Querying the Airline Database

In this exercise we will conduct some '**`SELECT`**' queries on the database tables you installed in the previous exercise. (If you haven't already done so, create the database by running the `airline.sql` script via the *DB Browser for SQLite* interface or an equivalent tool, or use the `airline.db` SQLite database provided.) Check that the database's tables contain the data shown below.

Countries:

CountryCode	CountryName
AUS	Australia
IND	Indonesia
MLY	Malaysia
NZL	New Zealand
USA	United States of America

Cities:

CityCode	CityName	CountryCode
ADL	Adelaide	AUS
AKL	Auckland	NZL
BNE	Brisbane	AUS
CBR	Canberra	AUS
CGK	Jakarta	IND
HNL	Honolulu	USA
LAX	Los Angeles	USA
MEL	Melbourne	AUS
SFO	San Francisco	USA
SYD	Sydney	AUS
BRI	Brisbane	USA

Aircraft:

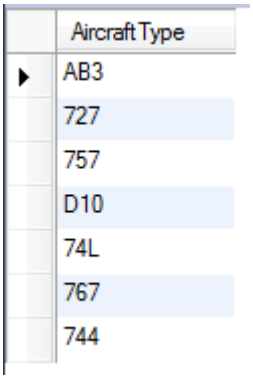
AircraftType	AircraftDescription	SeatingCapacity
AB3	Airbus A300	250
D10	McDonnel Douglas DC10	150
727	Boeing 727	150
737	Boeing 737	120
74L	Boeing 747SP	260
743	Boeing 747-338	420
744	Boeing 747-438	420
757	Boeing 757	150
767	Boeing 767	260

Flights:

FlightNum	FromCityCode	ToCityCode	SeatsRemaining	AircraftType
1	BNE	SYD	10	AB3
2	SYD	CBR	20	727
3	SYD	MEL	30	757
4	SYD	AKL	40	D10
5	BNE	CGK	50	757
6	BNE	LAX	60	74L
7	SYD	HNL	70	767
8	HNL	SFO	80	767
9	SYD	LAX	90	744
10	SYD	BNE	100	AB3

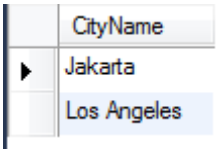
As a quick refresher on writing database queries in SQLite, answer the following questions by writing and executing SQLite queries in the database tool's graphical interface.

Query 1. Write a query that displays all the types of aircraft appearing in the Flights table. However, don't display the same type of aircraft more than once, i.e., you want to select distinct results. Your query should produce the following result set:



AircraftType
AB3
727
757
D10
74L
767
744

Query 2. Write a query that displays all the city names starting with the letters 'J', 'K' or 'L'. The result set should be:



CityName
Jakarta
Los Angeles

To do this you will need to us a "**LIKE**" clause with a "%" wildcard. For example, the condition

```
WHERE AircraftType LIKE '%7'
```

attached to a query would limit the results to aircraft types that end with the digit 7 only.

Query 3. Write a query that displays the number of flights which have fewer than 50 seats remaining. (The answer is 4.)

Query 4. Write a query that displays the largest number of seats remaining in any flight leaving from city code 'BNE'. To do so you will need to apply SQL's built-in `MAX` function to the selected column. (The answer is 60.)

Query 5. Write a query that, for each city, displays the city's name and corresponding country's name as shown below.

CityName	CountryName
Adelaide	Australia
Brisbane	Australia
Canberra	Australia
Melbourne	Australia
Sydney	Australia
Jakarta	Indonesia
Auckland	New Zealand
Brisbane	United States of America
Honolulu	United States of America
Los Angeles	United States of America
San Francisco	United States of America

Query 6. Write a query that displays the name of all cities in Australia served by our airline. Note that we want to specify the county by its full name, 'Australia', not the city code, 'AUS'. The answer should be as follows.

CityName
Adelaide
Brisbane
Canberra
Melbourne
Sydney