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IDCE 376  
Lab 1

***Introduction***

The purpose of this assignment is to learn how to do basic setup and analysis tasks for spatial data in PostgreSQL, and how to connect those data to QGIS. I chose to focus on Baltimore, the largest city in Maryland, USA. Code chunks referred to in this document are available in code.txt.

***Methods***

*Set up*

Open Street Maps (OSM) data were downloaded from the BBBike website in pbf format. This file was then imported into a posies-enabled PostgreSQL database using the osm2psql tool (see chunk 1). A GitHub repo was created and connected to a local git project using git bash.

*SQL Analysis*

Following basic data exploration, a new table was created and parks with valid names were added (see SQL 1,2). Summary statistics for parks were calculated as well (see SQL 3)

*DO I want to group by name?*

***Results***

Table 1 : Summary statistics of parks

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| n\_parks | totalarea\_sqkm | avgarea\_sqm | max\_area | min\_area |
| 478 | 31.96 | 66865 | 3962827 | 36 |

Table 2:

|  |  |
| --- | --- |
| 5 Largest Parks | Area (square km) |
| Druid Hill Park | 3.96 |
| Gwynns Falls / Leakin Park | 3.19 |
| Clifton Park | 1.74 |
| Gwynns Falls / Leakin Park | 1.6 |
| Herring Run Park | 0.98 |

|  |  |
| --- | --- |
| name | area |
| The Quad | 36.12 |
| The Quad | 49.75 |
| North & Woodbrook Park | 111.09 |
| Fayette Street Pocket Park | 127.58 |
| Fayette Street Pocket Park | 137.8 |