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	UCS1412 – Database Lab ***Assignment – 3***	***Assigned: 18-Jan-20***
Title: Advanced DML: Nested Queries, Joins, Set Operations		

Aim: To learn the following:

a) Write SELECT statements:
   i) Using JOIN
   ii) Using nested and correlated subquery
   iii) Using SET operations

A Royal Airlines wants to store information about various flights from different cities and about its employees. It involves the following relations:

a) Employee (*eid, ename, salary*)

b) Certified (*eid,aid*)

c) Aircraft (*aid, aname, cruisingrange*)

d) Routes (*routeid, orig_airport, dest_airport, distance*)

e) Flights (*flightno, rid, aid)*

f) Fl_schedule (*flno, departs, dtime, arrives, atime, price*)

Do the following:

i) Read the `README.AIRLINE.txt` file, to understand the semantic of the database and draw the schema.

ii) Execute the following script file: `air_main.sql` in SQLPlus.

iii) Do NOT alter the dataset.

You can use a subquery and/or JOIN (use subquery if required along with JOIN) in each of your answers. Use each multi-row operator of subquery, correlated subquery in any one of the following:

1. Display the flight number,departure date and time of a flight, its route details and aircraft name of type either Schweizer or Piper that departs during 8.00 PM and 9.00 PM.
2. For all the routes, display the flight number, origin and destination airport, if a flight is assigned for that route.
3. For all aircraft with cruisingrange over 5,000 miles, find the name of the aircraft and the

average salary of all pilots certified for this aircraft.

4. Show the employee details such as id, name and salary who are not pilots and whose salary is more than the average salary of pilots.
5. Find the id and name of pilots who were certified to operate some aircrafts but at least one of that aircraft is not scheduled from any routes.
6. Display the origin and destination of the flights having at least three departures with maximum distance covered.
7. Display name and salary of pilot whose salary is more than the average salary of any pilots for each route other than flights originating from Madison airport.
8. Display the flight number, aircraft type, source and destination airport of the aircraft having maximum number of flights to Honolulu.
9. Display the pilot(s) who are certified exclusively to pilot all aircraft in a type.
10. Name the employee(s) who is earning the maximum salary among the airport having maximum number of departures.
11. Display the departure chart as follows:
    flight number, departure(date,airport,time), destination airport, arrival time, aircraft name for the flights from New York airport during 15 to 19th April 2005. Make sure that the route contains at least two flights in the above specified condition.

Use SET operators (any one operator) for each of the following:

12. A customer wants to travel from Madison to New York with no more than two changes of flight. List the flight numbers from Madison if the customer wants to arrive in New York by 6.50 p.m.
13. Display the id and name of employee(s) who are not pilots.
14. Display the id and name of employee(s) who pilots the aircraft from Los Angels and Detroit airport.

What you have to submit:

1. Schema Diagram with constraints
2. Demo script file