

# LAB EXERCISE 2

## Create and modify content in a relational database

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This exercise is aimed at teaching you how data in a database can be handled to fulfil a company's information need.

Use the database you constructed in lab exercise 1. You are about to create SQL queries (especially DML) using MS SQL Server Management Server. For more information about how queries can be constructed, look in the folders "Introduction to SQL Server exercise", "SQL Server examples" and chapter 6 and 7 in the course literature.

Each question you create for the exercise below **must be presented in the following way when you hand in you project documentation** (observe that you should write your queries using Backus Naur Form – see p. 138 in Connolly & Begg):

I. *[The question in natural language with a motivation/explanation for the question]*

II. *[SQL code for the query]*

III. *[Paste a screen dump of the result from executing the query]*

IV. *[If you cannot achieve the result you are looking for, reflect on why that is. Propose a solution.]*

### Exercise

Create examples of various queries:

- 1 update queries (UPDATE)
- 1 delete queries (DELETE)
- 1 insert query (INSERT)
- 1 select query (SELECT)
- 3 advanced select queries (from 2 or more tables) (SELECT). Here you could e.g. use joins. For more information on how to write joins, see [http://www.w3schools.com/sql/sql\\_join.asp](http://www.w3schools.com/sql/sql_join.asp)
- 3 queries with aggregate functions, e.g. SUM, COUNT, AVERAGE, MAX etc. (see Connolly & Begg p.149-151)
- 1 nested query (subquery)
- 1 view (VIEW)
- 1 stored procedure, which updates the customer table with a new customer (user customer data as input), and 1 trigger which is set off by the stored procedure and prints a message that a customer has been added to the table.

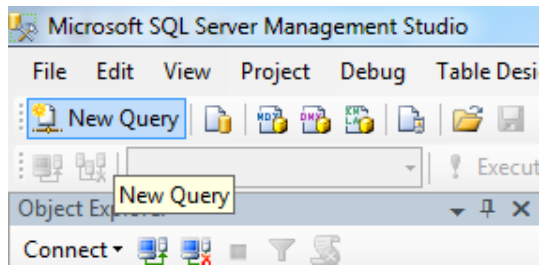


Figure 1. In the SQL Editor toolbar, select New Query

**Good luck!**