/*

Ex1: (20p) Sa se afiseze salariatii care au fost angajati în aceeaşi zi a lunii în care

cei mai multi dintre salariati au fost angajati. (ziua lunii insemnand numarul zilei, indiferent

de luna si an). Explicati solutia implementata.

Explicatie: folosim EXTRACT pentru a lua ziua dintr-o data si pentru a o putea compara. O sa dam SELECT la coloanele

ale caror zi extrasa din hire_date este in multimea (cu un singur element) zilelor extrase din hire_date cu proprietatea

ca numarul lor de aparitii este in multimea (cu un singur element) maximului numerelor de aparitii al zilelor

*/

```
SELECT *
FROM employees
WHERE EXTRACT(day FROM hire_date) IN (
                SELECT EXTRACT(day FROM hire_date)
                FROM employees
                GROUP BY EXTRACT(day FROM hire_date)
                HAVING COUNT(EXTRACT(day FROM hire_date)) IN
                                (
                                SELECT MAX(COUNT(EXTRACT(day FROM hire_date)))
                                FROM employees
                                GROUP BY EXTRACT(day FROM hire_date)
                                )
                );
```

/*

Ex2: (10p) Cati subalterni are fiecare angajat? Se vor afisa codul, numele, prenumele

si numarul de subalterni. Daca un angajat nu are subalterni se va afisa pentru numarul de

angajati valoarea 0 (zero). Sa se rezolve folosind doua metode, atat subcerere in clauza SELECT, cat si subcerere in FROM.
*/

-- Metoda 1: subcerere in clauza SELECT

```
SELECT employee_id, first_name, last_name, (
                        SELECT COUNT(e1.employee_id)
                        FROM employees e2
                        WHERE e2.manager_id = e1.employee_id
                        ) "Numar subalterni"
FROM employees e1;
```

--Metoda2: subcerere in clauza FROM

```
SELECT e1.employee_id, first_name, last_name, a.nr_ang
FROM employees e1, (
        SELECT manager_id, COUNT(employee_id) nr_ang
        FROM employees
        GROUP BY manager_id

        UNION

        SELECT employee_id, 0 nr_ang
        FROM employees
        WHERE employee_id NOT IN(
                        SELECT NVL(manager_id, 0)
                        FROM employees
                        )
```

```
        ) a
WHERE e1.employee_id = a.manager_id;
SELECT employee_id
FROM employees
WHERE employee_id NOT IN
            (
            SELECT NVL(manager_id, 0)
            FROM employees
            );
```

/*

EX3: (20p) Sa se listeze pentru fiecare angajat orasul in care a lucrat cele mai multe

zile. Explicati solutia implementata.

Explicatie: Am facut un alias tabel_mare in care retin coloanele employee_id, nume, prenume, department_id, location_id, city,

end_date - start_date / TRUNC(SYSDATE - hire_date) (numarul de zile lucrate la job ul respectiv). In el introducem datele corespunzatoare

job-urilor din trecut luate prin merge-uirea job_history-ului cu employees, departments si locations reunite cu datele corespunzatoare

job-urilor curente obtinute din merge-uirea employees, departments si locations (daca la job-urile vechi numarul de zile va fi start_date - end_date,

la job-urile curente o sa fie SYSDATE - hire_date). Din tabelul asta mare o sa cream un tabel mai mic unde job-urile avute in acelasi oras

vor fi grupate intr-o singura inregistrare in care zilele lucrate vor fi adunate. In tabelul mic obtinut vom alege fiecare inregistrare

in care numarul de zile lucrate este maximul zilelor lucrate din toate inregistrarile care refera acelasi angajat (ID_angajat).

*/

```
WITH tabel_mare AS (SELECT e.employee_id AS ID_angajat, e.first_name AS prenume, e.last_name AS nume, d.department_id AS ID_departament, d.location_id AS ID_oras, l.city AS nume_oras,
```

```
        end_date - start_date AS zile_lucrate
        FROM departments d JOIN job_history jh ON (d.department_id = jh.department_id)
        JOIN locations l ON (d.location_id = l.location_id) JOIN employees e ON (e.employee_id =
jh.employee_id)

        UNION

        SELECT e.employee_id AS ID_angajat, e.first_name AS prenume, e.last_name AS nume,
d.department_id AS ID_departament, d.location_id AS ID_oras, l.city AS nume_oras,
        TRUNC(SYSDATE - hire_date) AS zile_lucrate
        FROM departments d JOIN locations l ON (d.location_id = l.location_id) JOIN employees e ON
(e.department_id = d.department_id)
        ),
tabel_mic AS    (SELECT ID_angajat, nume, prenume, nume_oras, SUM(zile_lucrate) AS zile_lucrate
        FROM tabel_mare
        GROUP BY ID_angajat, nume, prenume, nume_oras
        ORDER BY ID_angajat
       )
SELECT ID_angajat, nume, prenume, nume_oras --, zile_lucrate
FROM tabel_mic t1
WHERE zile_lucrate IN (
          SELECT MAX(zile_lucrate)
          FROM tabel_mic t2
          WHERE t1.ID_angajat = t2.ID_angajat
          GROUP BY ID_angajat
          );
```