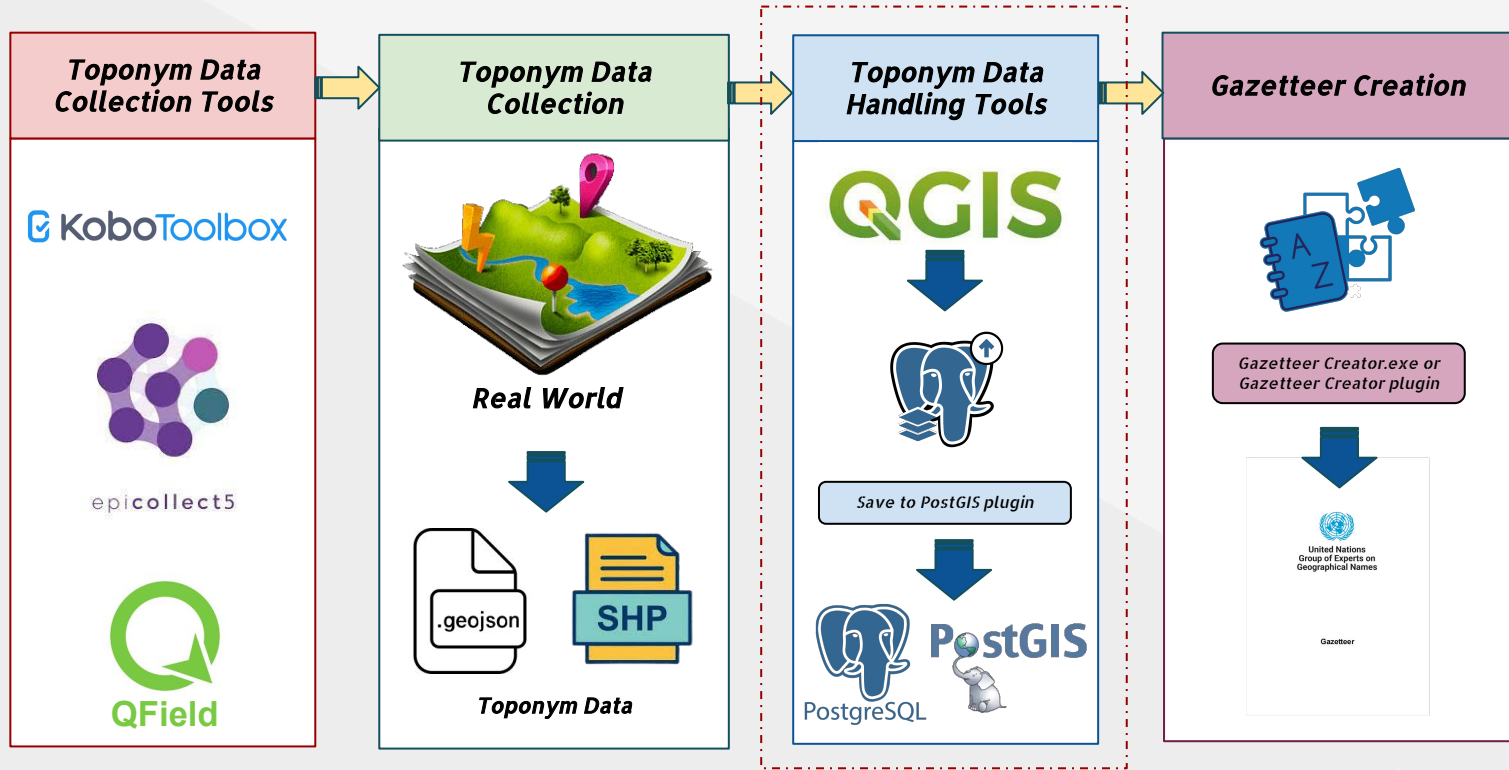




Database Management PostgreSQL+PostGIS

Septin Mulatsih Rezki

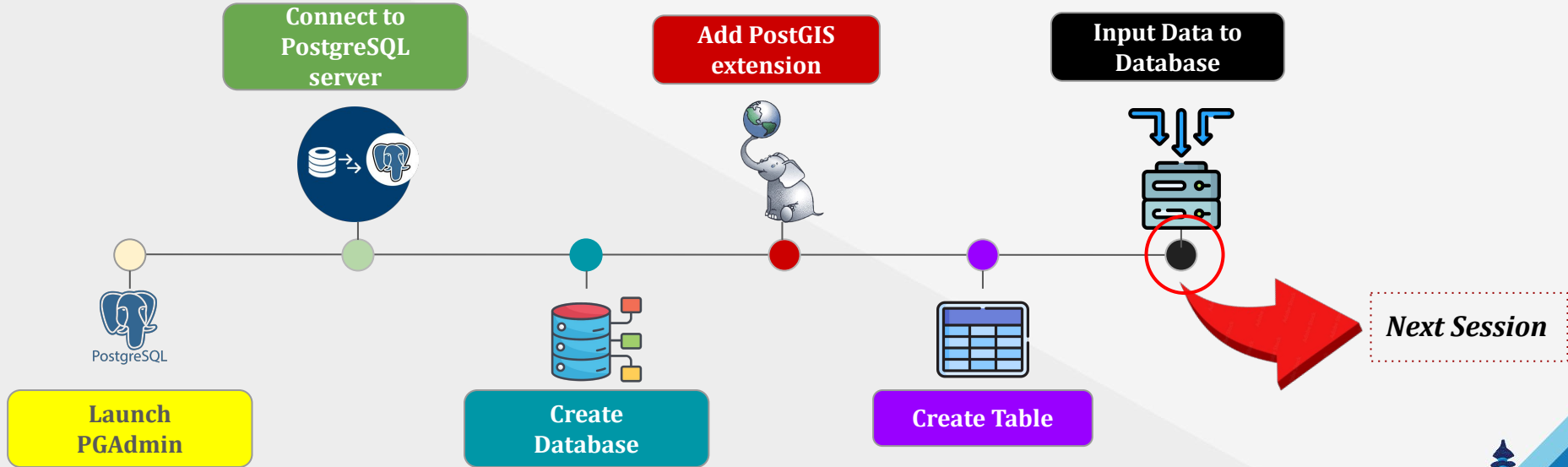
Geographical Names Data Management





Overview

Goals : Create table to store toponyms data





Result Overview

Data Output Messages Notifications

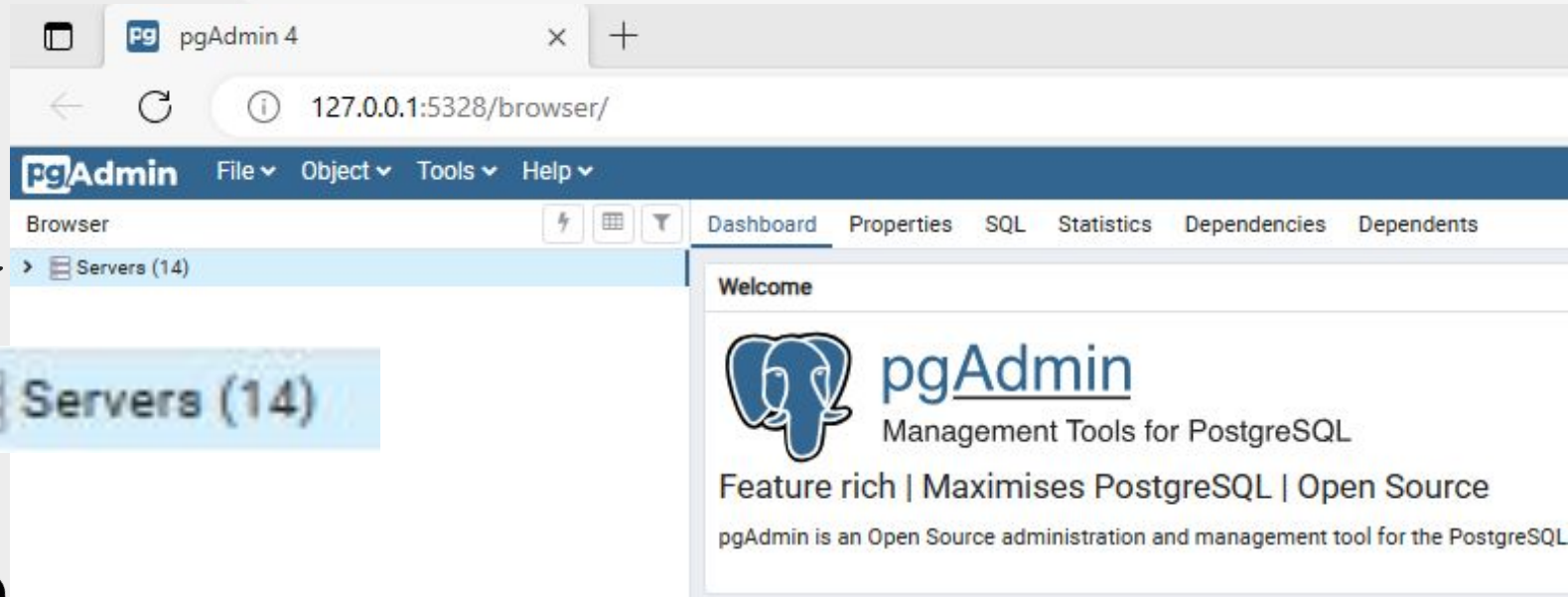
	id_toponym [PK] integer	geom geomet	geom_type character var	fclass character var	ftype character var	lat double precis	long double precis	remark character var	prov_state character var	name character var	var_name character var	prev_name character var	survey_date date	photo_1 character var	photo_2 character var	rec character var	hist_name character var	lang_ori character var
1	17	010500002...	Line	Railway, R...	Road	0	0	[null]	West Java	Jalan Ray...	[null]	[null]	2023-03-27	https://kc...	[null]	https://kc...	[null]	Indonesia
2	18	010400002...	Point	Building	Building(s)	0	0	[null]	West Java	Kantor Ba...	[null]	Kantor Ba...	2023-03-27	https://kc...	https://kc...	https://kc...	Badan Inf...	Indonesia
3	19	010400002...	Point	Building	Building(s)	0	0	[null]	West Java	Kantor Ba...	[null]	Kantor Ba...	2023-03-27	https://kc...	https://kc...	https://kc...	Badan Inf...	Indonesia
4	20	010400002...	Point	Building	Building(s)	0	0	[null]	West Java	Kantor Ba...	[null]	Kantor Ba...	2023-03-27	https://kc...	https://kc...	https://kc...	Badan Inf...	Indonesia
5	32	010400002...	Point	Building	Building(s)	0	0	[null]	West Java	Kantor Ba...	[null]	Kantor Ba...	2023-03-27	https://kc...	https://kc...	https://kc...	Badan Inf...	Indonesia
6	33	010400002...	Point	Building	Building(s)	0	0	[null]	West Java	Kantor Ba...	[null]	Kantor Ba...	2023-03-27	https://kc...	https://kc...	https://kc...	Badan Inf...	Indonesia
7	34	010400002...	Point	Building	Building(s)	0	0	[null]	West Java	Kantor Ba...	[null]	Kantor Ba...	2023-03-27	https://kc...	https://kc...	https://kc...	Badan Inf...	Indonesia
8	35	010400002...	Point	Building	Building(s)	0	0	[null]	West Java	Kantor Ba...	[null]	Kantor Ba...	2023-03-27	https://kc...	https://kc...	https://kc...	Badan Inf...	Indonesia
9	36	010400002...	Point	Building	Building(s)	0	0	[null]	West Java	Kantor Ba...	[null]	Kantor Ba...	2023-03-27	https://kc...	https://kc...	https://kc...	Badan Inf...	Indonesia
10	37	010600002...	Area	Building	Building(s)	0	0	[null]		Kantor BIG	[null]	[null]	2023-03-26	https://kc...	[null]	https://kc...	[null]	Indonesia
11	38	010400002...	Point	Building	Building(s)	0	0	Kantor ini...	West Java	Kantor Ba...	Kantor BIG	Kantor Ba...	2023-03-27	https://kc...	https://kc...	https://kc...	Badan Inf...	Indonesia
12	39	010400002...	Point	Building	Building(s)	-6.48938246	106.8499766	Kantor ini...	West Java	Kantor Ba...	Kantor BIG	Kantor Ba...	2023-03-27	https://kc...	https://kc...	https://kc...	Badan Inf...	Indonesia
13	40	010400002...	Point	Building	Building(s)	-6.48938246	106.8499766	Kantor ini...	West Java	Kantor Ba...	Kantor BIG	Kantor Ba...	2023-03-27	https://kc...	https://kc...	https://kc...	Badan Inf...	Indonesia
14	42	010600002...	Area	Building	Building(s)	0	0	[null]		Kantor BIG	[null]	[null]	2023-03-26	https://kc...	[null]	https://kc...	[null]	Indonesia
15	43	010600002...	Area	Building	Building(s)	0	0	[null]		Kantor BIG	[null]	[null]	2023-03-26	https://kc...	[null]	https://kc...	[null]	Indonesia

Total rows: 38 of 38 Query complete 00:00:00.724 Ln 1, Col 1



Create Database

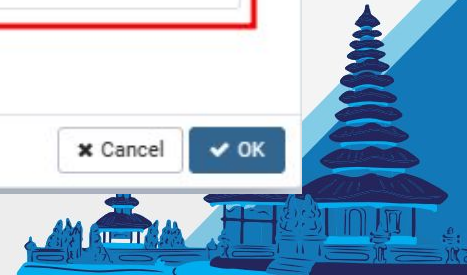
Launch pgAdmin



Create Database

Connect to a PostgreSQL server

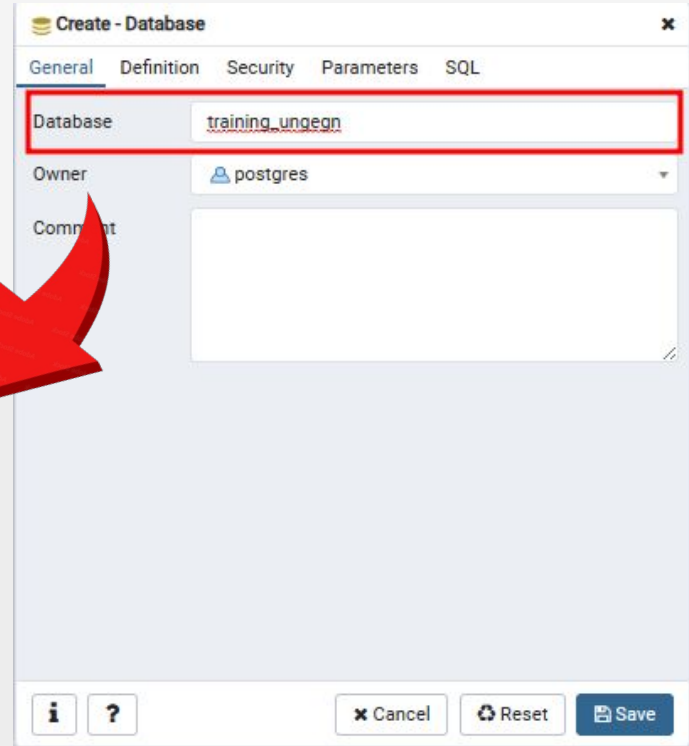
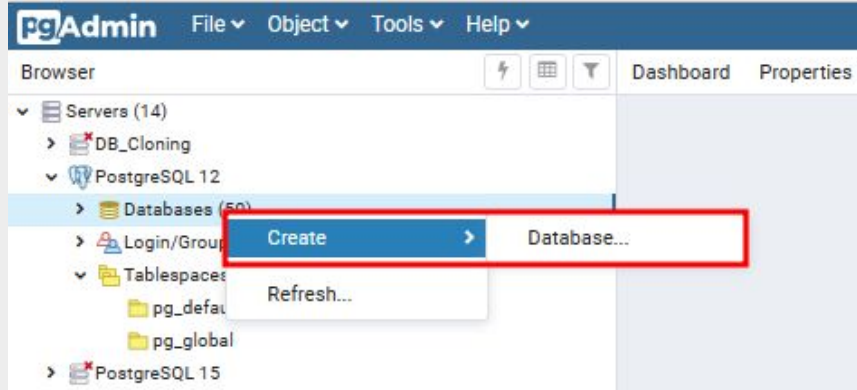
The screenshot shows the pgAdmin 4 web interface in a browser window. The address bar shows the URL `127.0.0.1:11900/browser/`. The main interface has a menu bar with 'File', 'Object', 'Tools', and 'Help'. Below the menu is a 'Browser' pane on the left, which contains a tree view of servers. The 'Servers (14)' folder is expanded, and the 'PostgreSQL 12' server is selected and highlighted in blue. A red box surrounds the entire 'Servers' tree, and a red arrow points to the 'PostgreSQL 12' entry. A hand cursor icon is positioned over the 'PostgreSQL 12' entry. To the right of the browser pane, a 'Connect to Server' dialog box is open. The dialog has a title bar 'Connect to Server' and a message: 'Please enter the password for the user 'postgres' to connect the server - "PostgreSQL 12"'. Below the message is a 'Password' input field with a red box around it, and a 'Save Password' checkbox. At the bottom right of the dialog are 'Cancel' and 'OK' buttons.





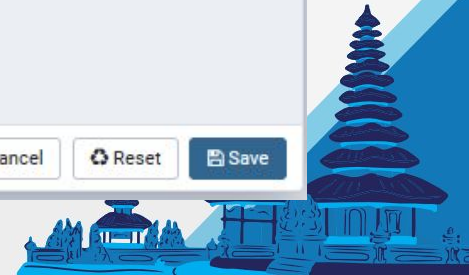
Create Database

Create New Database



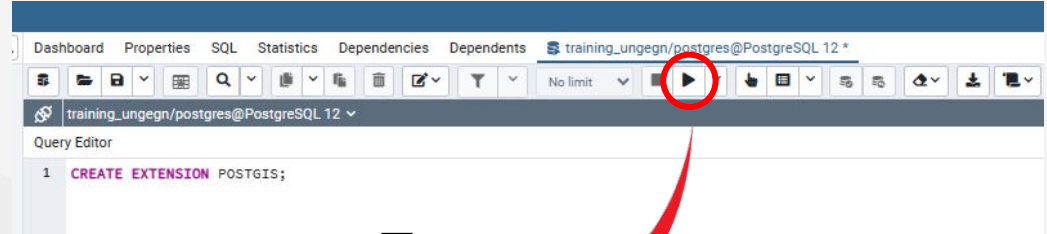
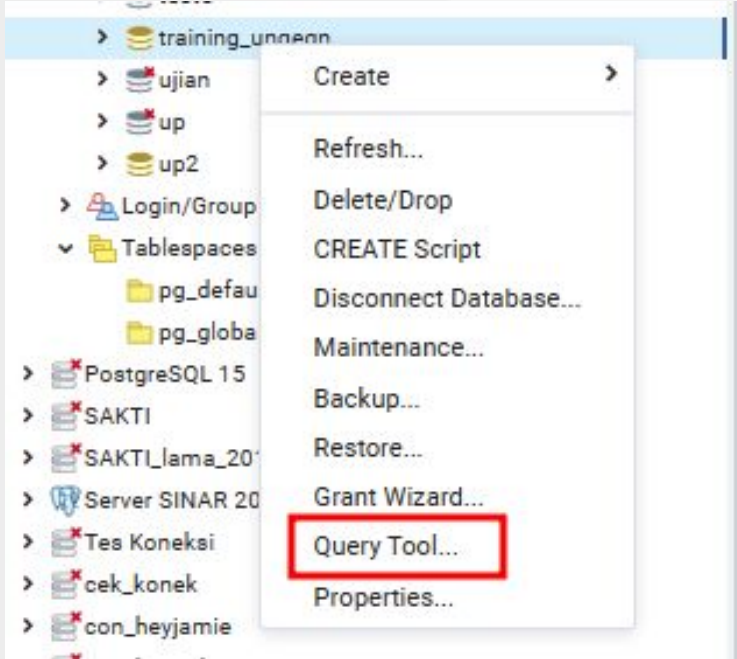
Database name syntax :

- *Must begin with a letter (a-z) or underscore (_)*
- *Subsequent characters in a name can be letters, digits (0-9), or underscores*
- *Maximum name length is 31*
- *Names containing other characters may be formed by surrounding them with double quotes (")*



Create Database

Add PostGIS extension



Execute





Create Table

Column Name	Mandatory (YES/NO)	TYPE	LENGTH
geom_type	Yes	TEXT	40
fclass	Yes	TEXT	40
ftype	Yes	TEXT	75
lat	Yes	Double	
long	Yes	Double	
remark	No	TEXT	254
prov_state	Yes	TEXT	254
regency	Yes	TEXT	254

district	Yes	TEXT	254
name	Yes	TEXT	254
var_name	No	TEXT	254
prev_name	No	TEXT	254
survey_date	Yes	Date	
photo_1	Yes	TEXT	254
photo_2	No	TEXT	254
rec	No	TEXT	254
hist_name	No	TEXT	254
lang_ori	No	TEXT	254





Create Table

Schema name

Table name

List of fields

```
CREATE TABLE public.toponyms (  
  id_toponym serial NOT NULL,  
  geom geometry(Geometry, 4326) NOT NULL,  
  geom_type character varying(40) NOT NULL,  
  fclass character varying(40) NOT NULL,  
  ftype character varying(75) NOT NULL,  
  lat double precision NOT NULL,  
  long double precision NOT NULL,  
  remark character varying(254),  
  prov_state character varying(254) NOT NULL,  
  regency character varying(254) NOT NULL,  
  district character varying(254) NOT NULL,  
  name character varying(254) NOT NULL,  
  var_name character varying(254),  
  prev_name character varying(254),  
  survey_date date NOT NULL,  
  photo_1 character varying(254) NOT NULL,  
  photo_2 character varying(254),  
  rec character varying(254),  
  hist_name character varying(254),  
  lang_ori character varying(254),  
  mean_name character varying(254),  
  surveyor character varying(254) NOT NULL,  
  CONSTRAINT toponym_pkey PRIMARY KEY (id_toponym));
```

Mandatory

Primary Key
(as identifier field)





Run the script

*Copy the table script
creation from the
manual guide page
199-200 (full version)/ 20
(database management module
version) and execute the
script*

The screenshot shows a PostgreSQL query editor window titled "training/postgres@PostgreSQL 12 *". The interface includes a toolbar with icons for file operations, search, and execution. A red circle highlights the "Execute" button (a play icon) in the toolbar. A red arrow points from this button to a red box with the word "Execute" in white text. Below the toolbar, the "Query Editor" tab is active, displaying a SQL script to create a table named "public.toponyms". The script includes various data types and constraints, such as "serial NOT NULL", "geometry", "character varying", "double precision", and "PRIMARY KEY". At the bottom of the editor, a "Messages" panel is visible, showing the output: "CREATE TABLE" and "Query returned successfully in 106 msec." A red arrow points from the "Execute" button to the "Messages" panel.

```
1 CREATE TABLE public.toponyms(  
2 id_toponym serial NOT NULL,  
3 geom geometry(Geometry, 4326) NOT NULL,  
4 geom_type character varying(40) NOT NULL,  
5 fclass character varying(40) NOT NULL,  
6 ftype character varying(75) NOT NULL,  
7 lat double precision NOT NULL,  
8 long double precision NOT NULL,  
9 remark character varying(254),  
10 prov_state character varying(254) NOT NULL,  
11 regency character varying(254) NOT NULL,  
12 district character varying(254) NOT NULL,  
13 name character varying(254) NOT NULL,  
14 var_name character varying(254),  
15 prev_name character varying(254),  
16 survey_date date NOT NULL,  
17 photo_1 character varying(254) NOT NULL,  
18 photo_2 character varying(254),  
19 rec character varying(254),  
20 hist_name character varying(254),  
21 lang_ori character varying(254),  
22 mean_name character varying(254),  
23 surveyor character varying(254) NOT NULL,  
24 CONSTRAINT toponym_pkey PRIMARY KEY (id_toponym));  
25
```

Data Output Explain Messages

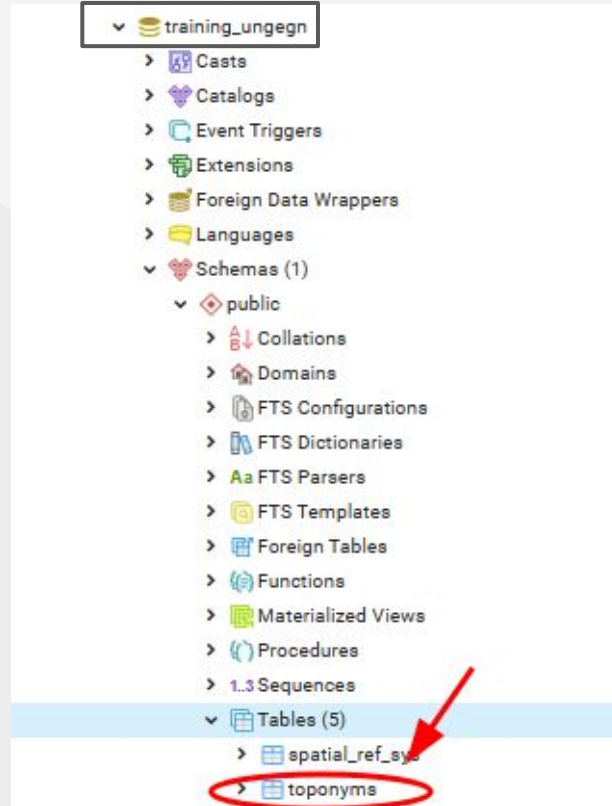
CREATE TABLE

Query returned successfully in 106 msec.





Check the table





View data

Tables (5)

- spatial_ref_sys
- toponyms
- toponyms_ar_xx
- toponyms_ln_xx
- toponyms_pt_xx

Trigger Functions

Types

Views (3)

- geography_column
- geometry_column
- toponyms_view

ujian

up

up2

Login/Group Roles

Tablespaces (2)

- pg_default
- pg_global

PostgreSQL 15

SAKTI

SAKTI_lama_2018

Context Menu:

- Create
- Refresh...
- Count Rows
- Delete/Drop
- Drop Cascade
- Reset Statistics
- Import/Export...
- Maintenance...
- Scripts
- Truncate
- Backup...
- Restore...
- View/Edit Data**
- Query Tool...
- Properties...

Dashboard Properties SQL Statistics Dependencies Dependents ↑ training_ungegn... public.toponyms/training_ungegn/postgres@PostgreSQL 12

public.toponyms/training_ungegn/postgres@PostgreSQL 12

Query Editor

```
1 SELECT * FROM public.toponyms
2
```

Query Editor Query History Notifications

Data Output	Explain	Messages												
id_toponym PK integer	geom geometry	geom_type character varying (40)	fdas character varying (40)	flpe character varying (75)	lat double precision	long double precision	remark character varying (254)	country character varying (254)	prov_state character varying (254)	regency character varying (254)	district character varying (254)			





End Session

