

# ARIF HIDAYAT

## Project Week 1

### *Tugas*

Instruksi:

**1. Untuk hasil jawaban bisa dilampirkan screenshot-an dibawah soal.**

**2. Submit hasil jawaban dengan format .pdf atau .doc**

Studi Kasus:

Perusahaan Teknologi

PT. Teknologi Maju adalah sebuah perusahaan teknologi yang sedang berkembang pesat. Perusahaan ini memiliki ratusan pegawai yang tersebar di berbagai wilayah di Indonesia.

Untuk mengelola data pegawai, PT. Teknologi Maju perlu menggunakan sebuah database. Database ini akan digunakan untuk menyimpan informasi tentang pegawai, seperti nama, usia, gaji, dan alamat. Dengan demikian kamu sebagai Data Analyst diminta untuk :

1. Buatlah sebuah database baru dengan nama "**employee\_db**".
2. Di dalam database "**employee\_db**", buatlah tabel "pegawai" dengan kolom-kolom berikut:

**id** (integer, primary key)

**nama** (varchar)

**nama\_panggilan** (varchar)

**usia** (integer)

**salary** (int)

3. Tambahkan kolom alamat dengan tipe data varchar ke dalam tabel "**pegawai**".

4. Hapus kolom **nama\_panggilan** dari tabel "**pegawai**".

5. Ubah tipe data kolom salary menjadi bigint di tabel "**pegawai**".

6. Sisipkan beberapa data baru ke dalam tabel "pegawai" dengan informasi berikut:

Nama:

'Ramzan', Usia: 30, Gaji: 5000000, Alamat: 'Jl. ABC No. 123'.

'Boodey', Usia: 35, Gaji: 6000000, Alamat: 'Jl. CDE No. 123'.

7. Perbarui gaji pegawai dengan nama 'Ramzan' menjadi 7000000.

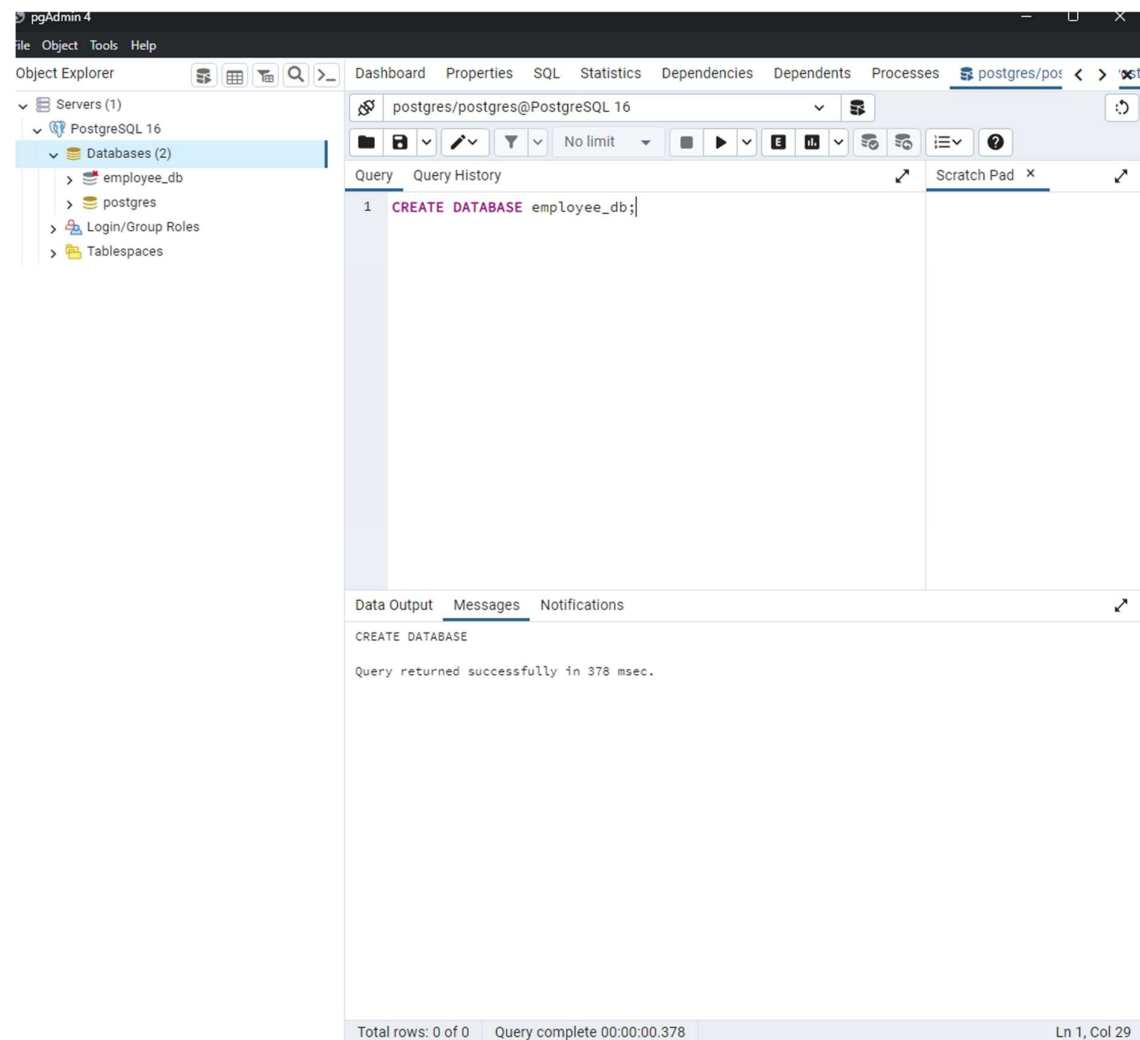
8. Hapus tabel "pegawai" dari database.

9. Hapus database "**employee\_db**".

10. Tampilkan semua data dari tabel "**pegawai**".

## JAWABAN :

1.



2.

The screenshot shows the pgAdmin 4 interface with the following components:

- Object Explorer:** Displays the database structure. The 'employee\_db' database is selected, and the 'pegawai' table is highlighted under the 'Tables (1)' category.
- Query Editor:** Contains the SQL query to create the 'pegawai' table and select all data from it.

```
1 CREATE TABLE pegawai(  
2     id int primary key,  
3     nama varchar,  
4     nama_panggilan varchar,  
5     usia int,  
6     salary int  
7 )  
8  
9 select * from pegawai
```
- Data Output:** Shows the table structure with columns and their data types.

id	nama	nama_panggilan	usia	salary
[PK] integer	character varying	character varying	integer	integer
- Status Bar:** Indicates 'Total rows: 0 of 0' and 'Query complete 00:00:00.154'.

3.

The screenshot displays the pgAdmin 4 web interface. On the left, the 'Object Explorer' pane shows the database structure: 'Servers (1)' > 'PostgreSQL 16' > 'Databases (2)' > 'employee\_db' > 'public' > 'Tables (1)' > 'pegawai'. The 'pegawai' table is selected. The main pane shows the SQL query editor with the following code:

```
1 CREATE TABLE pegawai(  
2     id int primary key,  
3     nama varchar,  
4     nama_panggilan varchar,  
5     usia int,  
6     salary int  
7 )  
8  
9 select * from pegawai  
10  
11 --  
12 ALTER TABLE pegawai  
13 ADD alamat varchar
```

Below the query editor, the 'Data Output' pane shows the table schema:

id	nama	nama_panggilan	usia	salary	alamat
----	------	----------------	------	--------	--------

The status bar at the bottom indicates 'Total rows: 0 of 0', 'Query complete 00:00:00.113', and 'Ln 13, Col 19'.

4.

pgAdmin 4

File Object Tools Help

Object Explorer

Servers (1)

- PostgreSQL 16
  - Databases (2)
    - employee\_db
      - Casts
      - Catalogs
      - Event Triggers
      - Extensions
      - Foreign Data Wrappers
      - Languages
      - Publications
      - Schemas (1)
        - public
          - Aggregates
          - Collations
          - Domains
          - FTS Configurations
          - FTS Dictionaries
          - FTS Parsers
          - FTS Templates
          - Foreign Tables
          - Functions
          - Materialized Views
          - Operators
          - Procedures
          - Sequences
          - Tables (1)
            - pegawai
              - Columns
              - Constraints
              - Indexes
              - RLS Policies
              - Rules
              - Triggers
              - Trigger Functions
              - Types
              - Views

employee\_db/postgres@PostgreSQL 16

Query

```

1 CREATE TABLE pegawai (
2     id int primary key,
3     nama varchar,
4     nama_panggilan varchar,
5     usia int,
6     salary int
7 )
8
9 select * from pegawai
10
11 --
12 ALTER TABLE pegawai
13 ADD alamat varchar
14
15 --
16 ALTER TABLE pegawai
17 DROP nama_panggilan

```

Query History

Scratch Pad

Data Output

id	nama	usia	salary	alamat
[PK] integer	character varying	integer	integer	character varying

Total rows: 0 of 0 Query complete 00:00:00.077 Ln 16, Col 20

5.

The screenshot displays the pgAdmin 4 interface. On the left, the Object Explorer shows the database structure: PostgreSQL 16 > Databases (2) > employee\_db > Schemas (1) > public > Tables (1) > pegawai. The main query editor shows the following SQL script:

```
1 CREATE TABLE pegawai (  
2     id int primary key,  
3     nama varchar,  
4     nama_panggilan varchar,  
5     usia int,  
6     salary int  
7 )  
8  
9 select * from pegawai  
10  
11 --  
12 ALTER TABLE pegawai  
13 ADD alamat varchar  
14  
15 --  
16 ALTER TABLE pegawai  
17 DROP nama_panggilan  
18  
19 --  
20 ALTER TABLE pegawai  
21 ALTER COLUMN salary TYPE bigint
```

The Messages pane at the bottom indicates: "Successfully run. Total query runtime: 144 msec. 0 rows affected." The status bar at the bottom shows "Total rows: 0 of 0" and "Query complete 00:00:00.144".

6.

pgAdmin 4

File Object Tools Help

Object Explorer

Servers (1)

PostgreSQL 16

Databases (2)

employee\_db

Casts

Catalogs

Event Triggers

Extensions

Foreign Data Wrappers

Languages

Publications

Schemas (1)

public

Aggregates

Collations

Domains

FTS Configurations

FTS Dictionaries

FTS Parsers

FTS Templates

Foreign Tables

Functions

Materialized Views

Operators

Procedures

Sequences

Tables (1)

pegawai

Columns (5)

id

nama

usia

salary

alamat

Constraints

Indexes

RLS Policies

Rules

Triggers

Dashboard Properties SQL Statistics Dependencies Dependents Processes employee\_db

employee\_db/postgres@PostgreSQL 16

No limit

Query Query History

```

1 CREATE TABLE pegawai(
2     id int primary key,
3     nama varchar,
4     nama_panggilan varchar,
5     usia int,
6     salary int
7 )
8
9 select * from pegawai
10
11 --
12 ALTER TABLE pegawai
13 ADD alamat varchar
14
15 --
16 ALTER TABLE pegawai
17 DROP nama_panggilan
18
19 --
20 ALTER TABLE pegawai
21 ALTER COLUMN salary TYPE bigint
22
23 --
24 INSERT INTO pegawai (id,nama,usia,salary,alamat)
25 VALUES (1,'Ramzan',30,5000000,'Jl. ABC No. 123'),
26 (2,'Boodey',35,6000000,'Jl. CDE No. 123')

```

Scratch Pad

Data Output Messages Notifications

	id [PK] integer	nama character varying	usia integer	salary bigint	alamat character varying
1	1	Ramzan	30	5000000	Jl. ABC No. 123
2	2	Boodey	35	6000000	Jl. CDE No. 123

Total rows: 2 of 2 Query complete 00:00:00.092 Ln 9, Col 1

7.

pgAdmin 4

File Object Tools Help

Object Explorer

- Servers (1)
  - PostgreSQL 16
    - Databases (2)
      - employee\_db
        - Cast
        - Catalogs
        - Event Triggers
        - Extensions
        - Foreign Data Wrappers
        - Languages
        - Publications
        - Schemas (1)
          - public
            - Aggregates
            - Collations
            - Domains
            - FTS Configurations
            - FTS Dictionaries
            - FTS Parsers
            - FTS Templates
            - Foreign Tables
            - Functions
            - Materialized Views
            - Operators
            - Procedures
            - Sequences
            - Tables (1)
              - pegawai
                - Columns (5)
                  - id
                  - nama
                  - usia
                  - salary
                  - alamat
                - Constraints
                - Indexes
                - RLS Policies
                - Rules
                - Triggers

employee\_db/postgres@PostgreSQL 16

Query

```

6      salary int
7    )
8
9    select * from pegawai
10
11  --
12  ALTER TABLE pegawai
13  ADD alamat varchar
14
15  --
16  ALTER TABLE pegawai
17  DROP nama_panggilan
18
19  --
20  ALTER TABLE pegawai
21  ALTER COLUMN salary TYPE bigint
22
23  --
24  INSERT INTO pegawai (id,nama,usia,salary,alamat)
25  VALUES (1,'Ramzan',30,5000000,'Jl. ABC No. 123'),
26  (2,'Boodey',35,6000000,'Jl. CDE No. 123')
27
28  --
29  UPDATE pegawai
30  set salary =7000000
31  where nama ='Ramzan'

```

Query History

Scratch Pad

Data Output

|   | id              | nama                   | usia         | salary        | alamat                   |
|---|-----------------|------------------------|--------------|---------------|--------------------------|
|   | id [PK] integer | nama character varying | usia integer | salary bigint | alamat character varying |
| 1 | 2               | Boodey                 | 35           | 6000000       | Jl. CDE No. 123          |
| 2 | 1               | Ramzan                 | 30           | 7000000       | Jl. ABC No. 123          |

Messages

Notifications

Total rows: 2 of 2    Query complete 00:00:00.077    Ln 29, Col 1



8.

pgAdmin 4

File Object Tools Help

Object Explorer

Servers (1)

PostgreSQL 16

Databases (2)

employee\_db

Casts

Catalogs

Event Triggers

Extensions

Foreign Data Wrappers

Languages

Publications

Schemas (1)

public

Aggregates

Collations

Domains

FTS Configurations

FTS Dictionaries

FTS Parsers

FTS Templates

Foreign Tables

Functions

Materialized Views

Operators

Procedures

Sequences

Tables (1)

pegawai

Columns (5)

id

nama

usia

salary

alamat

Constraints

Indexes

RLS Policies

Rules

Triggers

Dashboard Properties SQL Statistics Dependencies Dependents Processes employee\_db

employee\_db/postgres@PostgreSQL 16

No limit

Query Query History

```
9 select * from pegawai
10
11 --
12 ALTER TABLE pegawai
13 ADD alamat varchar
14
15 --
16 ALTER TABLE pegawai
17 DROP nama_panggilan
18
19 --
20 ALTER TABLE pegawai
21 ALTER COLUMN salary TYPE bigint
22
23 --
24 INSERT INTO pegawai (id,nama,usia,salary,alamat)
25 VALUES (1,'Ramzan',30,5000000,'Jl. ABC No. 123'),
26 (2,'Boodey',35,6000000,'Jl. CDE No. 123')
27
28 --
29 UPDATE pegawai
30 set salary =7000000
31 where nama ='Ramzan'
32
33 --
34 DROP TABLE pegawai
```

Scratch Pad

Data Output Messages Notifications

DROP TABLE

Query returned successfully in 82 msec.

✓ Query returned successfully in 82 msec. ✕

Total rows: 2 of 2 Query complete 00:00:00.082 Ln 34, Col 1

9.

The screenshot displays the pgAdmin 4 web interface. On the left, the 'Object Explorer' pane shows the database hierarchy: 'Servers (1)' > 'PostgreSQL 16' > 'Databases (1)' > 'postgres'. The main workspace is titled 'postgres/postgres@PostgreSQL 16\*'. It contains a 'Query' editor with two lines of SQL:   
1. `--cara drop database`   
2. `DROP DATABASE employee_db WITH (FORCE);`   
Below the editor is the 'Messages' tab, which shows the execution result:   
DROP DATABASE   
Query returned successfully in 237 msec.   
At the bottom status bar, it indicates 'Total rows: 0 of 0', 'Query complete 00:00:00.237', and 'Ln 2, Col 39'.

10.

The screenshot displays the pgAdmin 4 interface with the following components:

- Object Explorer:** Shows the database structure under 'PostgreSQL 16' > 'employee\_db' > 'public' > 'pegawai'.
- Query Editor:** Contains the following SQL script:

```
1 CREATE TABLE pegawai(  
2     id int primary key,  
3     nama varchar,  
4     nama_panggilan varchar,  
5     usia int,  
6     salary int  
7 )  
8  
9 select * from pegawai  
10  
11 --  
12 ALTER TABLE pegawai  
13 ADD alamat varchar  
14  
15 --  
16 ALTER TABLE pegawai  
17 DROP nama_panggilan  
18  
19 --  
20 ALTER TABLE pegawai  
21 ALTER COLUMN salary TYPE bigint  
22  
23 --  
24 INSERT INTO pegawai (id,nama,usia,salary,alamat)  
25 VALUES (1,'Ramzan',30,5000000,'Jl. ABC No. 123'),  
26 (2,'Boodey',35,6000000,'Jl. CDE No. 123')
```
- Data Output:** A table showing the results of the INSERT query:

|   | id | nama   | usia | salary  | alamat          |
|---|----|--------|------|---------|-----------------|
| 1 | 1  | Ramzan | 30   | 5000000 | Jl. ABC No. 123 |
| 2 | 2  | Boodey | 35   | 6000000 | Jl. CDE No. 123 |
- Status Bar:** Displays 'Total rows: 2 of 2' and 'Query complete 00:00:00.092'.

