

# Assignment 3

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Assignment 3 is a project assignment. It is important that you find a reasonable scope for your project. If you are unsure, discuss it with your supervisor before you continue past Task 1 of this assignment.

You can use whatever relational database management system and programming language(s) you prefer to solve the assignment. You can use whatever interface you like, either multiple programs, and console UI, a web interface, or whatever you like.

All answers should be your own. You are allowed to work in groups of two. Make sure you include your names in the report when you submit.

## Tasks

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### 1. Idea

Come up with an idea for your project. Describe what problem it solves, who the main user(s) will be, and why your idea is a good fit for them and the problem. Describe the main features that your application must have to be complete.

### 2. Logical model

Design a data model for your project and present it as an E/R diagram. Make sure to include important attributes and relationships. Discuss and motivate your design.

### 3. Design in SQL

Translate your design to collections in SQL. Discuss and motivate how you translated entities and relationships.

### 4. SQL queries

**Create five queries** to your SQL design that are needed to implement the functionality of your application. Focus on the more important queries and features of your application (i.e., there is no need to show how you insert documents in your various collections). Explain and motivate each query.

### 5. Implementation

Write a program that implements your Idea in Task 1 with the design and queries from Task 2–4. You are of course allowed to introduce more queries. Describe the overall structure of your program and how to compile/run it.

# Submission and deadlines

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Your submission should include solutions to all assignments above. Submit a report in PDF format on Moodle and the source code. If you need data in your database, please submit a database dump or an installation script. You can draw the E/R diagrams by hand and submit scanned versions or photos (as long as they are readable).

If you work together with someone, submit the assignment from one of your accounts and make sure to put both names in the report!

**Deadline:** End of day 2017-12-31.