

INFO 210 — Database Management Systems

Assignment – Milestone 2

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1 Logistics

The following exercises are for the INFO 210 course in the year 2023. Solutions for the example must be provided as one PDF and uploaded to the course's Moodle page (Assignment 2) by 18:10, November 10, 2023, at the latest. The solutions for the given examples will be discussed in the lab session one week later.

Note that given the deadlines are strict, with a two-day grace period! During the practical part, students may be asked to explain their solutions on the blackboard. In case a provided solution cannot be sufficiently explained, I will evaluate this part of the practical exercise as not provided!

2 Constructing a Database

The goal of the second assignment of your project is to

1. translate the ER diagram of your project into a relational schema;

For this milestone, you will have an occasion to apply the material of the lectures on (1) the relational model and (2) the translation of ER models into relational schemas. In the following, we will describe the single steps in more detail.

3 Translation into Relational Schema

Write up a relational schema that is equivalent to your ER diagram. You may change your ER diagram to improve it. Make sure that you translate not only entities but also relationships, and you also capture whenever possible, the integrity constraints of your ER diagram, and the textually specified data requirements.

Explain briefly how the various entities and relations are expressed in the relational schema. Whenever there was a choice for the translation, explain the reasons for the choice you made.

During the translation, you may find out that the relational schema resulting from the translation does not make a lot of sense. In this case, revise your ER diagram and the data requirements. It is imperative that all documents are consistent with each other.

Note: If you revise your data requirements or your ER diagram, submit the revised version with your deliverables for this milestone.

4 Deliverables

The deliverable will be a report following the same principles as for the 1st assignment comprising the following two parts:

- The relational schema (NOT in the form of SQL commands) in the following form for all relations:
 <Rel_NAME> "(" <Attr> ":" <Datatype> (" ," <Attr> ":" <Datatype>)* ")" ;
- an explanation of how it has been derived from the ER diagram;

If you have to change the ER diagram, please include the new diagram in the report (ideally at the beginning of the report) AND explain all the changes, including a rationale for the changes.

5 Deadline

The work has to be submitted as a report in PDF using the Moodle system. There is only one submission per group required. Indicate the group number on the first page AND in the name of the submitted file! **DO NOT USE ANY OTHER FORMAT LIKE ZIP OR WORD! PDF ONLY!**

The deadline is

Friday 10 November 2023; 18:10