Practical Assignment: 6

Aim: Extract your City data like Road, building, lake and other features from Open Street Map in QGIS

Theory: Here is a more detailed theory on extracting city data like roads, buildings, lakes, and other features from OpenStreetMap (OSM) in QGIS:

Spatial Data Structures

Vector Data: OSM data is stored as vector data, consisting of nodes, ways, and relations.

Raster Data: QGIS can also handle raster data, such as satellite imagery or elevation models.

OSM Data Model

Nodes: Represent points on the map, such as building locations or road intersections.

Ways: Represent linear features, such as roads, rivers, or building outlines.

Relations: Represent relationships between nodes and ways, such as a building's address or a road's name.

QGIS Spatial Analysis

Vector Analysis: QGIS provides various vector analysis tools, such as intersection, union, and difference.

Spatial Join: Joins two vector layers based on spatial relationships, such as intersection or proximity.

Buffer Analysis: Creates a buffer zone around a feature, useful for proximity analysis.

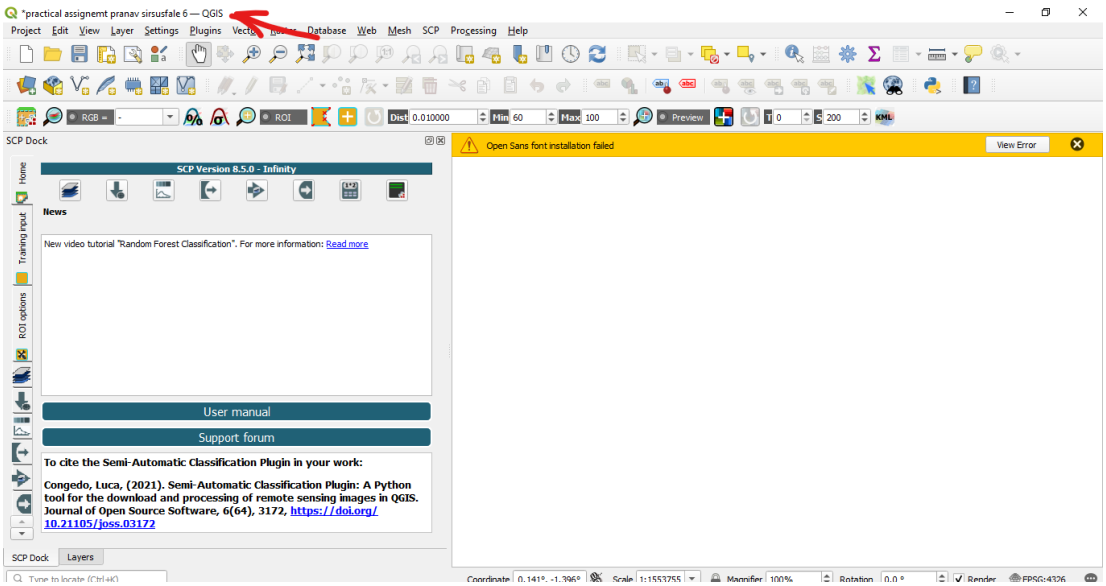
OSM Data Extraction

Tag-Based Extraction: Extracts features based on specific OSM tags, such as highway, building, or waterway.

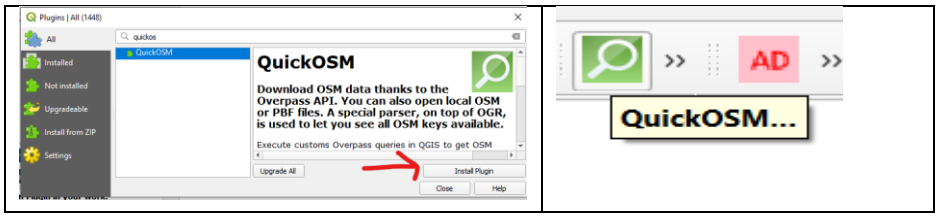
Spatial Querying: Extracts features based on spatial relationships, such as intersection or proximity.

Results:

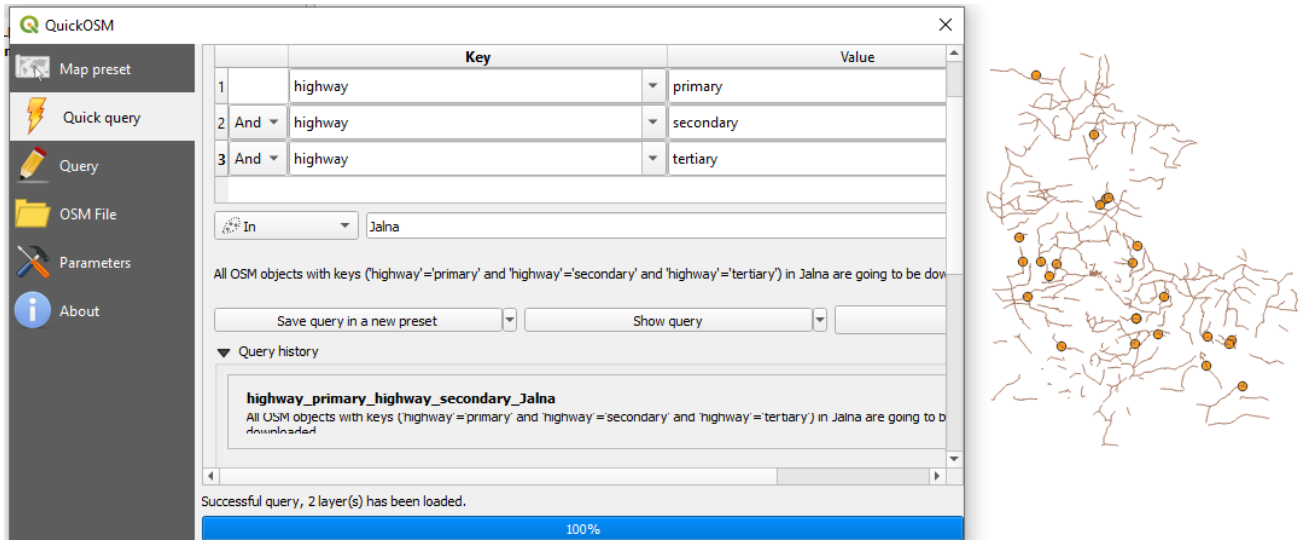
Step 1: open QGIS



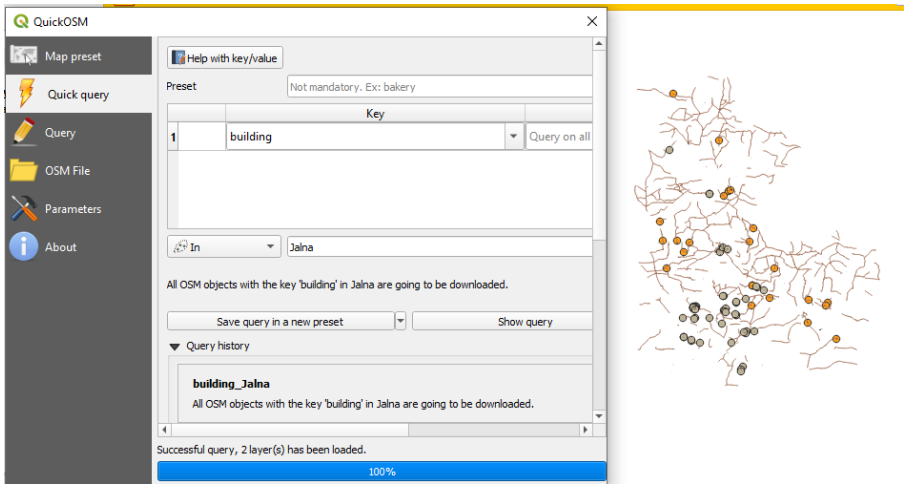
Step 2: install quickOSM pulgging



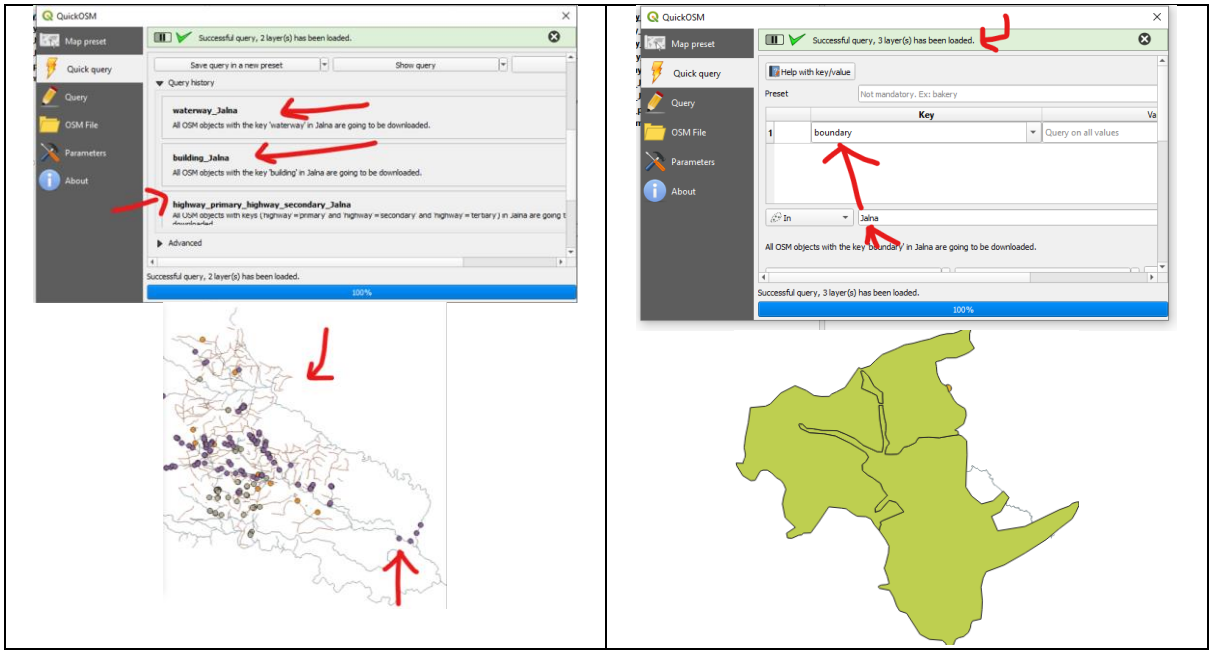
Step 3: openi QuickOSM and set key as highway and value as primary secondary and tertiary and its result



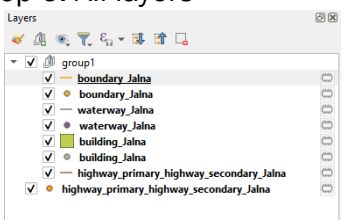
Step 4 : add buildings and it's results.



Step 5: add waterway and its result.add boundry



Step 6. All layers



Step 7. Final Result