

5DV021, Obligatory Exercise 2 answer sheet, query 1

Query: Find the code and city of each airport which is located in France.

Solution in the relational algebra:

Solution in the relational tuple calculus:

5DV021, Obligatory Exercise 2 answer sheet, query 2

Query: Find the names of those airlines which have both flights which depart from the airport with code 'CDG' as well as flights which depart from the airport with code 'ORY'.

Solution in the relational algebra:

Solution in the relational tuple calculus:

5DV021, Obligatory Exercise 2 answer sheet, query 3

Query: Find the names of those airlines whose home country is either the country in which the airport with code 'BGO' lies or else the country in which the airport with code 'UME' lies.

Solution in the relational algebra:

Solution in the relational tuple calculus:

5DV021, Obligatory Exercise 2 answer sheet, query 4

Query: Find the flights of the airline with the abbreviation 'SK' which are scheduled for December 14, 2008. In addition to the flight number, give the airport codes for both the origin and the destination.

Solution in the relational algebra:

Solution in the relational tuple calculus:

5DV021, Obligatory Exercise 2 answer sheet, query 5

Query: Find the names of those cities which have more than one airport.

Solution in the relational algebra:

Solution in the relational tuple calculus:

5DV021, Obligatory Exercise 2 answer sheet, query 6

Query: Find the names of those airlines which do not have flights which depart from an airport in Sweden.

Solution in the relational algebra:

Solution in the relational tuple calculus:

5DV021, Obligatory Exercise 2 answer sheet, query 7

Query: Find the codes of those airports which have flights to every airport in France. (Note that no French airport will normally qualify because, for example, there is no flight from 'CDG' to 'CDG'.)

Solution in the relational algebra:

Solution in the relational tuple calculus:

5DV021, Obligatory Exercise 2 answer sheet, query 8

Query: Find the names of those countries which have at exactly two home airlines (*i.e.*, airlines whose home is in that country).

Solution in the relational algebra:

Solution in the relational tuple calculus:

5DV021, Obligatory Exercise 2 answer sheet, query 9

Query: Find the names of those airports, all of whose departures are *domestic*, in the precise sense that the destination airport is in the same country as the airport of departure.

Solution in the relational algebra:

Solution in the relational tuple calculus:

5DV021, Obligatory Exercise 2 answer sheet, query 10

Query: Find the codes of those airports which have flights to every airport, other than itself, which is located in the same country but is not located in the same city. (Hint: The answer requires something which is similar to division. Look at the formula which underlies division, and modify it suitably.)

Solution in the relational algebra:

Solution in the relational tuple calculus: