

# ASSIGNMENT 4: SQL QUERIES

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Rev 1

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## LEARNING OBJECTIVES

Assignment A4 is the final assignment for the lab. You will be using the MySQL server and workbench installed in assignment 2. In this assignment you will be working through more queries, based on a database similar to the tables seen in the slides.



In this Assignment A2a, we will be doing the following:

1. We will be using SQL to query the `ti3125tu` database;
2. We will be using both the [MySQL Workbench](#) environment to do this
3. Copy-Paste your **query + output** into this document or a separate document.
4. Hand it in on BrightSpace.

You make this assignment as a team and once ready, you have it checked and graded at Friday Jan 18, 2019. See BrightSpace for further instructions.

## PREPARATION

You need to have installed or need to install the following software. Try to install yourself first, if needed seek assistance during the lab. See BrightSpace for the technical description how to install and how to load the IMDB data onto your database.

	MySQL 8 CE	MySQL database (community edition)	<a href="https://dev.mysql.com/">https://dev.mysql.com/</a>
	MySQL Workbench 8	Ontwikkelomgeving MySQL	<a href="https://dev.mysql.com/downloads/workbench/">https://dev.mysql.com/downloads/workbench/</a>

## TEAM MEMBERS

Your team member needs to be able to be involved as much as you are. So it is recommended to install the same software on the team mate's computer too, so that both members can consume the same exercises independently. During the assessment, both team members are assumed to have working knowledge on the assessments. Both will have to answer questions about it.

Once up and running, you can commence working your way through the below exercises.

## USING THE DATABASE

The assignment comes with a database called `ti3125tu`. You should import the files in your MySQL Workbench. Note that there are two versions of the database. One mirroring the data in the slides, and one 'populated' database. The latter will be used for the questions in this assignment.

## SQL EXERCISES

### EXERCISE 1:

Q: Find the departments where the average salary is greater than 50.

Your answer here:

EXERCISE 2:

Q: Find the number of employees living in a city in which there is no department.

Your answer here:

EXERCISE 3:

Q: Find the surnames of employees that live in the same city as the department they work for.

Your answer here:

EXERCISE 4:

Q: Find the code of purple products supplied by more than three suppliers.

Your answer here:

EXERCISE 5:

Q: How many people are working in departments that are not in Groningen?

Your answer here:



EXERCISE 6:

Q: Find all departments in which there is no one named Bowen or Grimes.

Your answer here:

EXERCISE 7:

Q: Find the names of the suppliers that supply only product 3.

Your answer here:

EXERCISE 8:

Q: Find the product codes of all products that are either black or supplied by Amal.

Your answer here:

EXERCISE 9:

Q: Find the total number of distinct first names and surnames as a single number.

Your answer here:

EXERCISE 10:

Q: Find the name of the suppliers that supply product 8 using nested queries

Your answer here:

EXERCISE 11:

Q: Find the first name and surname of people that earn more than the average of their department, but less than the average of their city.

Your answer here:

EXERCISE 12:

Q: Find the distinct name of all the suppliers that supply products that are only supplied from a single city.

Your answer here:

EXERCISE 13:

Q: Write the SQL required to create a foreign key between the supply and supplier tables.

Your answer here:



## EXERCISE 14:

Q: The `supplier`, `department`, and `employee` all have a column with cities. We want to extract this information into a separate table. Write the SQL instruction to create a new table that contains this information, then properly reference the `supplier`, `department`, and `employee` to entries in this new table.

Your answer here:

Done

**BONUS EXERCISES****EXERCISE 15:**

Q: Because the ids in the tables are stored as strings, it is not possible to auto increment the id of the next inserted product/supplier. Write the SQL required to edit the primary key of the products, table, without breaking the existing relation in supply. You are allowed to use multiple queries (and the MySQL Workbench tools). Note: You might need to turn 'safe' mode of if MySQL requires this.

Your answer here: