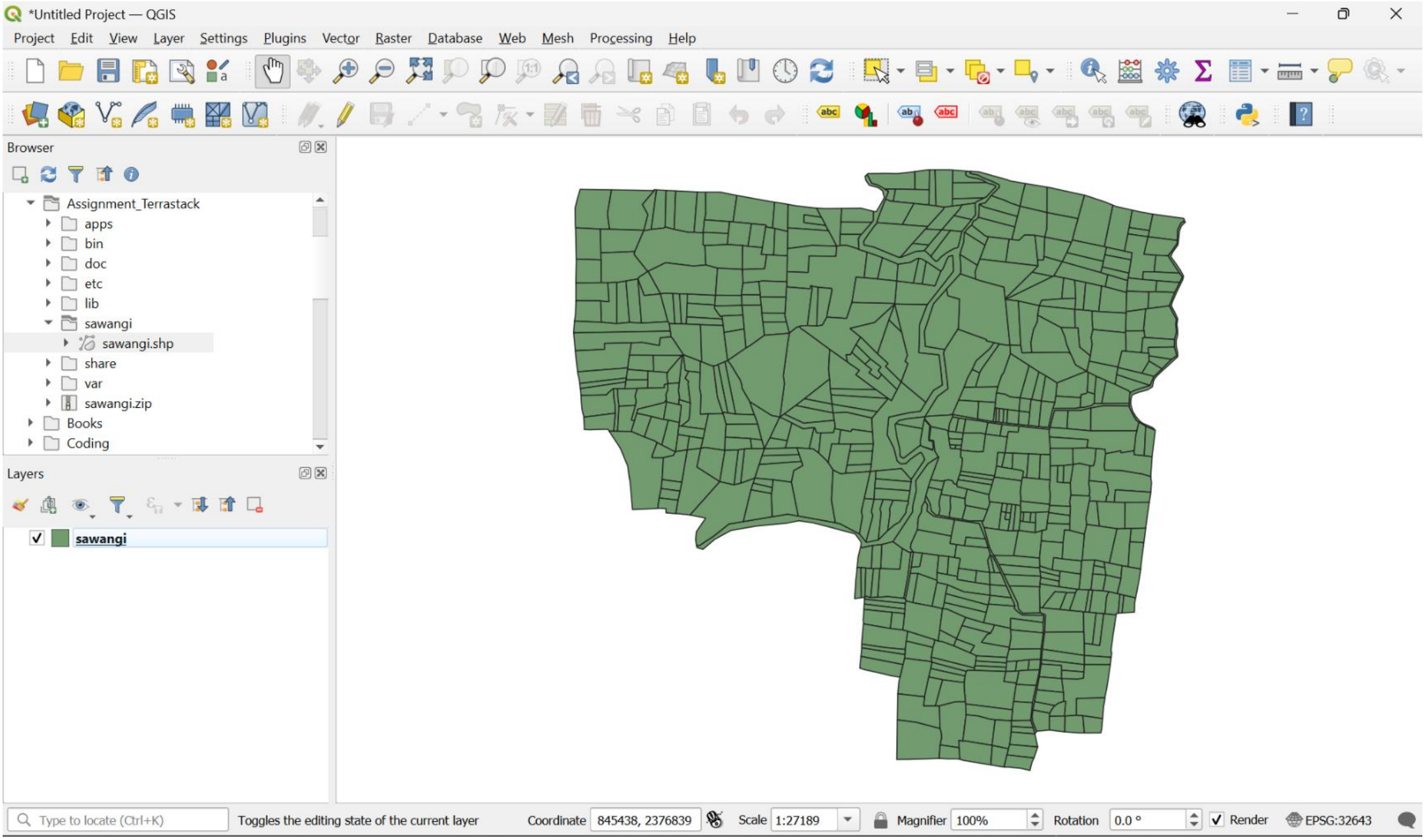
Terrastack Assignment Report

Part 1:

Screenshot of sawangi.shp



Part 2:

Description of Columns and their Datatypes

```
Assignment_Terrastack=# \d sawangi
                                  Table "public.sawangi"
  Column  |           Type            | Collation | Nullable |                Default
----------+---------------------------+-----------+----------+---------------------------------------
 gid      | integer                   |           | not null | nextval('sawangi_gid_seq'::regclass)
 __gid    | double precision          |           |          |
 ccode    | character varying(18)     |           |          |
 pin      | character varying(20)     |           |          |
 dtncode  | character varying(3)      |           |          |
 thncode  | character varying(5)      |           |          |
 vincode  | character varying(6)      |           |          |
 vil_name | character varying(30)     |           |          |
 dtname   | character varying(254)    |           |          |
 thname   | character varying(254)    |           |          |
 cncode11 | character varying(6)      |           |          |
 cncode01 | character varying(8)      |           |          |
 lgd_code | character varying(50)     |           |          |
 ef_code  | character varying(50)     |           |          |
 geom     | geometry(MultiPolygonZM) |           |          |
Indexes:
    "sawangi_pkey" PRIMARY KEY, btree (gid)
    "sawangi_geom_idx" gist (geom)
```

Part 3.1:

Firstly, I have created a new column area and then I used the ST_Area function to calculate the area of each polygon from its geometry values. I further divided the area values by 10000 to convert the area into Hectares. There are a total of 30 polygons whose area is greater than 5Ha.

```
Assignment_Terrastack=# alter table sawangi
Assignment_Terrastack-# add area double precision;
ALTER TABLE
Assignment_Terrastack=# \d sawangi;
                                  Table "public.sawangi"
  Column  |           Type           | Collation | Nullable |               Default
----------+--------------------------+-----------+----------+--------------------------------------
 gid      | integer                  |           | not null | nextval('sawangi_gid_seq'::regclass)
 __gid    | double precision         |           |          |
 ccode    | character varying(18)    |           |          |
 pin      | character varying(20)    |           |          |
 dtncode  | character varying(3)     |           |          |
 thncode  | character varying(5)     |           |          |
 vincode  | character varying(6)     |           |          |
 vil_name | character varying(30)    |           |          |
 dtname   | character varying(254)   |           |          |
 thname   | character varying(254)   |           |          |
 cncode11 | character varying(6)     |           |          |
 cncode01 | character varying(8)     |           |          |
 lgd_code | character varying(50)    |           |          |
 ef_code  | character varying(50)    |           |          |
 geom     | geometry(MultiPolygonZM) |           |          |
 area     | double precision         |           |          |
Indexes:
    "sawangi_pkey" PRIMARY KEY, btree (gid)
    "sawangi_geom_idx" gist (geom)


Assignment_Terrastack=# update sawangi
Assignment_Terrastack-# set area=ST_Area(geom);
UPDATE 501
Assignment_Terrastack=# update sawangi
Assignment_Terrastack-# set area=area/10000;
UPDATE 501
```

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File Object Tools Edit View Window Help

Object Explorer

- Functions
- Materialized Views
- Operators
- Procedures
- Sequences
- Tables (2)
  - sawangi
  - spatial_ref_sys
    - Columns
    - Constraints
    - Indexes
    - RLS Policies
    - Rules
    - Triggers
- Trigger Functions
- Types
- Views
- Subscriptions
- postgres
  - Casts
  - Catalogs
  - Event Triggers
  - Extensions
  - Foreign Data Wrappers

public.sawangi/As... | Assignment_Terrastack/postgres@PostgreSQL 17*

Assignment_Terrastack/postgres@PostgreSQL 17

No limit

Query | Query History

```
1  select*from sawangi where area>5;
2
```

Scratch Pad

Data Output | Messages | Notifications

SQL

		area double precision
1	2E97264241000000000000000FFFFFFFFFFFEFFF02E5AEFADDEB29415DEED7289C2642410000000000000000FFFFFFF...	21.953681976363757
2		5.396552630624638
3		6.25407656012922
4		5.907838655844701
5		5.606468975108305
6		9.807066052985096
7		12.365971971495162
8		7.631123380864068
9		5.390550476813525
10		12.324564790985798

Servers > PostgreSQL 17 > Databases > Assignment_Terrastack > Schemas > public > Tables > sawangi

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Object Explorer

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public.sawangi/As... | Assignment_Terrastack/postgres@PostgreSQL 17*

Assignment_Terrastack/postgres@PostgreSQL 17

No limit

Query | Query History

Scratch Pad

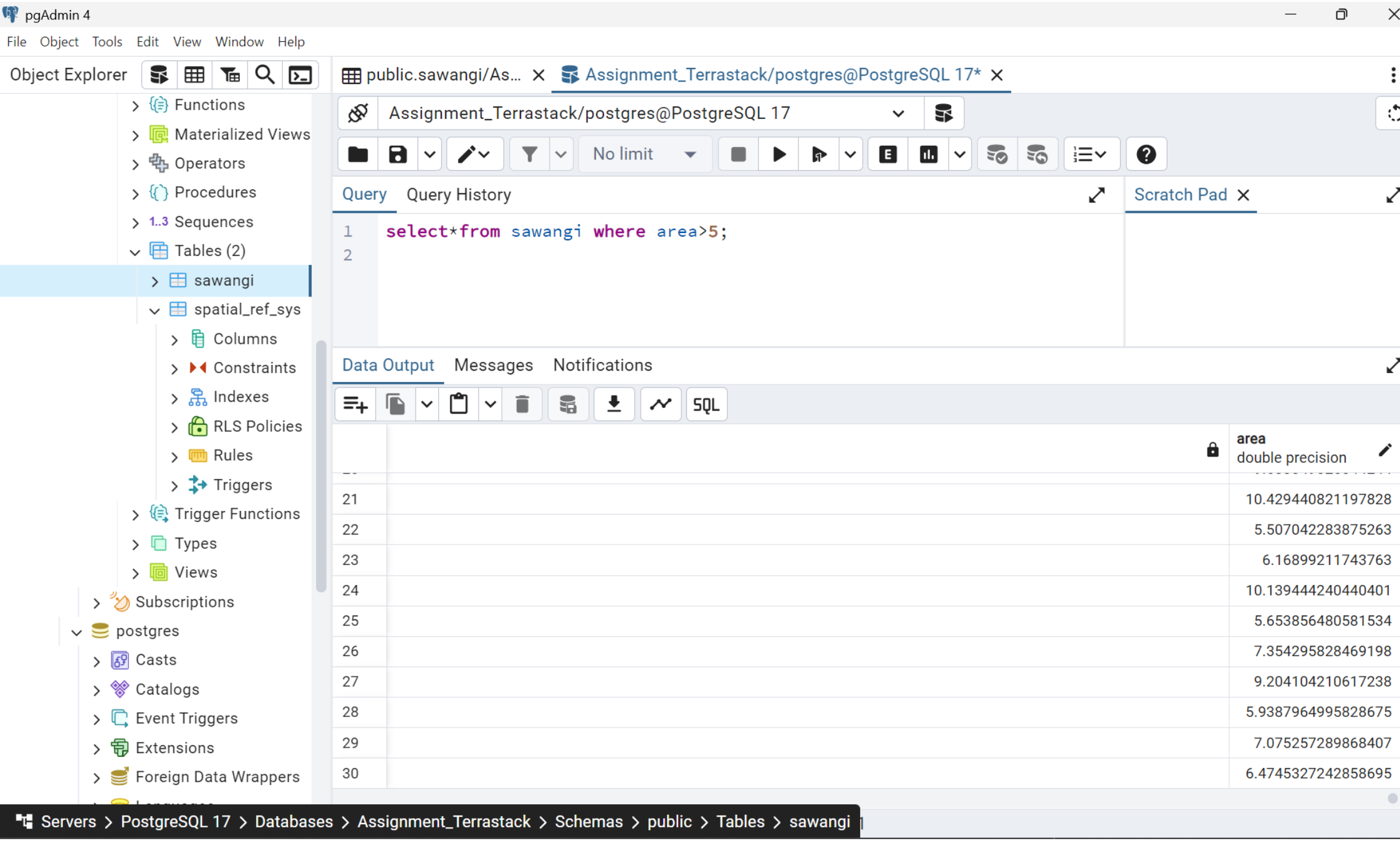
```
1  select*from sawangi where area>5;
2
```

Data Output | Messages | Notifications

SQL

	area double precision
11	6.045233044439859
12	8.831987871436004
13	10.0691007122588
14	11.4933409356306
15	5.171853379105195
16	9.677159410305984
17	13.328772849870884
18	5.140495827873043
19	5.6168754197273465
20	9.633349825844244

Servers > PostgreSQL 17 > Databases > Assignment_Terrastack > Schemas > public > Tables > sawangi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File Object Tools Edit View Window Help
Object Explorer
Functions
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public.sawangi/As...
Assignment_Terrastack/postgres@PostgreSQL 17*
Assignment_Terrastack/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
1 select*from sawangi where area>5;
2
Data Output
Messages
Notifications
SQL
area
double precision
21 10.429440821197828
22 5.507042283875263
23 6.16899211743763
24 10.139444240440401
25 5.653856480581534
26 7.354295828469198
27 9.204104210617238
28 5.9387964995828675
29 7.075257289868407
30 6.4745327242858695
Servers > PostgreSQL 17 > Databases > Assignment_Terrastack > Schemas > public > Tables > sawangi

Part 3.2

Total number of columns with pin as null were 17.

```
Assignment_Terrastack=# delete from sawangi where pin is null;
DELETE 17
```

Part 3.3

Total Perimeter of Sawangi Village=36482.401 sq. meters