AIRPORT MANAGEMENT DATABASE SYSTEM

Our database system is designed for airport management. It includes the following entities:

- City
- Airport
- Airline
- Plane
- Store
- Employee
- Flight
- Passenger
- Ticket

An airport is in a city.
City can have more than one airport.
There can be airports which have same name but located in different countries.

Airport has at least one store.
A store can be in only one airport.
Stores are identified by unique ids.
Stores can have different types which depend on their products or services.
A store belongs to a company.

There is at least one airline offices in airport.
Airline company has at least one plane.
Plane is owned by only one airline company.

A flight has only one plane.
Flight has status, departure, arrival, gate, type, date, source, destination, duration and unique id.
Flight status is to show if the plane is in air or landed.
Flight departure and arrival is represent time.
Flight gate is the place where the passengers will enter the plane.
Flight can have two different types, domestic and contour.
Flight source is the city where the plane will take off.
Flight destination is the city where the plane will arrive.
Scheduling of the flight is done by airlines.
Flight has many tickets.

Passengers are identified by first name, last name, age, gender, address, phone, passenger id and passport number.
Ticket has price, class, seat number, ticket id.

Ticket class can be business or economy.
Ticket id is a number that makes this ticket unique.
A ticket is booked by only one passenger, but passenger can book one or more tickets.
One ticket belongs one flight.

Employee has first name, last name, salary, gender, social security number, age, phone, address and job type.
Employee's job type can be airline, store or airport worker.
An employee can work for only one of airport, airline and store.
An employee can serve for a flight
Airport, store and airline, each have at least one employee.

Tables are reduced to:

City(cname, country),
Airport(apname, country, cname)
Airline(airline_id, airline_name, plane_id)
Plane(plane_id, model)
Store(store_id, company, location, type, airport_id)
Employee(SSN, firstName, lastName, age, gender, salary, phone, job_type,
address, place_of_work, airline_id) //airline or store
Flight(Flight_id, date_of_travel, type, status, destinatio`n,soure,arrival,departure,
gate,duration, plane_id, airline_id)
Passenger(Passport_no, PID, phone, dress,gender,age,lastName,firstName, flight_id)
Ticket(ticket_num, seat_no, class, price, pid, passport_no, flight_id, date_of_booking)

Contains(apname, airline_id)
Serves(SSN, flight_id)
Belongs(ticket_num, flight_id)

USERS

Employee, Airline, Passenger

ACTIONS
Passenger can book ticket.
Airline assigns flight to plane.
Airline creates tickets.
Airline can assign employees to flight.
Employee can work for Store, Airline, Airport.

QUERIES
Show All Tickets for a flight

Show all passengers of a flight
Show all flight of an airline
Show al employees of a store/airline/airport
Show all airports in a country
Show all airlines in an airport
Show all planes of an airline
Show all tickets of a passenger

Assumptions

1.There cannot be more than one airport with the same name in a country.

2.Employee does not need to serve for a flight because it could work at airport or store.

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