

Worksheet 5

This class is dedicated to installing PostGIS, creating a user and database with spatial extensions. Next, you must load the first table with spatial attributes: taxi_stands.

Write SQL expressions for the following questions:

1. Determine the total number of taxi stands in the taxi_stands table;
2. Determine the location of the taxi stand called "Infante";
3. Determine the name of the two taxi stands closest to each other;
4. Determine the name of the most north, most south, most east and most west taxi stands;
5. Calculate a rectangle that contains all the taxi ranks in the table taxi_stands. Show textually the representation of this polygon and calculate its area in km²;
6. Calculate a convex polygon that contains all the taxi ranks in the table taxi_stands. Calculate its area. It is smaller than the rectangle from the previous question? Why?
7. Calculate the longest distance between two taxi stands;
8. Calculate the location of the centroid point of all taxi stands in the table taxi_stands;
9. Calculate the distance from the centroid point of the previous question to each of the taxi stands;
10. Show the name of the taxi stands that are less than 1 km from the point centroid point of all taxi stands.