ERHVERVSAKADEMI
AARHUS

Data modelling and SQL

The purpose of this home assignment is that you practice the elements from data modelling and SQL that has been the subject for the first lesson.

1. Data model

You have to build the data model for a blog system that has the following characteristic:

- Users can register

- Users can have different roles, eg. author, administrator, commentator

- Blog posts can be established with eg. headline, content, picture

- Blog posts can belong to a number of categories

- Blog posts can be marked with a number of tags

- Blog posts can have different states, eg. drafts, published, archived, hidden

The data model (the design) have to include:

- Entities with specification of attributes and keys

- Relations with specification of cardinality and participation

2. SQL

For the solution of the following assignments, it can be of help to establish the tables in SQL Server Management Studio and put up some realistic data, so that it is possible to test whether the SQL expressions work as planned or not.

1. What SQL expression(s) can be used to establish a blog post, when you consider that there has to be a user for the post, it has to belong to one category and two tags, and it is supposed to be a draft?

2. What SQL expression(s) can be used to collect all the tags that a given blog post has attached to it?

3. What SQL expression(s) can be used to show the 10 latest published blog posts?

4. What SQL expression(s) can be used to show the number of blog posts for the categories that have at least one blog post attached?

5. What SQL expression(s) can be used to do a text search in both a headline and the content of a blog post?