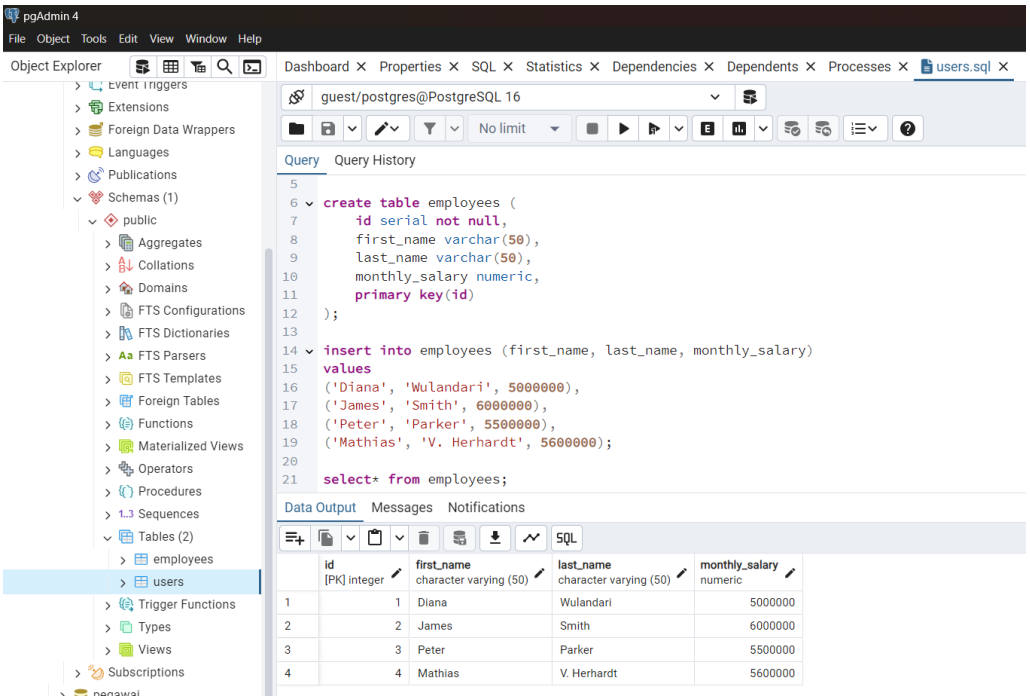
Dokumentasi Simple ETL, Data dari PostgreSQL dan Disimpan Kembali ke PostgreSQL

1. Rancangan sistem ETL
   a. Buat data dummy di PostgreSQL dengan nama tabel employees dan isi tabel terdiri atas first_name, last_name dan salary



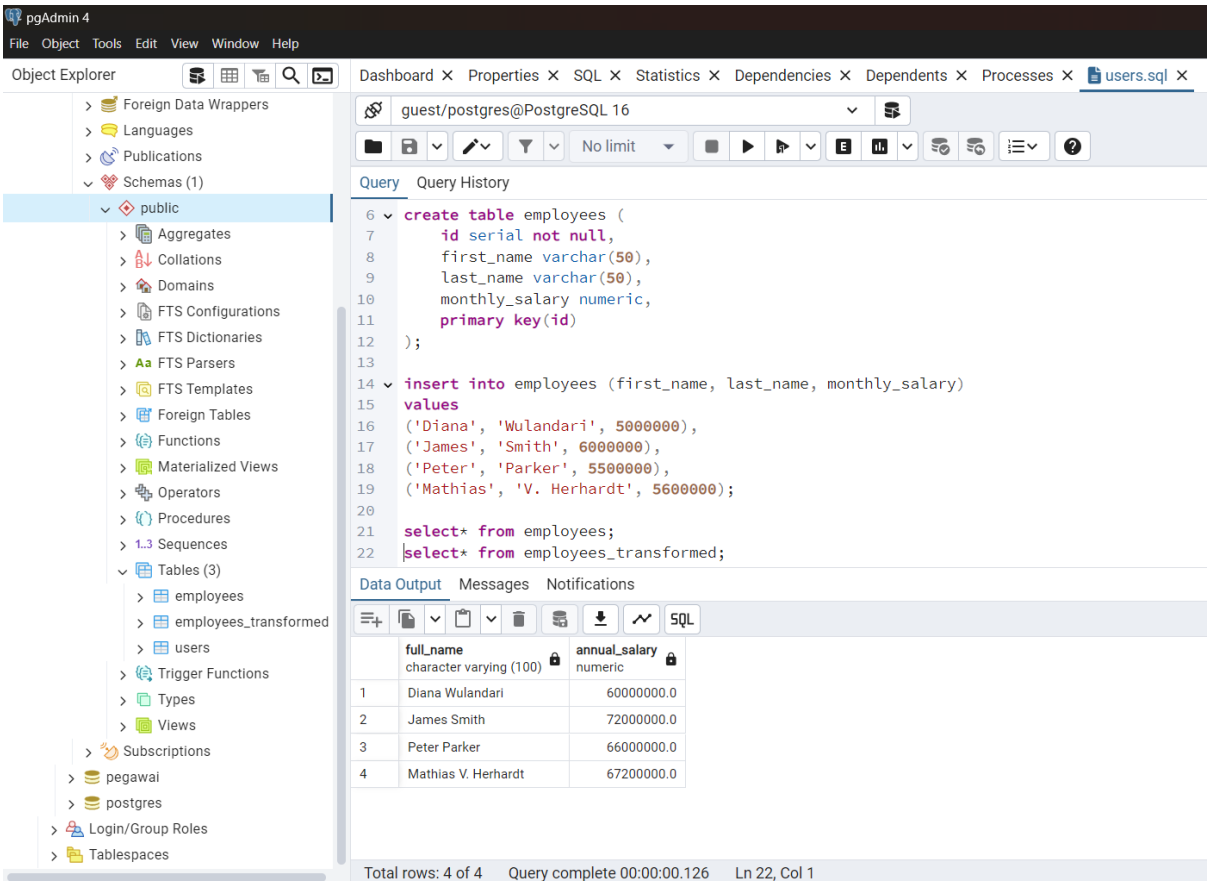
   b. Extract data, ambil data table employees dari PostreSQL

```python
# 1. Extract: Mengambil data dari tabel 'employees'
def extract_data():
    conn = connect_to_db()
    query = "SELECT * FROM employees"
    df = pd.read_sql(query, conn)
    conn.close()
    print("Data berhasil diekstrak dari PostgreSQL.")
    return df
```

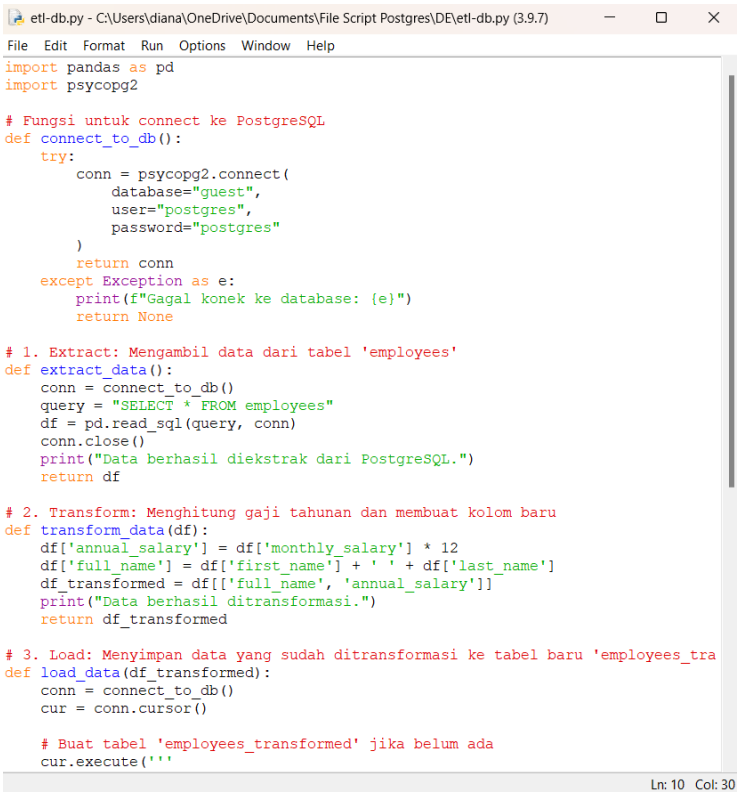
   c. Transformasi data, ambil full name employees dan hitung gaji tahunan

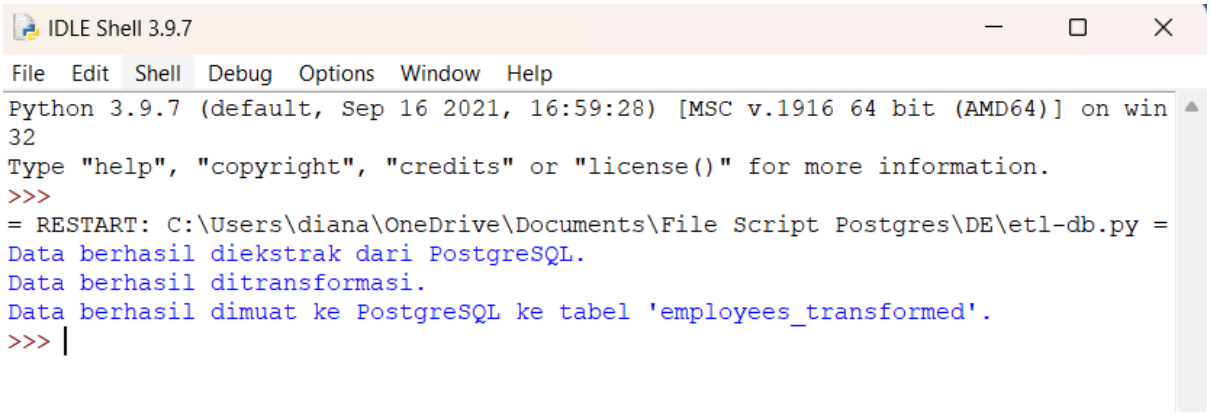
```python
# 2. Transform: Menghitung gaji tahunan dan membuat kolom baru
def transform_data(df):
    df['annual_salary'] = df['monthly_salary'] * 12
    df['full_name'] = df['first_name'] + ' ' + df['last_name']
    df_transformed = df[['full_name', 'annual_salary']]
    print("Data berhasil ditransformasi.")
    return df_transformed
```

d. Load data, simpan data yang telah di transformasi kembali ke PostreSQL dengan tabel baru employee_transformed



2. Script python dan output




IDLE Shell 3.9.7
File Edit Shell Debug Options Window Help
Python 3.9.7 (default, Sep 16 2021, 16:59:28) [MSC v.1916 64 bit (AMD64)] on win
32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:\Users\diana\OneDrive\Documents\File Script Postgres\DE\etl-db.py =
Data berhasil diekstrak dari PostgreSQL.
Data berhasil ditransformasi.
Data berhasil dimuat ke PostgreSQL ke tabel 'employees_transformed'.
>>>