1. Connect ke database postgresql (Local atau Remote DB)

```
[1]: import psycopg2

try:
    conn = psycopg2.connect(
        host="localhost",
        dbname="project3",
        user="postgres",
        password="90sparta90"
    )
    print("Connection to the database successful!")
except psycopg2.Error as e:
    print("Error connecting to the database:", e)

Connection to the database successful!
```

1. Connect database PostgreSQL


2. PostgreSQL connect

2. Create table latihan_users_nama-peserta

```
[45]: cur.execute('''
    CREATE TABLE IF NOT EXISTS latihan_users_alif(
    id serial PRIMARY KEY,
    email text,
    name text,
    phone text,
    postal_code text
    )
    '''
          )
```

3. Create table 1

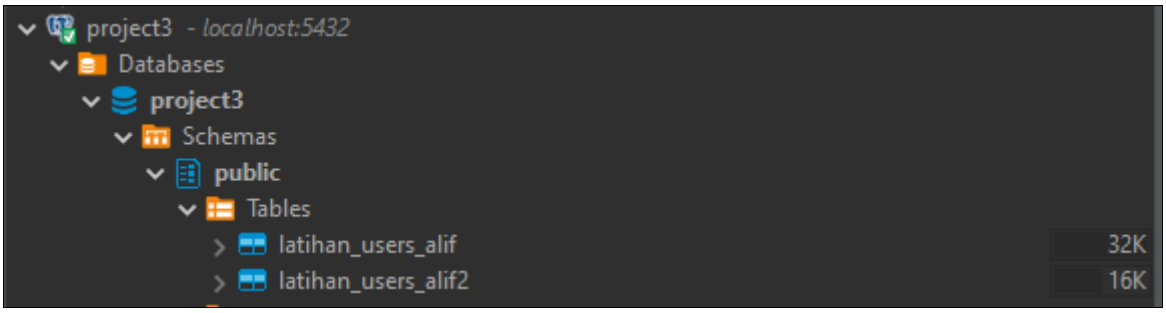
```
[57]: cur.execute('''
    CREATE TABLE IF NOT EXISTS latihan_users_alif2(
    email text,
    name text,
    phone text,
    postal_code text
    )
    '''
          )
```

4. Create table 2

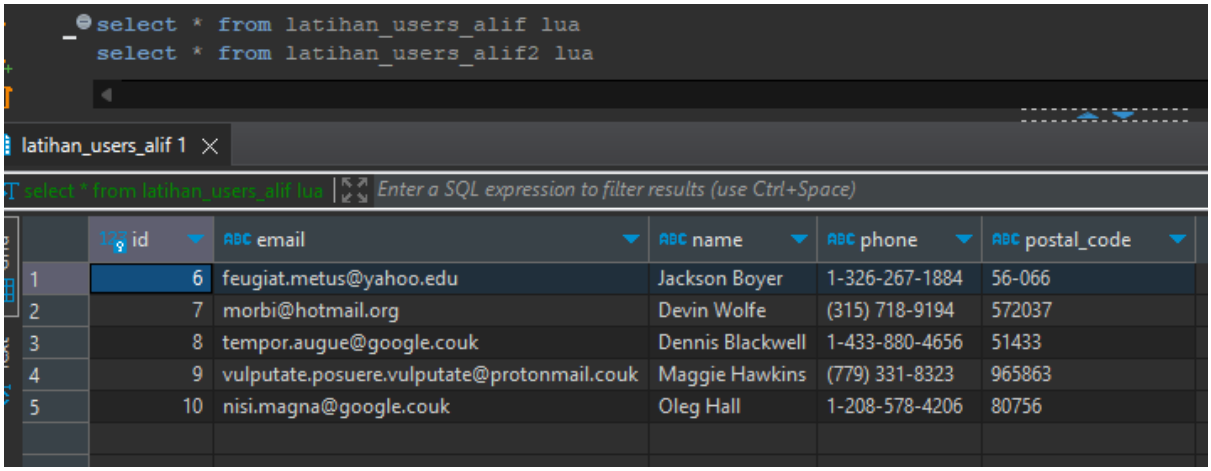
```
[68]: cur.execute("SELECT table_name FROM information_schema.tables WHERE table_schema='public'")

[69]: #fetch all the rows returned by the query
      table_name = cur.fetchall()

[70]: #print list of table
      for name in table_name:
          print(name[0])

      latihan_users_alif
      latihan_users_alif2
```

5. Table yang ada di schema public

3. List table di postgresql




6. Hasil create table di PostgreSQL




7. List table di PostgreSQL

## 4. Inserting data using copy_from atau copy_expert

```
[19]: with open ('Desktop/users_w_postal_code.csv') as f:
          next(f)
          cur.copy_from(f, 'latihan_users_alif', sep=',', columns=('email','name','phone','postal_code'))

[64]: cur.execute("SELECT * FROM public.latihan_users_alif")

[26]: #fetch all the rows returned by the query
      latihan_users_alif = cur.fetchall()

[27]: #print the list of table names
      for name in latihan_users_alif:
          print (name)

(6, 'feugiat.metus@yahoo.edu', 'Jackson Boyer', '1-326-267-1884', '56-066')
(7, 'morbi@hotmail.org', 'Devin Wolfe', '(315) 718-9194', '572037')
(8, 'tempor.augue@google.couk', 'Dennis Blackwell', '1-433-880-4656', '51433')
(9, 'vulputate.posuere.vulputate@protonmail.couk', 'Maggie Hawkins', '(779) 331-8323', '965863')
(10, 'nisi.magna@google.couk', 'Oleg Hall', '1-208-578-4206', '80756')
```

8. Insert data menggunakan copy_from

```
[71]: #Open the source file
      with open('Desktop/users_w_postal_code.csv', 'r') as f:
          #Execute the COPY operation
          cur.copy_expert(f"COPY public.latihan_users_alif2 FROM STDIN WITH (FORMAT CSV, HEADER TRUE, DELIMITER ',')", f)

[4]: cur.execute("SELECT * FROM public.latihan_users_alif2")

[5]: #fetch all the rows returned by the query
     latihan_users_alif2 = cur.fetchall()

[6]: #print the list of table names
     for name in latihan_users_alif2:
         print (name)

('feugiat.metus@yahoo.edu', 'Jackson Boyer', '1-326-267-1884', '56-066')
('morbi@hotmail.org', 'Devin Wolfe', '(315) 718-9194', '572037')
('tempor.augue@google.couk', 'Dennis Blackwell', '1-433-880-4656', '51433')
('vulputate.posuere.vulputate@protonmail.couk', 'Maggie Hawkins', '(779) 331-8323', '965863')
('nisi.magna@google.couk', 'Oleg Hall', '1-208-578-4206', '80756')
```

9. Insert data menggunakan copy_expert

5. Inserting data using pandas to_sql

[7]:
```
import pandas as pd
from sqlalchemy import create_engine
```

```
C:\Users\Cerv\AppData\Roaming\Python\Python38\site-packages\pandas\core\computation\e
'2.7.1' currently installed).
  from pandas.core.computation.check import NUMEXPR_INSTALLED
```

[11]:
```
df = pd.read_csv('Desktop/users_w_postal_code.csv', sep=',')
```

[12]:
```
df.head()
```

[12]:

| | email | name | phone | postalZip |
|---|---|---|---|---|
| 0 | feugiat.metus@yahoo.edu | Jackson Boyer | 1-326-267-1884 | 56-066 |
| 1 | morbi@hotmail.org | Devin Wolfe | (315) 718-9194 | 572037 |
| 2 | tempor.augue@google.couk | Dennis Blackwell | 1-433-880-4656 | 51433 |
| 3 | vulputate.posuere.vulputate@protonmail.couk | Maggie Hawkins | (779) 331-8323 | 965863 |
| 4 | nisi.magna@google.couk | Oleg Hall | 1-208-578-4206 | 80756 |

[13]:
```
engine = create_engine('postgresql://postgres:90sparta90@localhost:5432/postgres')
```

[14]:
```
df.to_sql('from_file_table', engine)
```

[14]:
```
5
```

10. Insert data menggunakan pandas to_sql