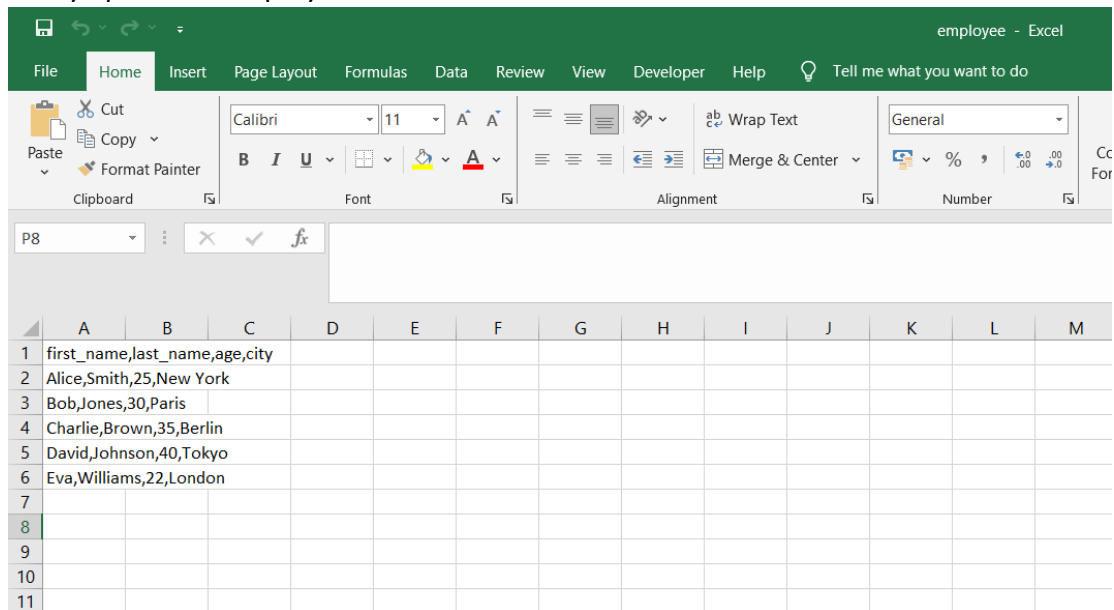
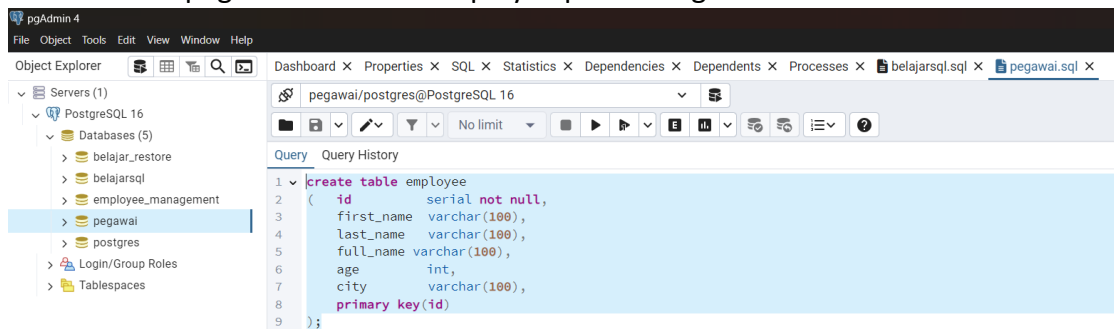


Dokumentasi Simple ETL Dengan CSV ke PostgreSQL

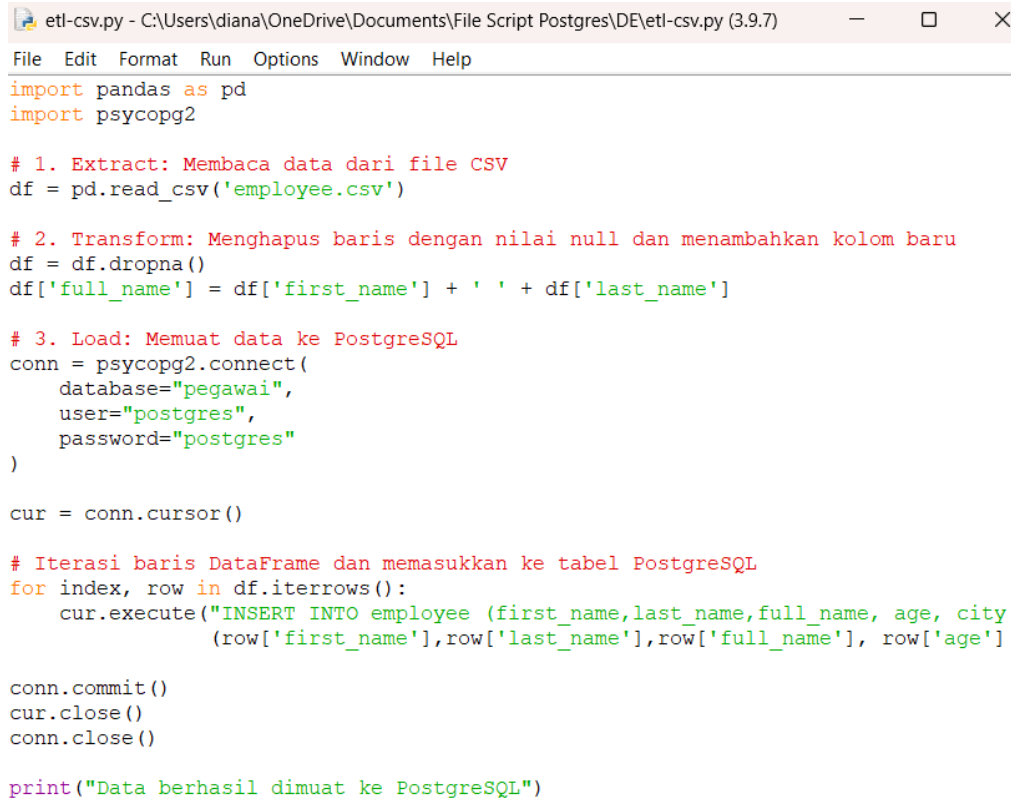
1. Rancangan sistem ETL
 - a. Read data csv
 - b. Transform data (hapus null jika ada dan menambahkan full_name)
 - c. Load data ke PostgreSQL
2. Menyiapkan file employee.csv untuk di ekstrak



3. Membuat db pegawai dan tabel employee pada PostgreSQL



4. Menyiapkan file ETL dengan menggunakan python kemudian merunningnya



```
etl-csv.py - C:\Users\diana\OneDrive\Documents\File Script Postgres\DE\etl-csv.py (3.9.7)
File Edit Format Run Options Window Help

import pandas as pd
import psycopg2

# 1. Extract: Membaca data dari file CSV
df = pd.read_csv('employee.csv')

# 2. Transform: Menghapus baris dengan nilai null dan menambahkan kolom baru
df = df.dropna()
df['full_name'] = df['first_name'] + ' ' + df['last_name']

# 3. Load: Memuat data ke PostgreSQL
conn = psycopg2.connect(
    database="pegawai",
    user="postgres",
    password="postgres"
)

cur = conn.cursor()

# Iterasi baris DataFrame dan memasukkan ke tabel PostgreSQL
for index, row in df.iterrows():
    cur.execute("INSERT INTO employee (first_name,last_name,full_name, age, city)
                (row['first_name'],row['last_name'],row['full_name'], row['age'])")

conn.commit()
cur.close()
conn.close()

print("Data berhasil dimuat ke PostgreSQL")
```

```

IDLE Shell 3.9.7
File Edit Shell Debug Options Window Help

>>>
= RESTART: C:\Users\diana\OneDrive\Documents\File Script Postgres\DE\etl-csv.py
Traceback (most recent call last):
  File "C:\Users\diana\OneDrive\Documents\File Script Postgres\DE\etl-csv.py", line 22, in <module>
    cur.execute("INSERT INTO employee (full_name, age, city) VALUES (%s, %s, %s)",
psycopg2.errors.UndefinedColumn: column "full_name" of relation "employee" does not exist
LINE 1: INSERT INTO employee (full_name, age, city) VALUES ('Alice S...
                                ^

>>>
= RESTART: C:\Users\diana\OneDrive\Documents\File Script Postgres\DE\etl-csv.py
Traceback (most recent call last):
  File "C:\Users\diana\OneDrive\Documents\File Script Postgres\DE\etl-csv.py", line 22, in <module>
    cur.execute("INSERT INTO employee (full_name, age, city) VALUES (%s, %s, %s)",
psycopg2.errors.NotNullViolation: null value in column "first_name" of relation "employee" violates not-null constraint
DETAIL:  Failing row contains (1, null, null, 25, New York, Alice Smith).

>>>
= RESTART: C:\Users\diana\OneDrive\Documents\File Script Postgres\DE\etl-csv.py
Data berhasil dimuat ke PostgreSQL

>>>
= RESTART: C:\Users\diana\OneDrive\Documents\File Script Postgres\DE\etl-csv.py
Traceback (most recent call last):
  File "C:\Users\diana\OneDrive\Documents\File Script Postgres\DE\etl-csv.py", line 22, in <module>
    cur.execute("INSERT INTO employee (first_name,last_name,full_name, age, city) VALUES (%s, %s, %s)",
TypeError: not all arguments converted during string formatting

>>>
= RESTART: C:\Users\diana\OneDrive\Documents\File Script Postgres\DE\etl-csv.py
Data berhasil dimuat ke PostgreSQL

>>> |

```

Ln: 50 Col: 4

5. Data berhasil di load kedalam db pegawai

pgAdmin 4

Object Explorer | Tools | Edit | View | Window | Help

Dashboard | Properties | SQL | Statistics | Dependencies | Dependents | Processes | belajarsql.sql | pegawai.sql*

Servers (1)

- PostgreSQL 16
 - Databases (5)
 - belajar_restore
 - belajarsql
 - employee_management
 - pegawai**
 - postgres
 - Login/Group Roles
 - Tablespaces

pegawai/postgres@PostgreSQL 16

Query | Query History

```

1 create table employee
2 (
3   id serial not null,
4   first_name varchar(100),
5   last_name varchar(100),
6   full_name varchar(100),
7   age int,
8   city varchar(100),
9   primary key(id)
10 );
11 select * from employee;

```

Data Output | Messages | Notifications

	id [PK] integer	first_name character varying (100)	last_name character varying (100)	full_name character varying (100)	age integer	city character varying (100)
1	1	Alice	Smith	Alice Smith	25	New York
2	2	Bob	Jones	Bob Jones	30	Paris
3	3	Charlie	Brown	Charlie Brown	35	Berlin
4	4	David	Johnson	David Johnson	40	Tokyo
5	5	Eva	Williams	Eva Williams	22	London