SQL part 6.1. Basic subqueries.

1. Display surnames and jobs of those employees who work in the same department as employee Johnson (do not display Johnson).

```
 surname |    job
---------+-----------
 Edwards | SECRETARY
 Green   | ASSISTANT
 Lewis   | ASSISTANT
 White   | LECTURER
 Wilson  | PROFESSOR
 Young   | ASSISTANT
```

2. Add to result of previous query departments names.

```
 surname |    job    |      dept_name
---------+-----------+---------------------
 Edwards | SECRETARY | DISTRIBUTED SYSTEMS
 Green   | ASSISTANT | DISTRIBUTED SYSTEMS
 Lewis   | ASSISTANT | DISTRIBUTED SYSTEMS
 White   | LECTURER  | DISTRIBUTED SYSTEMS
 Wilson  | PROFESSOR | DISTRIBUTED SYSTEMS
 Young   | ASSISTANT | DISTRIBUTED SYSTEMS
```

3. Find the longest-employed lecturer.

```
 surname |   job    | hire_date
---------+----------+------------
 White   | LECTURER | 1977-09-01
```

4. For every department find the shortest-employed employee.

```
     department      | surname | hire_date
---------------------+---------+------------
 ADMINISTRATION      | Clark   | 1985-02-20
 ALGORITHMS          | Jones   | 1973-05-01
 DISTRIBUTED SYSTEMS | Young   | 1993-10-01
 EXPERT SYSTEMS      | Wood    | 1994-07-15
```

5. Find departments without employees.

```
 dept_id |      dept_name       |     address
---------+----------------------+-----------------
      50 | OPERATIONAL RESEARCH | PLAINFIELD ROAD
```

6. Find professors who have not any phd students among their subordinates.

```
 surname  |    job    | salary
----------+-----------+---------
 Jones    | PROFESSOR | 3350.00
 Williams | PROFESSOR | 3070.00
```

7. Find departments which employ more employees than department “ADMINISTRATION” (use a subquery in a HAVING clause).

```
      dept_name       | num_of_empl
----------------------+-------------
 DISTRIBUTED SYSTEMS  |           7
 EXPERT SYSTEMS       |           3
```

8. Find the year in which the biggest number of professors were hired. Show also the number of professors hired in the year.

```
YEAR    NUMBER_OF_PROFESSORS
---- ----------------------
1968                       1
1973                       1
1975                       1
1977                       1
```

9. Find the department (write its name and sum of salaries) which pays the biggest amount (sum of salaries) of money to its employees. Take into account also additional salaries.

```
DEPARTMENT              MAX_SUM
------------------- ------------
DISTRIBUTED SYSTEMS    18610.70
```