LEMBAR KERJA PRAKTIKUM 7

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1. Tentukan query untuk soal-soal di bawah ini ! (Screenshoot query dan hasilnya)
    a. MENCARI EMPLOYEE YANG MENJADI MANAGER SERTA PROYEK APA SAJA YANG PERNAH IA KERJAKAN (SSN, FName, LName, PName).

```
company=# SELECT ssn, fname, lname, pname FROM employee E, project P, department D
company-# WHERE ssn = mgrssn and E.dnum = P.dnum
company-# ORDER BY ssn ASC;
    ssn    | fname |  lname  | pname
-----------+-------+---------+-------
 E001      | Hakim | Arifin  | AAA
 E002      | Yuni  | Arti    | CCC
 E002      | Yuni  | Arti    | BBB
 E002      | Yuni  | Arti    | DDD
 E003      | Mutia | Aziza   | EEE
 E003      | Mutia | Aziza   | FFF
 E004      | Hanif | Affandi | GGG
 E004      | Hanif | Affandi | HHH
(8 rows)
```

    b. MENCARI EMPLOYEE YANG HANYA BEKERJA PADA SATU PROYEK SAJA (ESSN, FName, LName, Dependent_Name, Relationship).

```
company=# SELECT E.ssn, E.fname, E.lname, dependent_name, relationship
company-# FROM employee E JOIN dependent D ON E.ssn = D.essn JOIN works_on W ON E.ssn = W.essn
company-# GROUP BY E.ssn, E.fname, E.lname, dependent_name, relationship
company-# HAVING COUNT(W.pnum) = 1;
 ssn | fname | lname | dependent_name | relationship
-----+-------+-------+----------------+--------------
(0 rows)
```

2. Buatlah virtual table (view) dari soal berikut !
    a. View yang memiliki atribut Nomor dan Nama yang isinya adalah Dnumber dan Dname.

```
company=# CREATE VIEW v2a (nomor, nama) AS
company-# SELECT dnumber, dname
company-# FROM department;
CREATE VIEW
company=#
company=# SELECT * FROM v2a;
 nomor |   nama
-------+----------
     1 | HRD
     2 | FINANCE
     3 | HUMAS
     4 | PRODUKSI
(4 rows)
```

b. View yang isinya adalah employee yang memiliki total hours per week lebih besar dari 120 hours beserta nama departemen tempat dia bekerja dan memiliki atribut SSN, Ename (berasal dari Fname dan Lname), Dname.

```
company=# CREATE VIEW v2b AS
company-# SELECT E.ssn, E.fname || ' ' || E.lname AS ename, dname
company-# FROM employee E JOIN department D ON E.dnum = D.dnumber JOIN works_on W ON E.ssn = W.essn
company-# GROUP BY E.ssn, ename, dname
company-# HAVING SUM(W.hours) > 120
company-# ORDER BY E.ssn ASC;
CREATE VIEW
company=#
company=# SELECT * FROM v2b;
    ssn    |         ename          |  dname
-----------+------------------------+----------
 E001      | Hakim Arifin           | HRD
 E002      | Yuni Arti              | FINANCE
 E003      | Mutia Aziza            | HUMAS
 E004      | Hanif Affandi          | PRODUKSI
 E005      | Vera Yunita            | HRD
 E006      | Pritasri Palupiningsih | HRD
 E007      | Rifki Haidar           | HRD
 E008      | Muhammad Rosyidi       | HRD
 E009      | Ferry Pratama          | FINANCE
 E011      | Yuhan Kusuma           | FINANCE
(10 rows)
```

3. Buatlah trigger yang akan menjalankan procedure dengan nama show jika ada employee yang dipecat dimana procedure show akan menunjukan banyaknya employee dari setiap Department dan urutkan berdasarkan urutan abjad Nama Department.

```
company=# CREATE OR REPLACE FUNCTION show() RETURNS Trigger AS $$
company$# BEGIN
company$# CREATE VIEW v3 AS
company$# SELECT dnum, dname, COUNT(dnum)
company$# FROM employee E JOIN department D ON D.dnumber = E.dnum
company$# GROUP BY dnum, D.dname
company$# ORDER BY dnum ASC;
company$# RETURN Null;
company$# END $$ LANGUAGE 'plpgsql';
CREATE FUNCTION
company=# CREATE TRIGGER show
company-# AFTER DELETE
company-# ON employee
company-# FOR EACH ROW
company-# EXECUTE FUNCTION show();
CREATE TRIGGER
```

4. Buatlah trigger yang akan menjalankan procedure dengan nama display jika ada employee baru yang masuk dimana procedure display akan menampilkan SSN, FName, Lname, Hours.

```
company=# CREATE OR REPLACE FUNCTION display() RETURNS Trigger AS $$
company$# BEGIN
company$# CREATE VIEW v4 AS
company$# SELECT E.ssn, fname, lname, hours
company$# FROM employee E JOIN works_on W on E.ssn = W.essn;
company$# RETURN Null;
company$# END $$ LANGUAGE 'plpgsql';
CREATE FUNCTION
company=# CREATE TRIGGER display
company-# AFTER INSERT
company-# ON employee
company-# FOR EACH ROW
company-# EXECUTE FUNCTION display();
CREATE TRIGGER
```

5. Tentukan dependent name, sex, birthdate, dan relationship dari employee yang memiliki rata-rata hours per week = 50 jam dan bekerja pada 2 project.

```
company=# SELECT dependent_name, sex, bdate, relationship
company-# FROM dependent D JOIN works_on W ON D.essn = W.essn JOIN project P ON W.pnum = P.pnumber
company-# GROUP BY dependent_name, sex, bdate, relationship
company-# HAVING AVG(W.hours) = 50 and COUNT(W.pnum) = 2
company-# ORDER BY dependent_name;
 dependent_name | sex | bdate | relationship
----------------+-----+-------+--------------
(0 rows)
```