

Lab-4

2021101107

1. PgAdmin with spatial reference systems

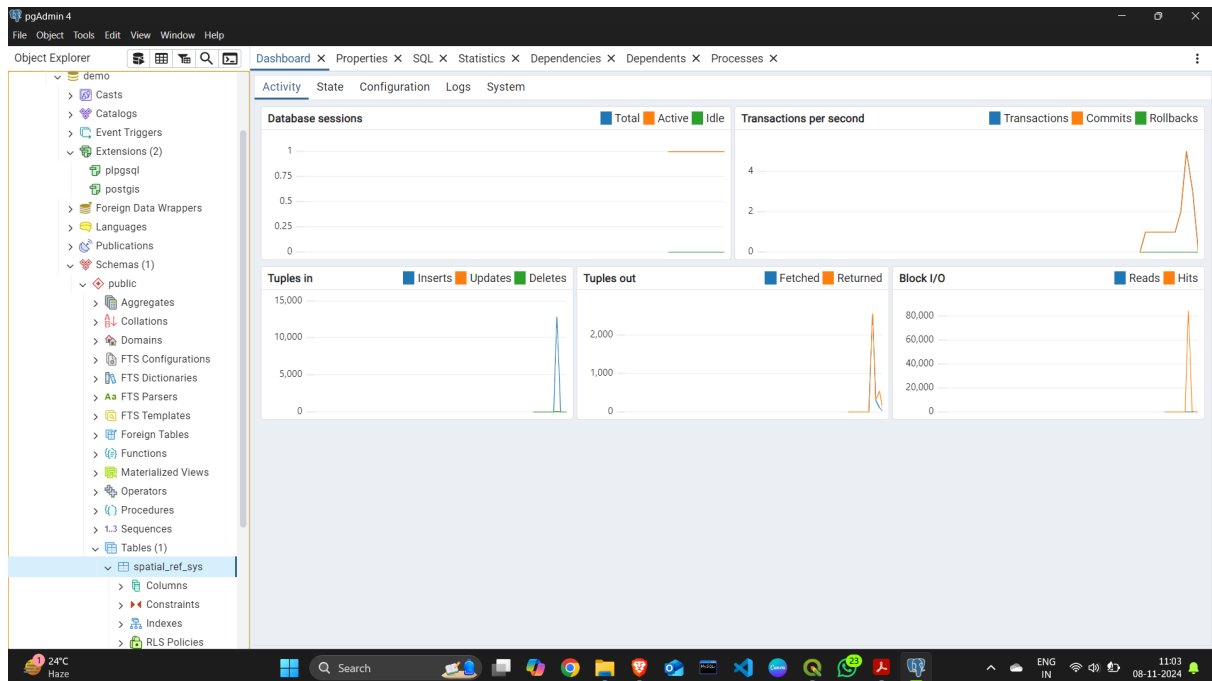
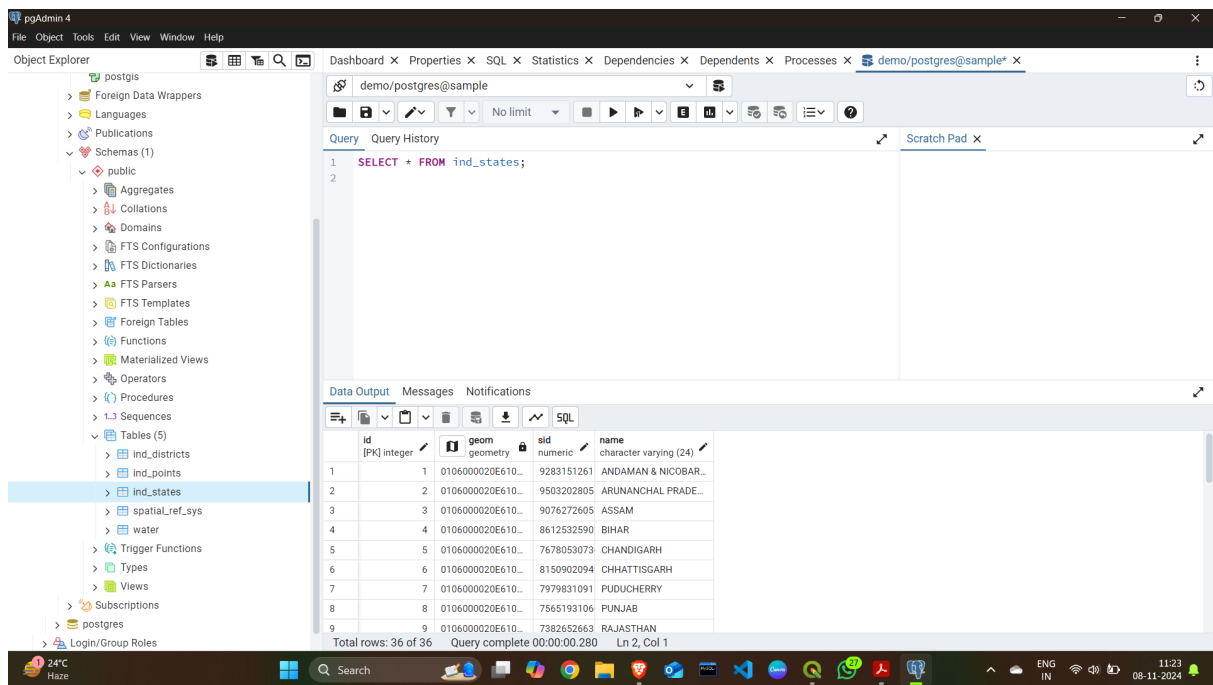


Table view of State Data (Simple query)



QUERIES

1. SELECT st_area(the_geom) FROM ind_states; (displays in radians)

The screenshot shows the pgAdmin 4 interface. On the left, the 'Object Explorer' pane displays the database structure, with 'ind_states' selected under the 'public' schema. The main query editor contains the following SQL query:

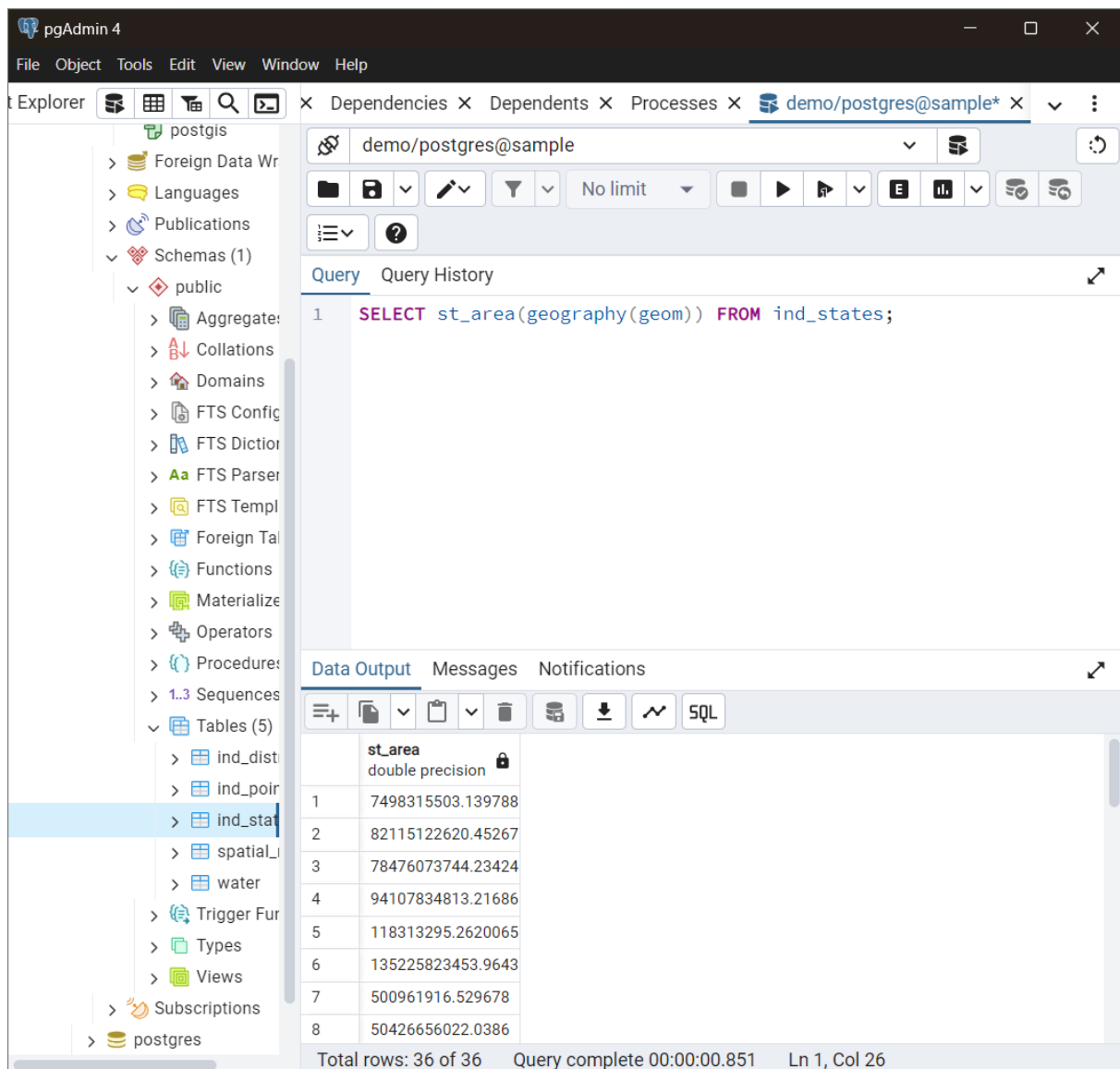
```
1 SELECT st_area(geom) FROM ind_states;
```

The 'Data Output' pane at the bottom shows the results of the query. The results are displayed in a table with two columns: 'st_area' (double precision) and a lock icon. The table contains 8 rows of data:

	st_area double precision
1	0.621139530402834
2	7.536072422049425
3	7.096758499919938
4	8.462570287030449
5	0.011142972106663
6	11.77232781687946
7	0.041593788336631
8	4.755022517877102

The status bar at the bottom indicates 'Total rows: 36 of 36', 'Query complete 00:00:00.081', and 'Ln 1, Col 38'.

2. `SELECT st_area(geography(the_geom)) FROM ind_states;` (displays in m²)



3. `SELECT st_area(geography(the_geom))/1000000, name FROM ind_states;`
 (displays in km²)

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

- postgres
 - Foreign Data Wrappers
 - Languages
 - Publications
 - Schemas (1)
 - public
 - Aggregate Functions
 - Collations
 - Domains
 - FTS Configuration
 - FTS Dictionaries
 - FTS Parsers
 - FTS Templates
 - Foreign Tables
 - Functions
 - Materialized Views
 - Operators
 - Procedures
 - Sequences
 - Tables (5)
 - ind_dist
 - ind_poi
 - ind_states
 - spatial_ref_sys
 - water
 - Trigger Functions
 - Types
 - Views
 - Subscriptions

demo/postgres@sample

Query

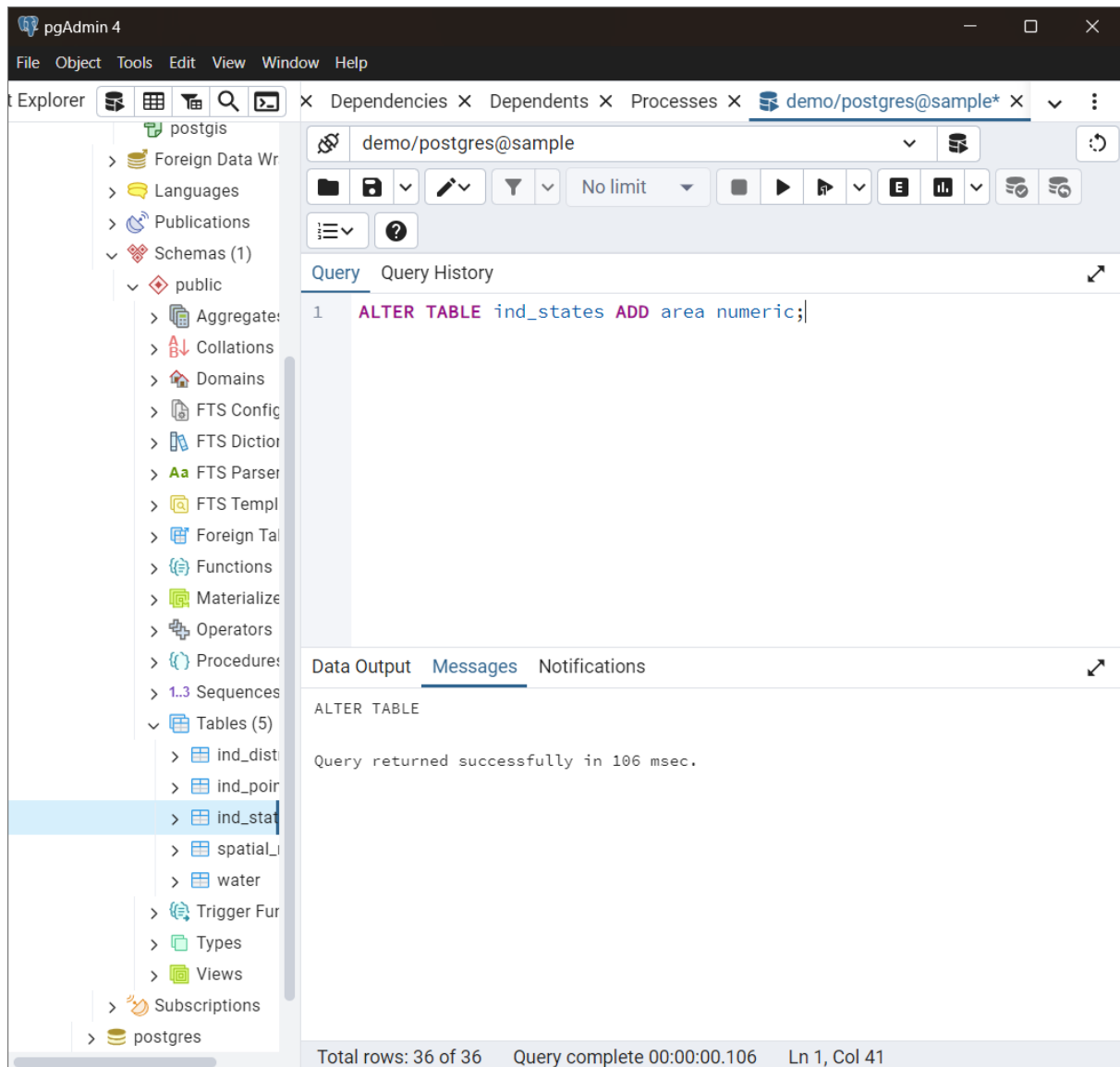
```
1 SELECT st_area(geography(geom))/1000000, name FROM ind_states;
```

Data Output

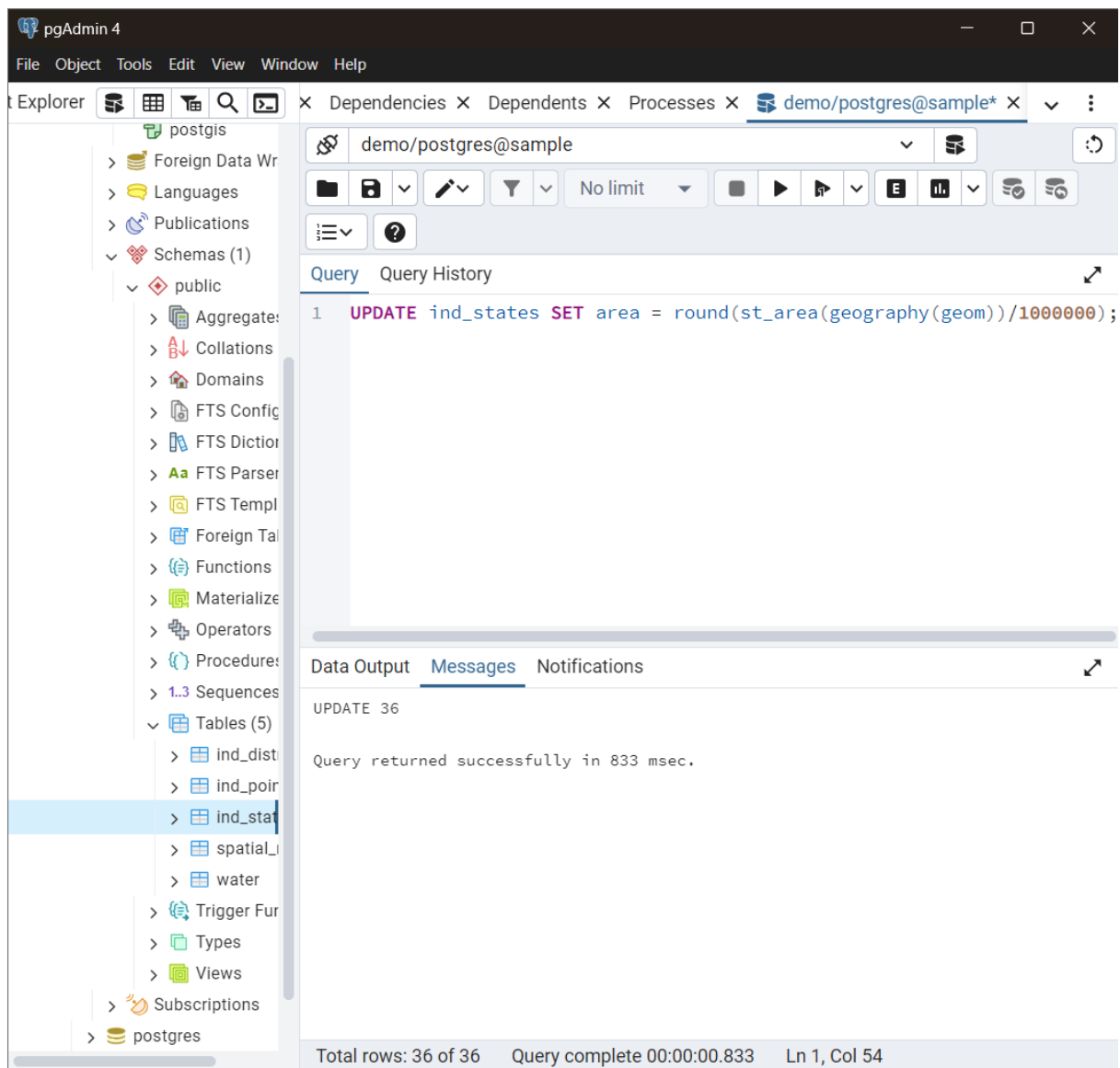
	?column? double precision	name character varying (24)
1	7498.315503139787	ANDAMAN & NICOBAR...
2	82115.12262045266	ARUNANCHAL PRADE...
3	78476.07374423424	ASSAM
4	94107.83481321686	BIHAR
5	118.3132952620065	CHANDIGARH
6	135225.8234539643	CHHATTISGARH
7	500.961916529678	PUDUCHERRY
8	50426.65602203859	PUNJAB

Total rows: 36 of 36 Query complete 00:00:00.893 Ln 1, Col 26

4. ALTER TABLE ind_states ADD area numeric;



5. UPDATE ind_states SET area =
round(st_area(geography(the_geom))/1000000);



6. SELECT * FROM ind_states;

pgAdmin 4

File Object Tools Edit View Window Help

Object Explorer

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 - Collations
 - Domains
 - FTS Configuration
 - FTS Dictionaries
 - FTS Parser
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 - Tables (5)
 - ind_dist
 - ind_poi
 - ind_states**
 - spatial_ref_sys
 - water
 - Trigger Functions
 - Types
 - Views
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demo/postgres@sample

Query

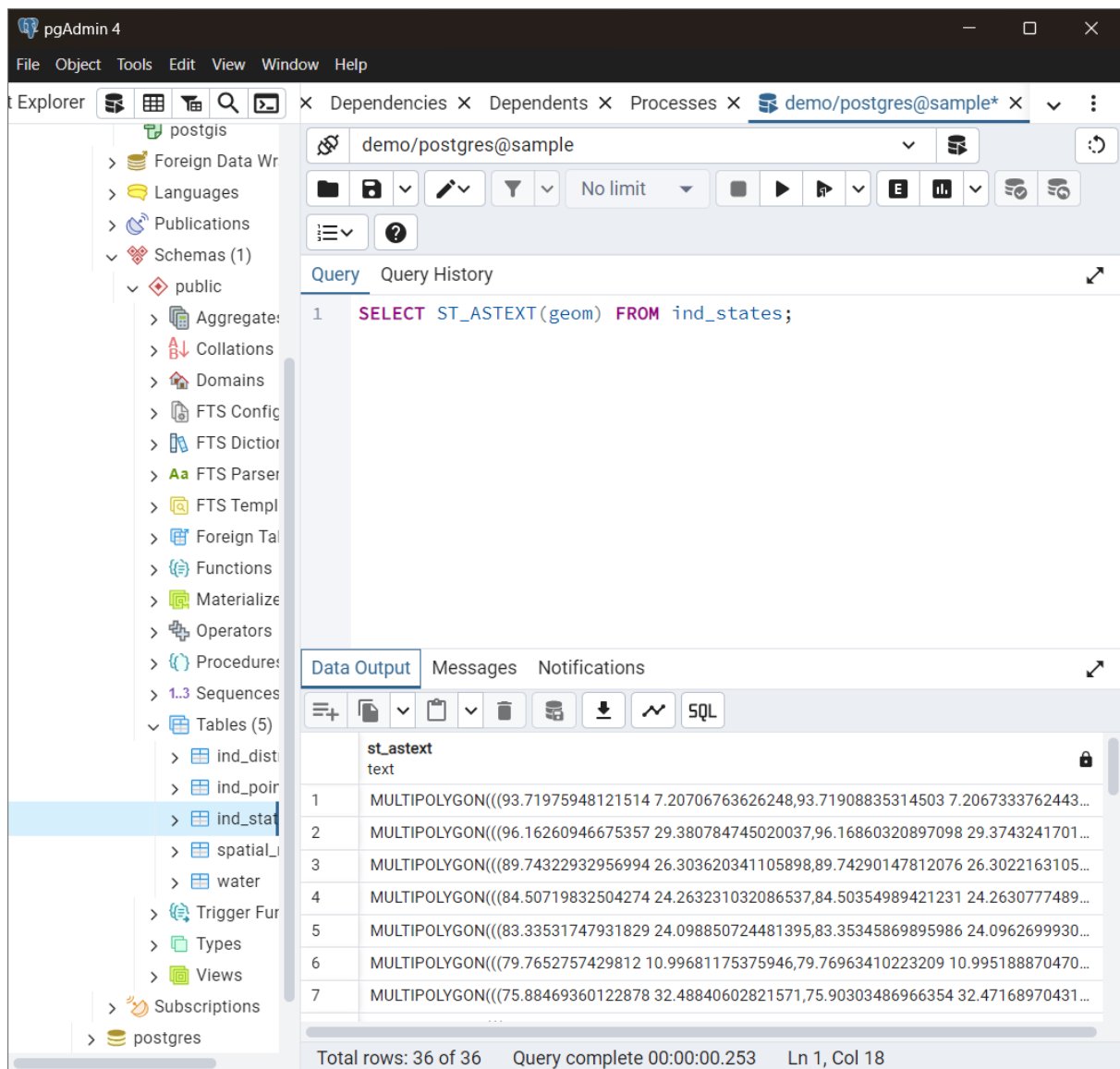
```
1 SELECT * FROM ind_states;
```

Data Output

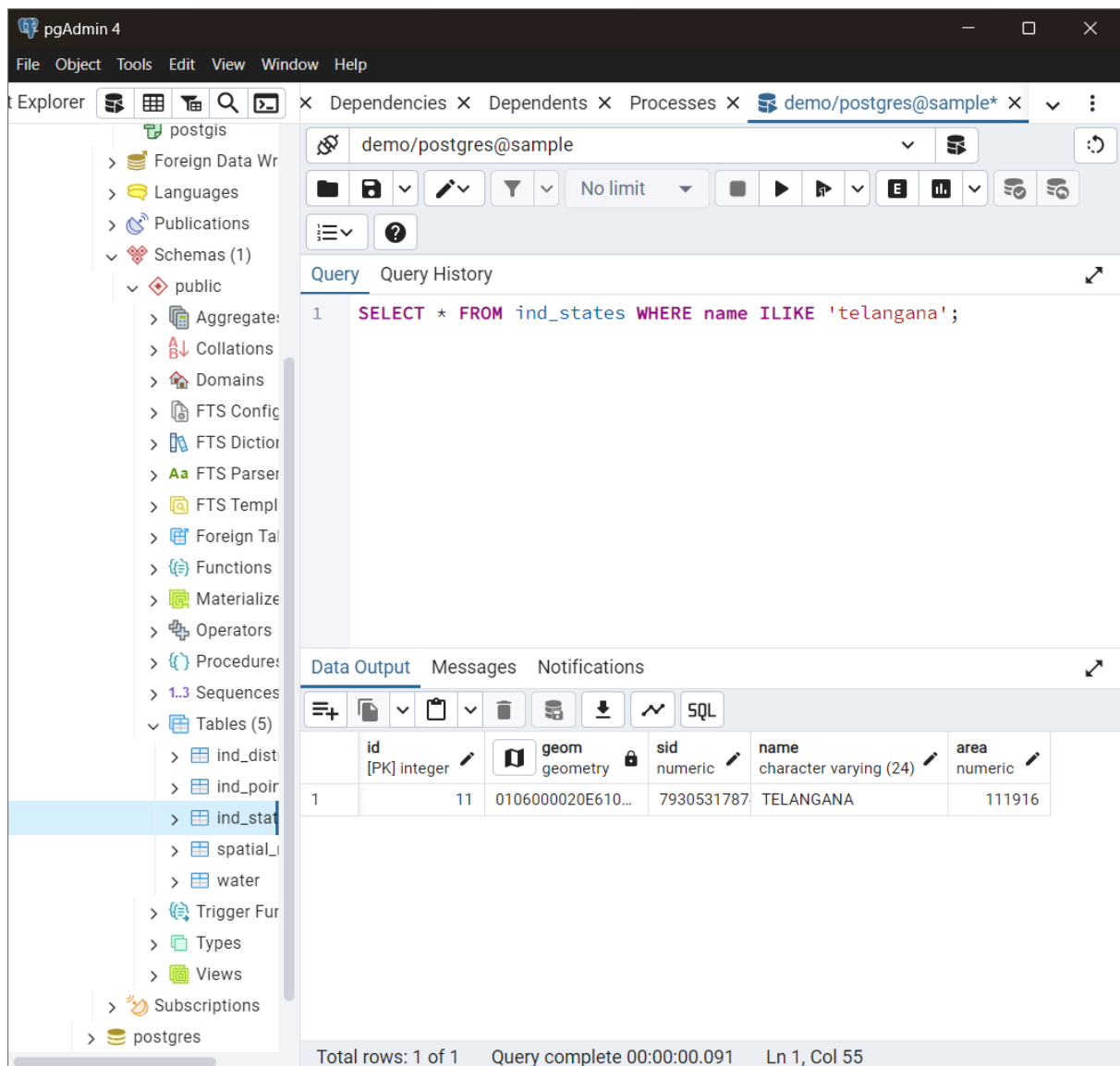
	id [PK] integer	geom geometry	sid numeric	name character varying (24)	area numeric
1	1	0106000020E610...	9283151261	ANDAMAN & NICOBAR...	7498
2	2	0106000020E610...	9503202805	ARUNANCHAL PRADE...	82115
3	3	0106000020E610...	9076272605	ASSAM	78476
4	4	0106000020E610...	8612532590	BIHAR	94108
5	6	0106000020E610...	8150902094	CHHATTISGARH	135226
6	7	0106000020E610...	7979831091	PUDUCHERRY	501
7	8	0106000020E610...	7565193106	PUNJAB	50427
8	5	0106000020E610...	7678053073	CHANDIGARH	118

Total rows: 36 of 36 Query complete 00:00:00.209 Ln 1, Col 26

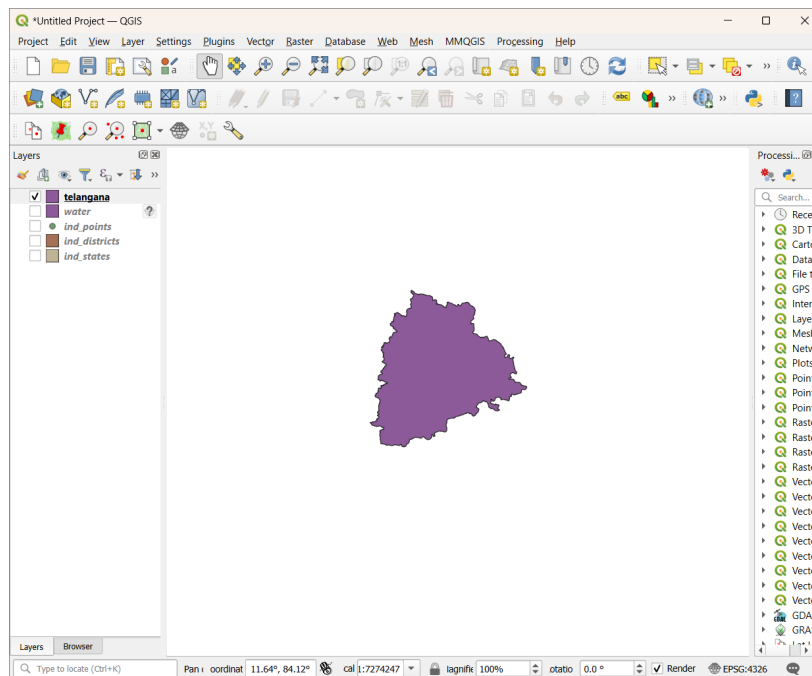
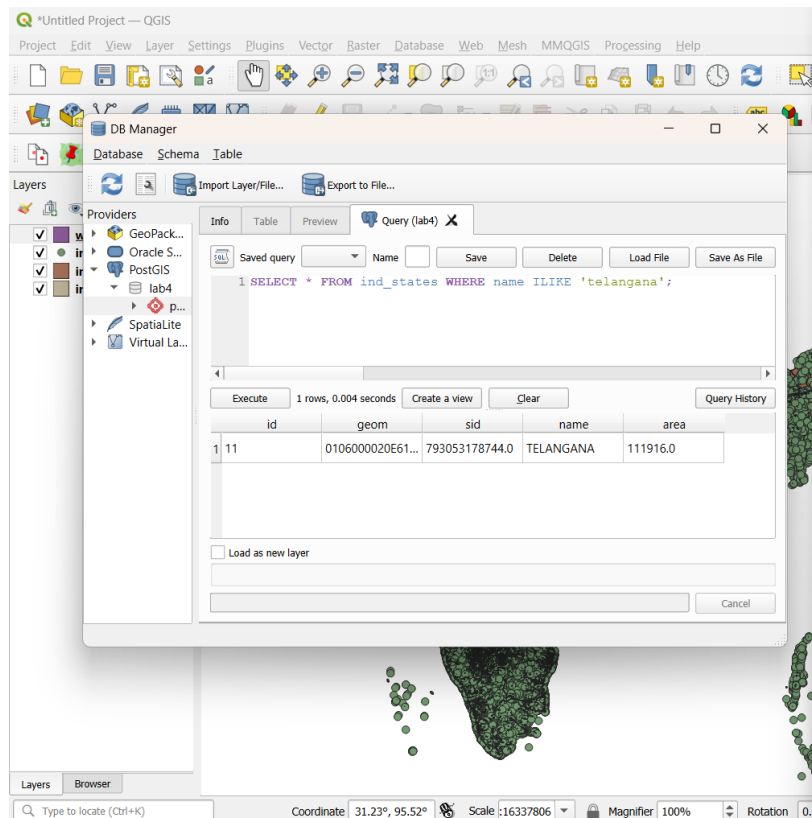
7. SELECT ST_ASTEXT(the_geom) FROM ind_states;



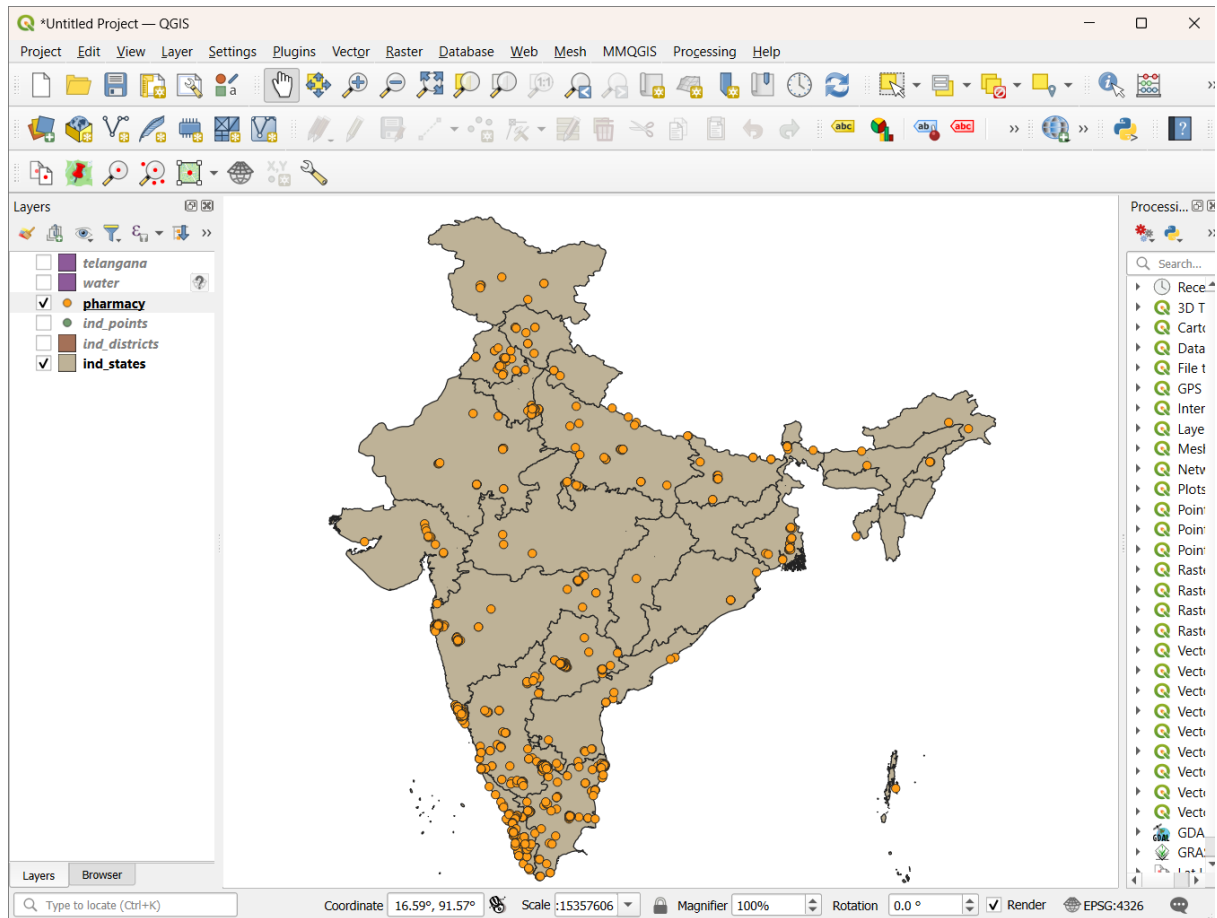
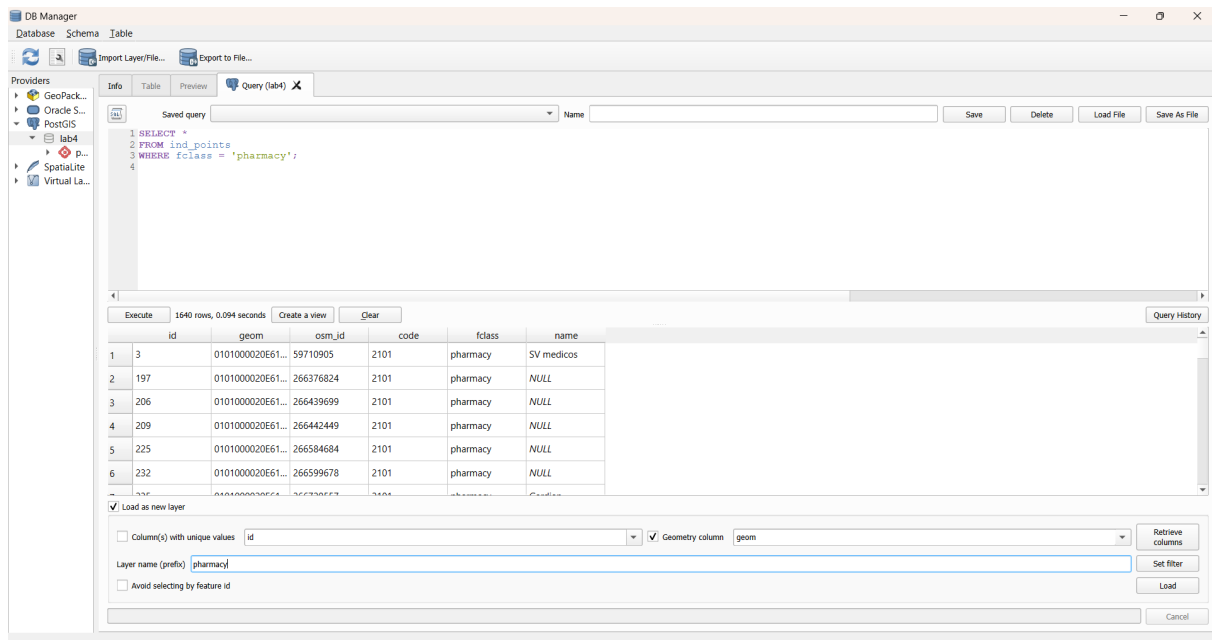
8. `SELECT * FROM ind_states WHERE name ILIKE 'telangana';`



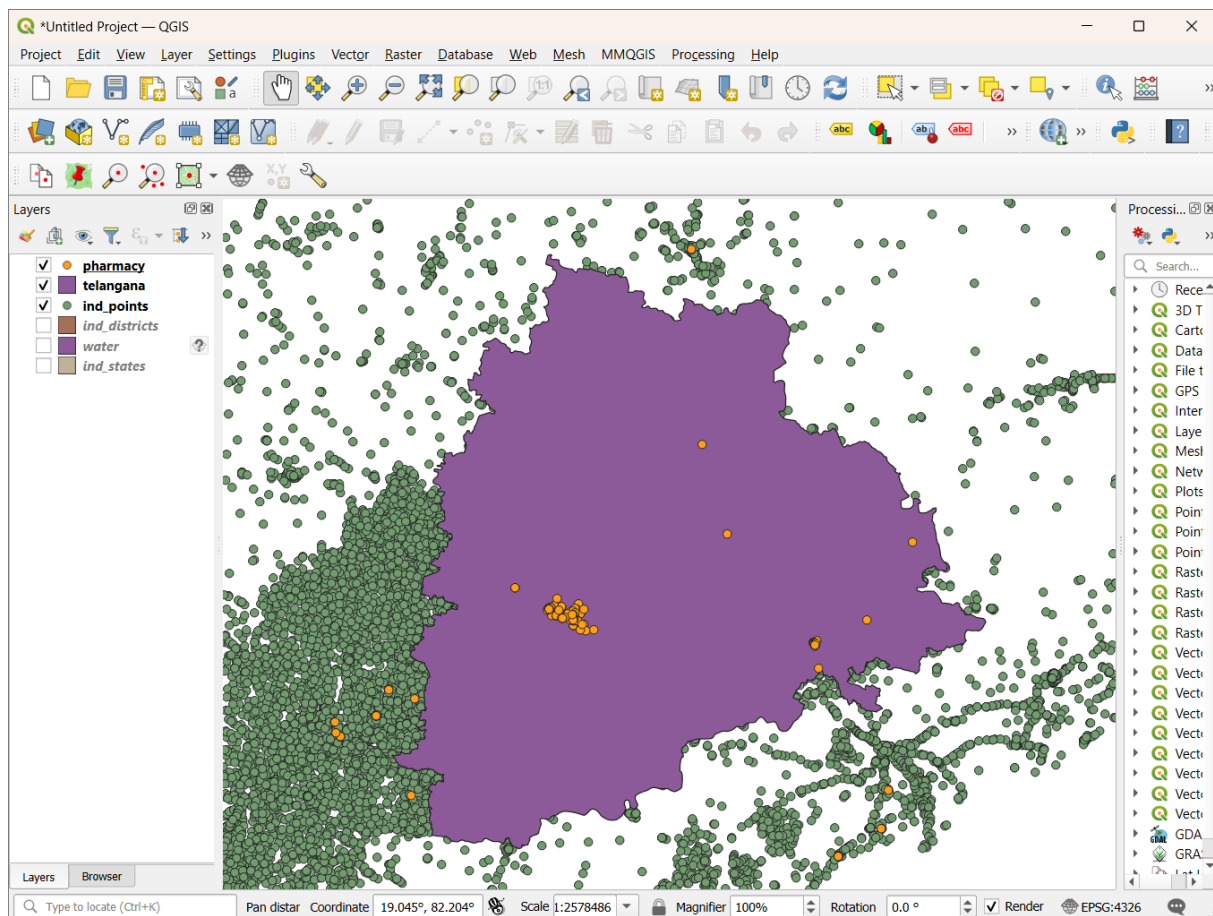
Visualise query output in QGIS



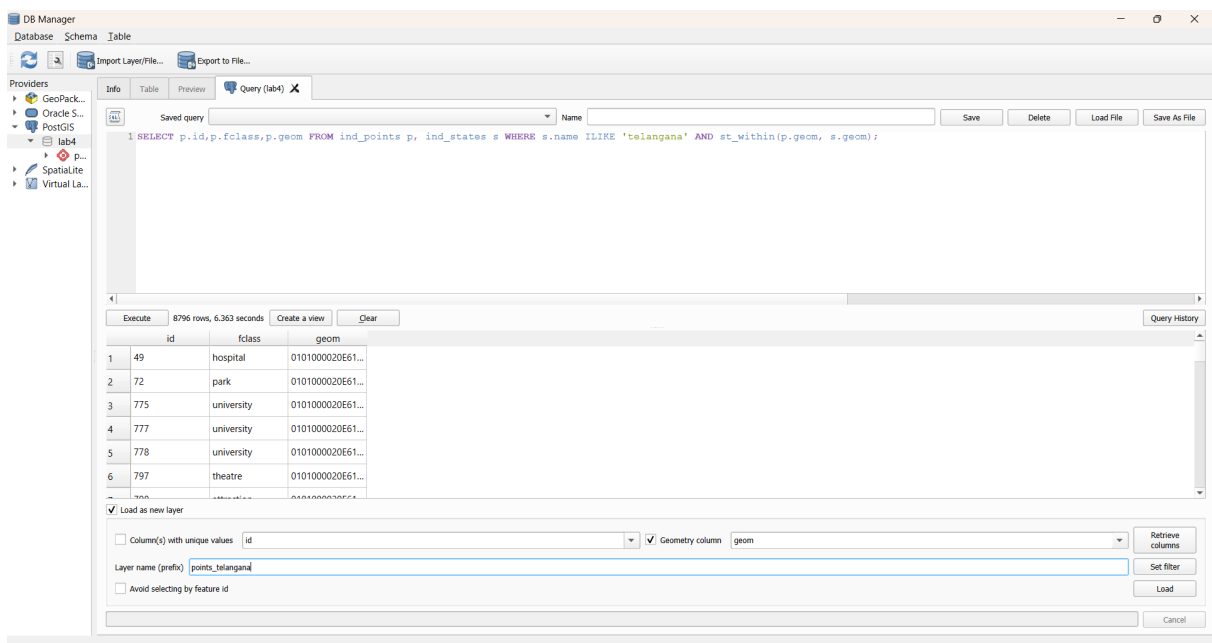
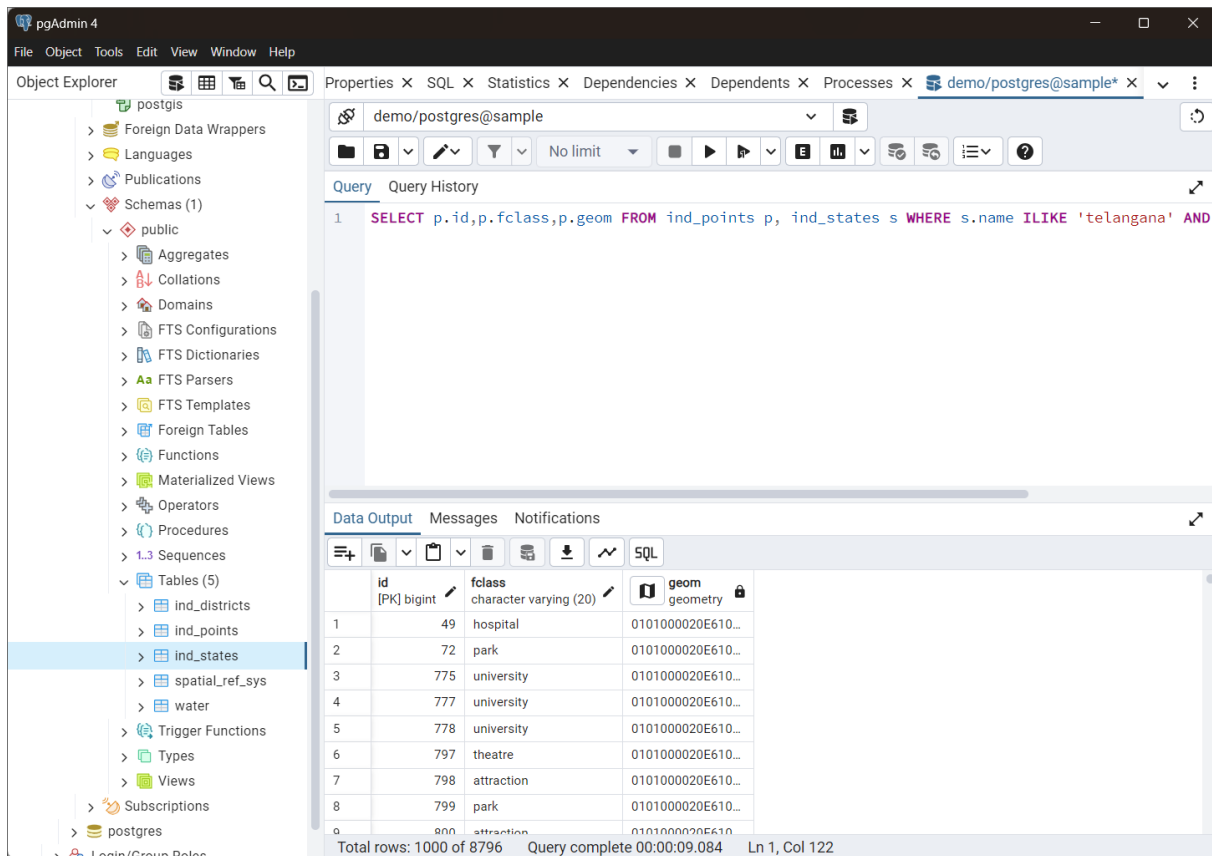
• VISUALISING PHARMACY POINTS

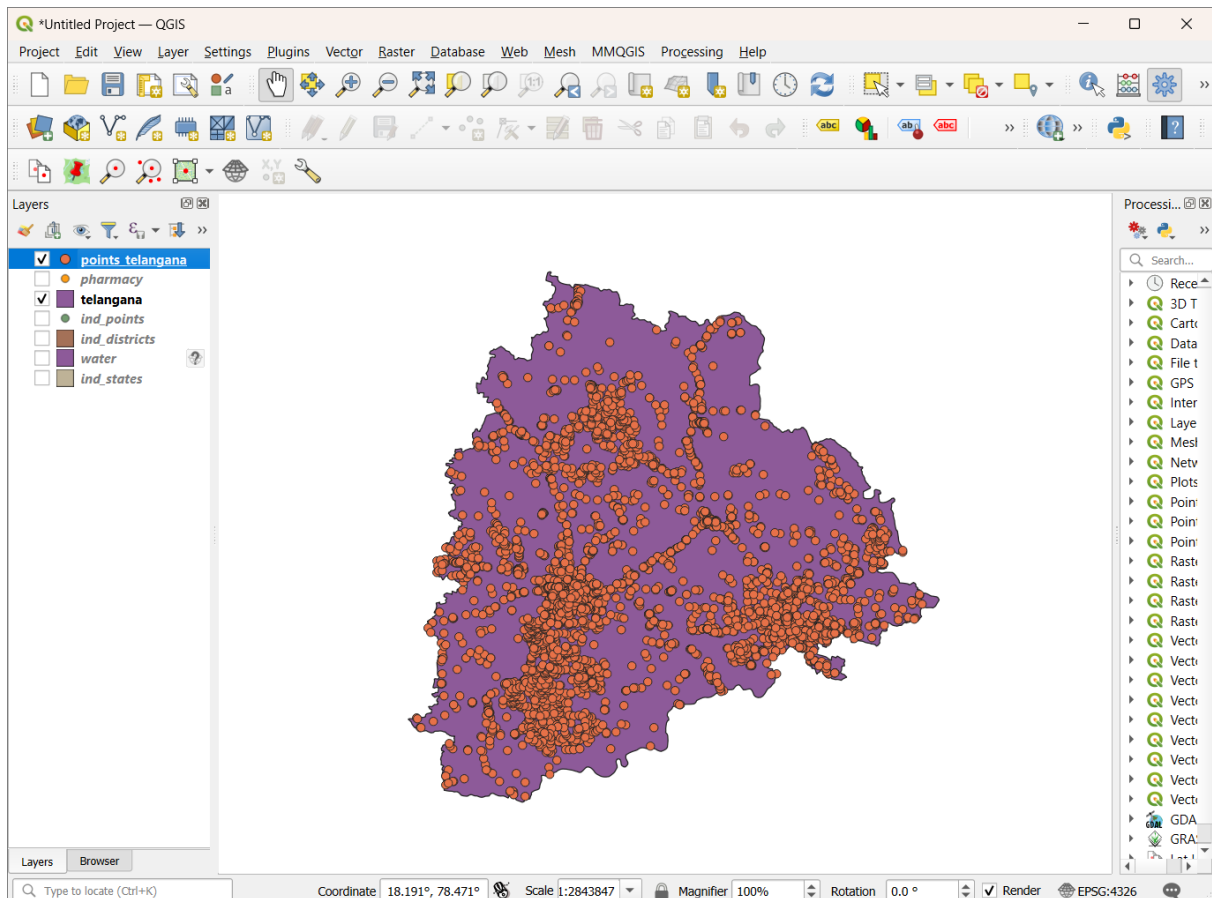


Pharmacy points only in telangana-

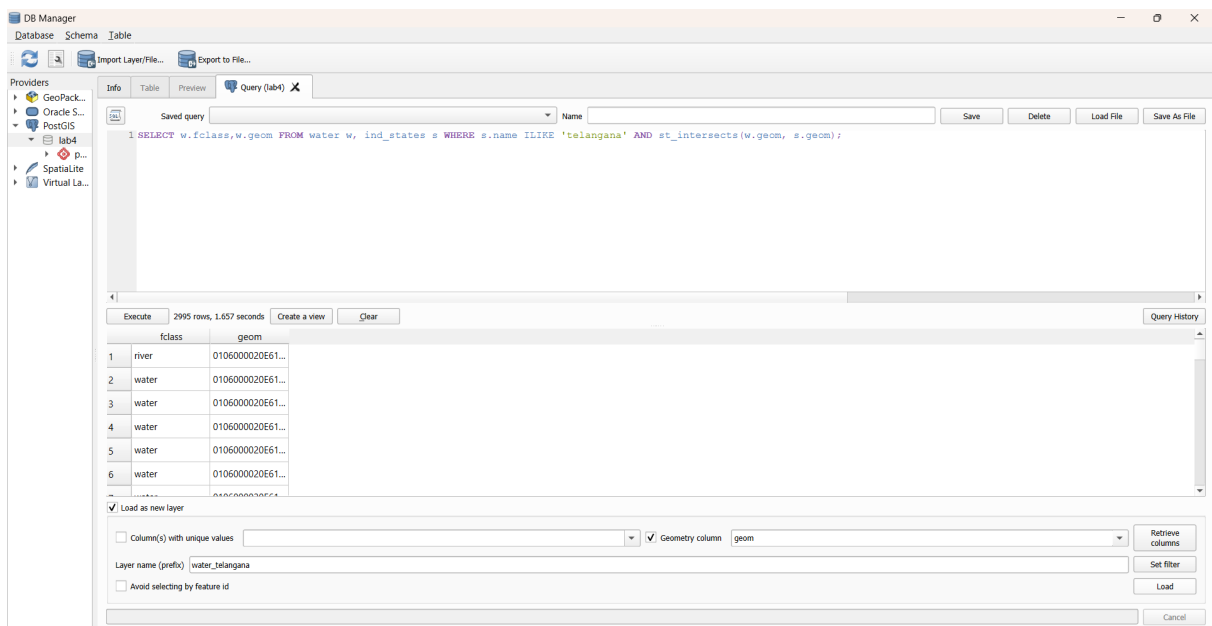


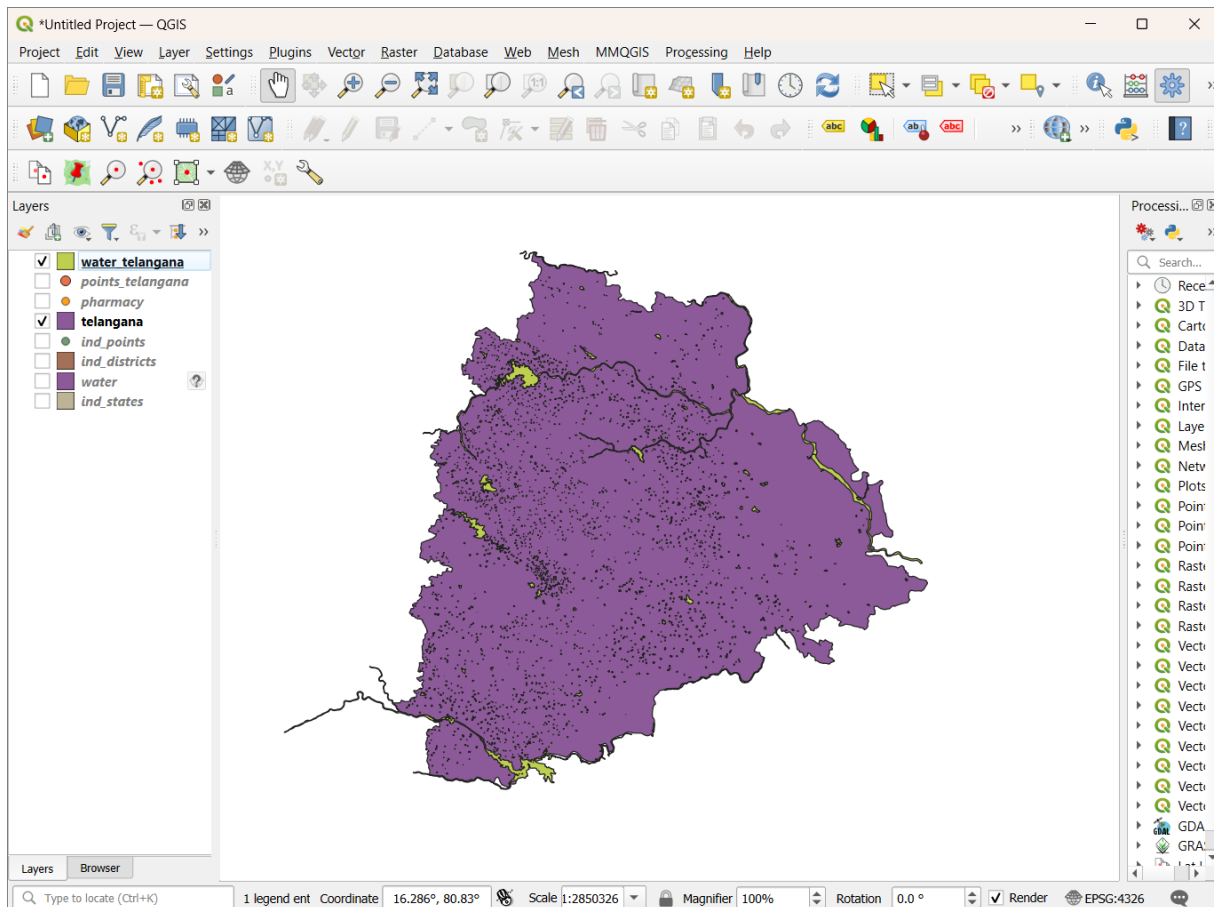
Visualising all types of points in telangana boundary:





Visualising water bodies in telangana-





Visualising districts in telangana:

