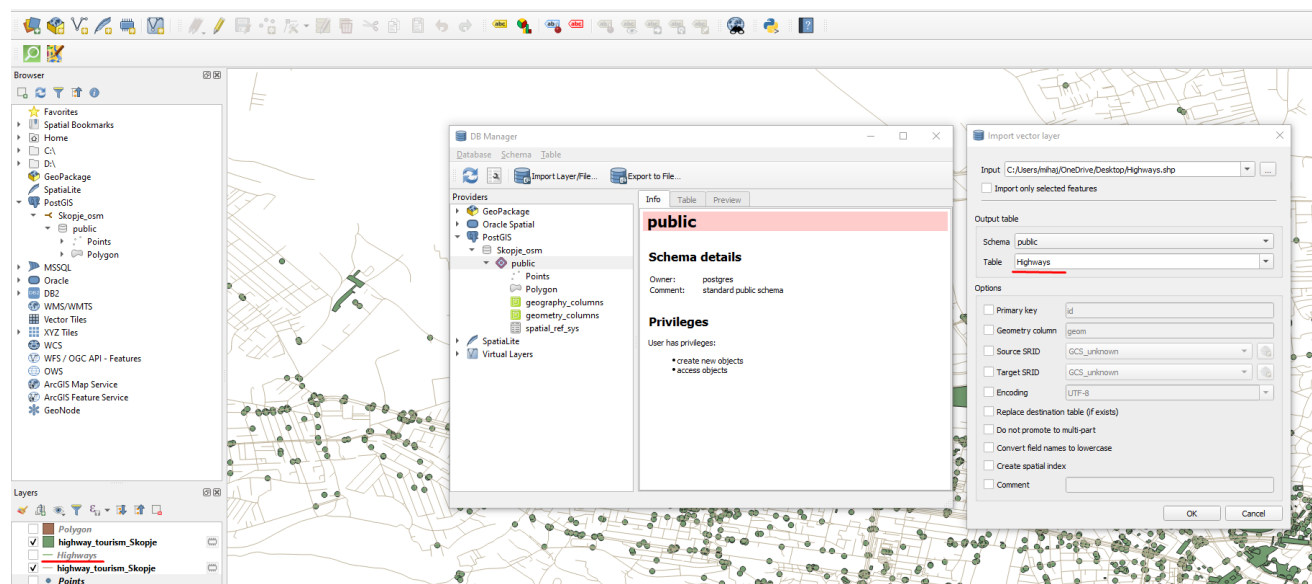


Превземање на OSM податоци

За превземање на OSM податоците го користевме софтверот QGIS, така што преку додатокот QuickOSM ги екстрактиравме потребните податоци за градот Скопје. QuickOSM работи со python и го користи Overflow API-то на OpenStreetMap преку кое се овозможува филтрирање на податоците за соодветните потреби на проектот. Податоците кои ние ги екстрактиравме беа тие со таговите highway, tourism и amenities (restaurant). Откако ги ги верификувавме податоците со QGIS истите ги експортиравме во посебни shape фајлови и преку остварена конекција со PostgreSQL базаза ги прикачивме во истата како табели.

PostgreSQL базата користи PostGIS додаток за работа со геометриски податоци.

```
{{geocodeArea:Skopje}}-> .area_0;  
(  
  node["highway"](area.area_0);  
  node["tourism"](area.area_0);  
  node["amenity"]="restaurant"(area.area_0);  
  node["amenity"]="bus_station"(area.area_0);  
  node["amenity"]="taxi"(area.area_0);  
  way["highway"](area.area_0);  
  way["tourism"](area.area_0);  
  way["amenity"]="restaurant"(area.area_0);  
  way["amenity"]="bus_station"(area.area_0);  
  way["amenity"]="taxi"(area.area_0);  
  relation["highway"](area.area_0);  
  relation["tourism"](area.area_0);  
  relation["amenity"]="restaurant"(area.area_0);  
  relation["amenity"]="bus_station"(area.area_0);  
  relation["amenity"]="taxi"(area.area_0);  
);  
(.;>);  
out body;
```



QGIS interface showing a map of a city area with various layers. The Layers panel on the left lists:

- Polygon
- highway_tourism_Skopje
- Highways
- highway_tourism_Skopje
- Points
- highway_tourism_Skopje

The main map area displays a street network with green points representing locations. Two dialog boxes are open:

DB Manager

- Database: GeoPackage
- Schema: public
- Table: Polygon

Import vector layer

- Input: C:/Users/mha/OneDrive/Desktop/Polygon.shp
- Import only selected features: ☐
- Output table:
 - Schema: public
 - Table: Polygon
- Options:
 - ☐ Primary key: id
 - ☐ Geometry column: geom
 - ☐ Source SRID: GCS_unknown
 - ☐ Target SRID: GCS_unknown
 - ☐ Encoding: UTF-8
 - ☐ Replace destination table (if exists)
 - ☐ Do not promote to multi-part
 - ☐ Convert field names to lowercase
 - ☐ Create spatial index
 - ☐ Comment

Below the map, three data tables are displayed:

Polygon — Features Total: 199, Filtered: 199, Selected: 0

	full_id	osm_id	osm_type	tourism	amenity	highway	hotel	food
1	r2351791	2351791	relation	attraction	NULL	NULL	NULL	NULL
2	r5360060	5360060	relation	attraction	NULL	NULL	NULL	NULL
3	r5360062	5360062	relation	museum	arts_centre	NULL	NULL	NULL
4	r6712328	6712328	relation	NULL	NULL	service	NULL	NULL
5	r7931877	7931877	relation	NULL	NULL	pedestrian	NULL	NULL
6	r8264320	8264320	relation	NULL	NULL	pedestrian	NULL	NULL
7	w2821242	2821242	way	hotel	NULL	NULL	NULL	NULL
8	w28212860	28212860	way	hotel	NULL	NULL	NULL	NULL
9	w28214395	28214395	way	attraction	NULL	NULL	NULL	NULL
10	w32463336	32463336	way	attraction	NULL	NULL	NULL	NULL
11	w32674255	32674255	way	NULL	restaurant	NULL	NULL	NULL
12	w32674402	32674402	way	NULL	restaurant	NULL	NULL	NULL
13	w32812963	32812963	way	museum	NULL	NULL	NULL	NULL
14	w32854672	32854672	way	hotel	NULL	NULL	NULL	NULL
15	w32886132	32886132	way	hotel	NULL	NULL	NULL	NULL

Points — Features Total: 3502, Filtered: 3502, Selected: 0

	full_id	osm_id	osm_type	tourism	amenity	highway	contact_gh	contact_fa	learnica	inve
1	n170637653	170637653	node	NULL	NULL	traffic_signals	NULL	NULL	NULL	NULL
2	n170640007	170640007	node	NULL	NULL	crossing	NULL	NULL	NULL	NULL
3	n170643837	170643837	node	NULL	NULL	crossing	NULL	NULL	NULL	NULL
4	n170654261	170654261	node	NULL	NULL	traffic_signals	NULL	NULL	NULL	NULL
5	n170654263	170654263	node	NULL	NULL	traffic_signals	NULL	NULL	NULL	NULL
6	n170654265	170654265	node	NULL	NULL	traffic_signals	NULL	NULL	NULL	NULL
7	n170662453	170662453	node	NULL	NULL	traffic_signals	NULL	NULL	NULL	NULL
8	n170664726	170664726	node	NULL	NULL	NULL	NULL	NULL	NULL	NULL
9	n170668056	170668056	node	NULL	NULL	crossing	NULL	NULL	NULL	NULL
10	n170668064	170668064	node	NULL	NULL	traffic_signals	NULL	NULL	NULL	NULL
11	n170668068	170668068	node	NULL	NULL	traffic_signals	NULL	NULL	NULL	NULL
12	n170668079	170668079	node	NULL	NULL	crossing	NULL	NULL	NULL	NULL
13	n170674544	170674544	node	NULL	NULL	crossing	NULL	NULL	NULL	NULL
14	n170674547	170674547	node	NULL	NULL	traffic_signals	NULL	NULL	NULL	NULL
15	n170693690	170693690	node	NULL	NULL	crossing	NULL	NULL	NULL	NULL

Highways — Features Total: 10688, Filtered: 10688, Selected: 0

	full_id	osm_id	osm_type	tourism	highway	motorcar	crossing_i	type	lanes_pos	lanes_pos_1
1	w16536306	16536306	way	NULL	pedestrian	NULL	NULL	NULL	NULL	NULL
2	w16536711	16536711	way	NULL	primary_link	NULL	NULL	NULL	NULL	NULL
3	w16536753	16536753	way	NULL	secondary	NULL	NULL	NULL	NULL	NULL
4	w16536771	16536771	way	NULL	secondary	NULL	NULL	NULL	NULL	NULL
5	w16537171	16537171	way	NULL	residential	NULL	NULL	NULL	NULL	NULL
6	w16537262	16537262	way	NULL	residential	NULL	NULL	NULL	NULL	NULL
7	w16538142	16538142	way	NULL	tertiary	NULL	NULL	NULL	NULL	NULL
8	w16538360	16538360	way	NULL	residential	NULL	NULL	NULL	NULL	NULL
9	w16538762	16538762	way	NULL	primary_link	NULL	NULL	NULL	NULL	NULL
10	w16538835	16538835	way	NULL	primary_link	NULL	NULL	NULL	NULL	NULL