

GIS – Exercise 2

ArcGIS Pro: Attribute and Spatial Queries

Data: Kosice_buildings.shp; Kosice_roads.shp, Kosice_waterways.shp (extracted from OSM datasets)

Select By Attributes

<https://pro.arcgis.com/en/pro-app/latest/tool-reference/data-management/select-layer-by-attribute.htm>

SELECT * FROM layer_name WHERE ...

Logical operators:

LIKE similar to / matches a pattern

AND conjunction (and at the same time)

OR disjunction (or)

Tasks – Working with OSM Buildings and Roads (Košice area)

1. Select all hospitals within the area
type = 'hospital'
2. Select all buildings used for education
type = 'school' OR type = 'college' OR type = 'university'
type IN ('school', 'college', 'university')
3. Select all commercial buildings with names containing „Business“ and area larger than 5000 m²
name LIKE '%Business%' AND AREA > 5000
4. Select all roads with a defined maximum speed
maxspeed > 0
5. Select all cycleways with a given max speed of 10 km/h
type = 'cycleway' AND maxspeed = 10

Select By Location

A tool used to select features from one layer based on their spatial relationship with another layer.

Input Features: target layer (features to be selected)

Selecting Features: source layer (features used to make the selection)

Relationship: the type of spatial condition (intersect, within, contain, etc.)

<https://pro.arcgis.com/en/pro-app/latest/tool-reference/data-management/select-layer-by-location.htm>

Tasks – Working with OSM Buildings, Roads and Waterways (Košice area)

1. Find all roads that cross the Hornád River
2. Select all hotels within 500 m of Hlavná street