Lab 2: SQL Queries

assigned week **3**/**4** – due week **7**/**8**

For the database created for the first lab, write SQL statements that

- insert data – for at least 4 tables;
- update data – for at least 1 table;
- delete date – for at least 1 table.

In the UPDATE / DELETE statements, use at least once (in the WHERE clause): the relational operators {<, <=, >, >=, =, <>}, the logical operators {AND, OR, NOT}, {IS NULL, IS NOT NULL}, {IN, BETWEEN}, {LIKE, NOT LIKE}. At least one operator from each category (mention above) should be used.

On the same database, write the following SELECT queries:

a. 3 queries with UNION, INTERSECT, EXCEPT (one query per operator);
b. 4 queries with INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL JOIN (one query per operator); one query will join at least 3 tables;
c. 2 queries using IN and EXISTS to introduce a subquery in the WHERE clause (one query per operator);
d. 1 query with a subquery in the FROM clause;
e. 3 queries with the GROUP BY clause, from which 2 queries will also contain the HAVING clause; 1 query from the latter 2 will also have a subquery in the HAVING clause; use the aggregation operators: SUM, AVG, MIN, MAX, COUNT.

In the SELECT queries mentioned above, you must use:

- At least one composed condition with AND, OR, NOT in the WHERE clause, for 2 queries;
- DISTINCT in at least 1 query; TOP in at least 1 query;
- ORDER BY in at least 2 queries.

Remarks:

- The relational structure created for the first lab can be changed.
- The queries must have a description (as comment) and should be relevant for the problem domain and return information (as tuples).