSTRAINT pk\_airport\_employee PRIMARY KEY (eID),

CONSTRAINT ae\_airport\_fk

FOREIGN KEY (aID) REFERENCES airport(aID)

);

INSERT INTO airport\_employee (eID, aID) VALUES (116, 'LGB');

INSERT INTO airport\_employee (eID, aID) VALUES (117, 'LAX');

INSERT INTO airport\_employee (eID, aID) VALUES (118, 'ORD');

INSERT INTO airport\_employee (eID, aID) VALUES (119, 'JFK');

INSERT INTO airport\_employee (eID, aID) VALUES (120, 'MCO');

CREATE TABLE incident\_report (

irID INTEGER NOT NULL,

reporter INTEGER NOT NULL,

involvedEmployee INTEGER NOT NULL,

flightID INTEGER NOT NULL,

reportType ENUM('complaint', 'praise', 'suggestion', 'other') NOT NULL,

report varchar(60) NOT NULL,

reportDate Date,

CONSTRAINT pk\_incident\_report PRIMARY KEY (irID),

CONSTRAINT ir\_reporter\_fk

FOREIGN KEY (reporter) REFERENCES crew\_member(cmID),

CONSTRAINT ir\_involved\_fk

FOREIGN KEY (involvedEmployee) REFERENCES crew\_member(cmID),

CONSTRAINT ir\_flight\_fk

FOREIGN KEY (flightID) REFERENCES flight(flightID)

);

INSERT INTO incident\_report (irID, reporter, involvedEmployee, flightID, reportType, report, reportDate)

VALUES (0001, 201, 202, 1, 'complaint', 'The crew member was conducting themselves unprofessionally', '2014-12-01');

INSERT INTO incident\_report (irID, reporter, involvedEmployee, flightID, reportType, report, reportDate)

VALUES (0002, 203, 205, 2, 'praise', 'The crew member was conducting themselves like a boss', '2014-12-02');

Queries

1.     The list of all airlines for a given airport.

SELECT DISTINCT airline.aName FROM airline

JOIN flight

JOIN route

JOIN airport ON airport.aID = route.departureID

WHERE airport.airportName = 'Long Beach';

2.     The list of all flights for a given airline. Sorted by:

a.     starting location

SELECT flight.flightID, flight.flightDate, route.departureTime, route.arrivalTime, airport.airportName “Starting Airport” FROM flight

JOIN route ON flight.rID = route.rID

JOIN airport ON route.departureID = airport.aID

WHERE arID = (SELECT arID FROM airline

WHERE aName = 'Southwest' limit 1)

ORDER BY airport.airportName;

;

b.     destination

SELECT flight.flightID, flight.flightDate, route.departureTime, route.arrivalTime, airport.airportName “Ending Airport” FROM flight

JOIN route ON flight.rID = route.rID

JOIN airport ON route.arrivalID = airport.aID

WHERE arID = (SELECT arID FROM airline

WHERE aName = 'Southwest' limit 1)

ORDER BY airport.airportName;

c.      longest flight

SELECT \* FROM flight

JOIN route

WHERE arID = (SELECT arID FROM airline

WHERE aName = 'Southwest' limit 1)

ORDER BY (route.arrivalTime - route.departureTime) DESC;

d.     shortest flight.

SELECT \* FROM flight

JOIN route

WHERE arID = (SELECT arID FROM airline

WHERE aName = 'Southwest' limit 1)

ORDER BY (route.arrivalTime - route.departureTime);

3.     Flights that charge for extras (water, etc.)

SELECT \* FROM flight

WHERE flight.flightCharge = true;

\*\*assuming charge variable is a boolean

4.     The crew roster for each flight for each airline

SELECT DISTINCT eFirstName, eLastName, eTitle, flight.fcID, flightID, aName

FROM employee

JOIN employee\_titles ON

employee.eID = employee\_titles.eID

JOIN crew\_member ON

employee.eID = crew\_member.eID

JOIN flight ON

flight.fcID = crew\_member.fcID

JOIN airline ON

flight.arID = airline.arID

ORDER BY flightID, eTitle;

5.     The trips that are available if you do make one stop over

SELECT DISTINCT r.departureID 'Departure With Layover' , r2.arrivalID 'Arrival With Layover'

FROM route r

JOIN route r2 ON r.arrivalID = r2.departureID;

6.     Management reports of mifly information:

a.     arriving flights per city

SELECT a.alocation, f.flightID FROM airport a

JOIN route r ON r.arrivalID = a.aID

JOIN flight f ON f.rID = r.rID

ORDER BY a.airportName, f.flightID;

b.     departing flights per city

SELECT a.alocation, f.flightID FROM airport a

JOIN route r ON r.departureID = a.aID

JOIN flight f ON f.rID = r.rID

ORDER BY a.airportName, f.flightID;

c.      list of airlines in each service category

SELECT \* FROM airline

WHERE area=<Selected area>

or SELECT \* FROM airline

ORDER BY area

d.     crews that fly multiple flights in a single day

SELECT flightDate,fcID FROM flight

GROUP BY flightDate,fcID

HAVING COUNT(flightDate)>1 AND COUNT(fcID)>1

7.     A list of all incident reports by flight

SELECT \* FROM incident\_report

ORDER BY flightID

8.     Individually designed queries (one per team member)

a. Elena: all plane models used by specific airline

SELECT DISTINCT modelID FROM plane

JOIN flight ON plane.tailNum = flight.tailNum

JOIN airline ON flight.arID = airline.arID

WHERE aName = 'Alaska Airlines';

b. Emily: All routes leaving from JFK airport.ordered by departure time

SELECT \* FROM route

JOIN airport

WHERE aID = 'JFK'

ORDER BY departureTime;

c. Daniel: Give the average seats available for each airline’s flights

SELECT DISTINCT a.aName, SUM(p.capacity)/COUNT(p.tailNum) FROM airline a

JOIN flight f ON f.arID = a.arID

JOIN plane p ON p.tailNum = f.tailNum

GROUP BY a.aName;

1. Chris: Display the flights ordered by departure time for 2014-05-05

SELECT \* FROM flight  
JOIN route  
WHERE flight.flightDate = ‘2014-05-05’  
ORDER BY route.departureTime