



March 2024

### Exercise 1β

## Elementary Cadaster

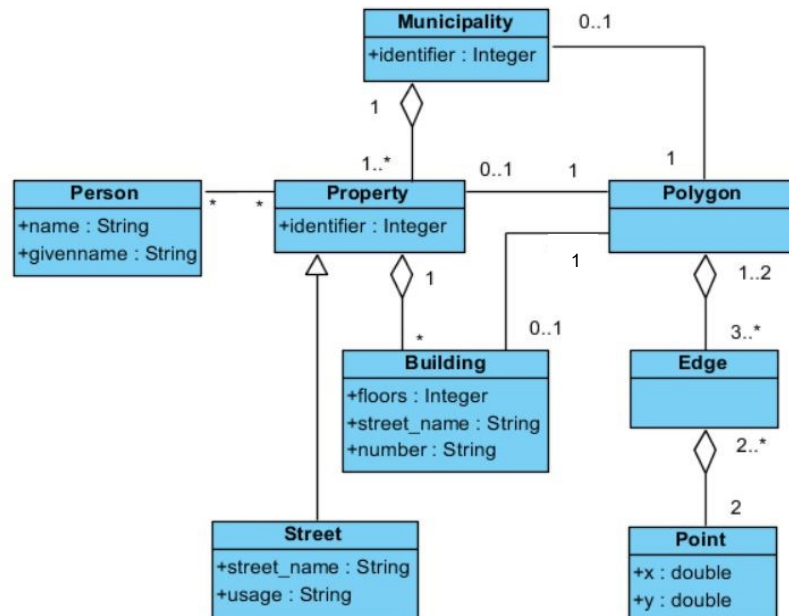


Figure 1.1

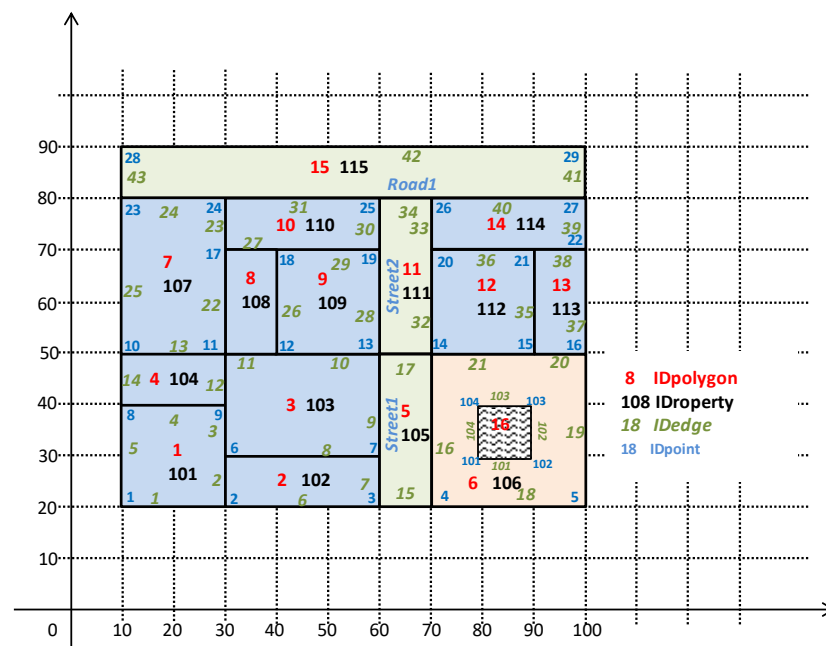


Figure 1.2



- I. Extend the schema exercise1 you created in Exercise 1a so that the model in Figure 1.1 is implemented. The new tables should be created and filled in gradually, based on the SQL commands of the file **exercise1b-2024-incomplete.sql** (after filling in the parts where they are incomplete) and the diagram of Figure 1.2.  
ATTENTION: For each polygon, insert entries with the edges in counterclockwise sequence in the **polygonedge** table.
- II. Assign properties {108,109,110} to students enrolled in the year 2024 SPATIAL DATABASES course, with appropriate entries in the **person**↔**property** relation table. The assignment of properties should be done in alphabetical order and, since these are not sufficient, they will be recycled by co-ownership.
- III. Formulate the following queries:
  1. Compute edge lengths and display them in a table <**edgeID,length**> in order of increasing size and, secondarily, decreasing edgeID.
  2. Calculate the distance of all points from point 13(60, 50) and give them sorted according to the corresponding pointID.
  3. Calculate the area of the properties(polygons) and give them together with the name of the owner, sorted in order of increasing size.
  4. Provide the list of owners with their properties (**IDperson, name, propertyID**).
  5. Give the list of your neighbors.
- IV. Suppose you buy plot 112 and build a building on the polygon ((70 50, 80 50, 80 60, 70 60, 70 50)). The database should be properly updated.