# Assignment 5 – Creating you own relational database

**This assignment IS graded**
**Deadline: 2020-12-17**

Choose your own favorite online service, website or mobile application, the data model of which you would like to "reverse engineer". If this is a larger application, select only a reasonably simple subset of its primary functionality that would fit inside approximately 5-12 tables. You can use all the knowledge you have gained in this course to achieve it.

Firstly, create a relational model for it, by normalizing its tables to the 3$^{rd}$ normal form (3NF). This can be done using any tool you like, or even by drawing on the paper and taking a photo of it. Also, please follow best practices of naming things and make sure that the context of each data model component is easily understandable. In the ideal case, the data model itself is so well designed, that no additional documentation is necessary.

Secondly, create SQL statements for:

- creating a database
- creating needed tables (including nullability, default values, and other constraints that make sense)

Thirdly, add insert statements for filling those tables with test data (approximately 500 rows would be the reasonable upper limit).

Fourthly, create select statements for retrieving needed information for **2 pages** (similarly to the way we did it in case of the MiniInsta):

- Querying the data for main page of the service
- Querying the data for specific selected item (profile, article, post, or whatever make sense in the context of the selected application/service)

Please create a short document describing the chosen application/service, which portion of it you have included in the data model and what each table represents. Please make sure that all tables are properly normalized. Validate your assumptions on the simple test data to see if it is still possible to describe the scenarios that the application/service would actually expect. If it turns out that some important scenarios cannot be represented by the data model, then amend the model in such a way that would allow to cover that scenario.

Please also attach the data model image, and script files for the remaining steps to the Moodle submission. The scripts should be in separate file(s) so that they could be actually executed against the database server. I do not wish to see the queries that are embedded inside Word/PDF documents.