

```
1 SELECT name, ST_ASTEXT(ST_TRANSFORM(way,4326)) FROM planet_osm_polygon WHERE admin_level='4';
```

| Data Output | Explain | Notifications | Messages |
|--|---------|---------------|----------|
| <div> <div>name</div> <div>text</div> </div> <div> <div>st_astext</div> <div>text</div> </div> | | | |
| 1 Žilinský kraj | | | |
| 2 Prešovský kraj | | | |
| 3 Trenčiansky kraj | | | |
| 4 Bratislavský kraj | | | |
| 5 Trnavský kraj | | | |
| 6 Nitriansky kraj | | | |
| 7 Košický kraj | | | |
| 8 Banskobystrický kraj | | | |

```
1 SELECT name, ST_AREA(ST_TRANSFORM(way, 4326), TRUE)/1000000 as st_area
2 FROM planet_osm_polygon
3 WHERE admin_level='4'
4 ORDER BY ST_AREA(ST_TRANSFORM(way, 4326), TRUE) DESC;
```

| | Data Output | Explain | Notifications | Messages | Geometry Viewer |
|---|--|-------------------|---------------|----------|-----------------|
| | <div> <div>name</div> <div>text</div> </div> <div> <div>st_area</div> <div>double precision</div> </div> | | | | |
| 1 | Banskobystrický kraj | 9454.543435236586 | | | |
| 2 | Prešovský kraj | 8971.630508024711 | | | |
| 3 | Žilinský kraj | 6806.915104947965 | | | |
| 4 | Košický kraj | 6751.927549426834 | | | |
| 5 | Nitriansky kraj | 6341.249779583087 | | | |
| 6 | Trenčiansky kraj | 4501.797074560811 | | | |
| 7 | Trnavský kraj | 4145.341158351734 | | | |
| 8 | Bratislavský kraj | 2051.67405276842 | | | |

```
1 INSERT INTO planet_osm_polygon(name, way)
2 VALUES ('dom', ST_TRANSFORM(ST_GEOMFROMTEXT('POLYGON((
3                                     17.0917465 48.1133994,
4                                     17.0918107 48.1132433,
5                                     17.0915210 48.1131908,
6                                     17.0914557 48.1133480,
7                                     17.0917465 48.1133994
8                                     ))', 4326), 3857));|
9
10 SELECT ST_TRANSFORM(way, 4326) FROM planet_osm_polygon WHERE name='dom';
```



5.

Query Editor Query History

```

1 SELECT region.name
2 FROM planet_osm_polygon region, planet_osm_polygon house
3 WHERE house.name='dom' AND ST_INTERSECTS(region.way, house.way) AND region.admin_level='4';

```

Data Output Explain Notifications Messages Geometry Viewer

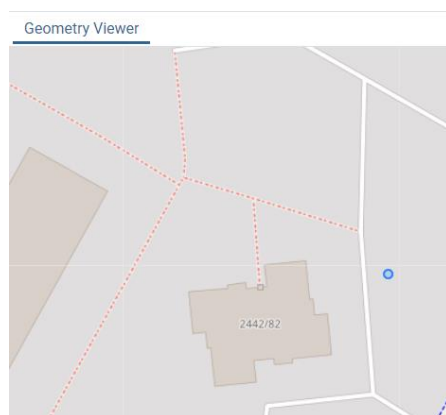
| | name | |
|---|-------------------|--|
| | text | |
| 1 | Bratislavský kraj | |

6. Svoju polohu som získal cez google maps, avšak na obrázku je vidieť, že to nie je úplne presné.

```

1 INSERT INTO planet_osm_point(name, way)
2 VALUES ('poloha', ST_TRANSFORM(ST_GEOMETRYFROMTEXT('POINT(17.09195141416512 48.113376549291026)', 4326), 3857));
3
4 SELECT ST_TRANSFORM(way, 4326) FROM planet_osm_point WHERE name='poloha';

```



7. Podľa výsledku sa doma nenachádzam, to však nie je pravda.

```

1 SELECT ST_CONTAINS(ST_TRANSFORM(home.way, 4326), ST_TRANSFORM(loc.way, 4326))
2 FROM planet_osm_polygon home, planet_osm_point loc
3 WHERE home.name='dom' AND loc.name='poloha';

```

Data Output Explain Notifications Messages Geometry Viewer

| | st_contains | |
|---|-------------|--|
| | boolean | |
| 1 | false | |

8. Od FIIT sa nachádzam necelých 7 km.

```

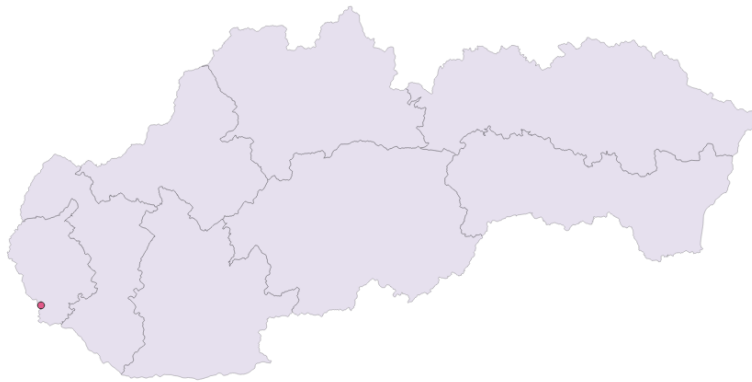
1 SELECT ST_DISTANCE(loc.way, fiit.way)/1000 distance
2 FROM planet_osm_point loc, planet_osm_polygon fiit
3 WHERE loc.name='poloha' AND fiit.name='Fakulta informatiky a informačných technológií STU';

```

Data Output Explain Notifications Messages Geometry Viewer

| | distance | |
|---|-------------------|--|
| | double precision | |
| 1 | 6.958867902811364 | |

9.



10. Najmenší okres je Bratislava I. V dátach je však tento okres pod viacerými menami, takže mi vyhodilo viac výsledkov. Dalo by sa to samozrejme ohraničiť znovupoužitím podmienky.

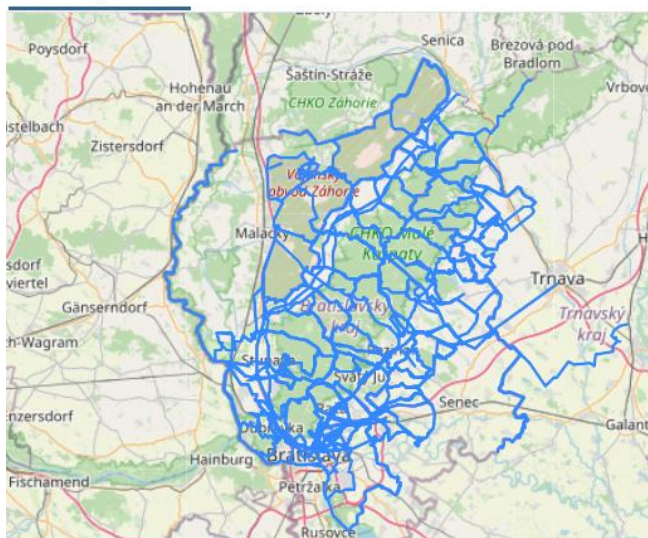
```
1 SELECT name, ST_ASTEXT(ST_CENTROID(ST_TRANSFORM(way, 4326), TRUE)), ST_SRID(ST_CENTROID(ST_TRANSFORM(way, 4326)))
2 FROM planet_osm_polygon
3 WHERE ST_AREA(ST_TRANSFORM(way, 4326), TRUE)/1000000 = (
4 SELECT MIN(ST_AREA(ST_TRANSFORM(way, 4326), TRUE)/1000000) as min
5 FROM planet_osm_polygon
6 WHERE name like 'okres%');
7
```

| | name text | st_astext text | st_srid integer |
|---|---------------------------------------|--|--------------------|
| 1 | okres Bratislava I | POINT(17.097442372606615 48.1536127366079) | 4326 |
| 2 | Bratislava - mestská časť Staré Mesto | POINT(17.097442372606615 48.1536127366079) | 4326 |
| 3 | Staré Mesto | POINT(17.097442372606615 48.1536127366079) | 4326 |

11.

```
1 SELECT ST_TRANSFORM(way, 4326) cesty
2 FROM planet_osm_roads
3 WHERE ST_DISTANCE((
4 SELECT ST_TRANSFORM(ST_INTERSECTION(pezinok.way, malacky.way), 4326)
5 FROM planet_osm_polygon pezinok, planet_osm_polygon malacky
6 WHERE pezinok.name like 'okres Pezinok' AND malacky.name like 'okres Malacky'), ST_TRANSFORM(way, 4326), TRUE)/1000 < 10;
```

Geometry Viewer



12.

13. Mapu je možné zobrazit pomocou vnútorného selectu. Vonkajší select slúži na výmeru oblasti.

```
1 SELECT ST_AREA(okolie.way, TRUE)/1000000 area
2 FROM(
3     SELECT ST_DIFFERENCE(
4         ST_INTERSECTION(
5             ST_BUFFER(
6                 ST_TRANSFORM(p1.way, 4326)::geography,
7                 20000
8             )::geometry,
9             ST_TRANSFORM(p2.way, 4326)
10        ),
11        ST_TRANSFORM(p1.way, 4326)
12    ) as way
13 FROM planet_osm_polygon p1, planet_osm_polygon p2
14 WHERE p1.name='Bratislava' AND p2.name='Slovensko' AND p1.admin_level='6'
15 ) as okolie;
```

