BBM 473 - Database Management Systems Laboratory

HACETTEPE UNIVERSITY
Department of Computer Engineering

Project
Fall '2018-2019
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PART I - Design of Database

Due Date: 23:55, November 12th, 2018

Overview

In this part of you project, your goal is to decide a problems set for your term project and analyze the requirements of the problem to propose a solution. Before you implement your solution, you have to design a database that addresses your problem's requirements.

Details

You have to decide a subject for your project and analyze the requirements of it. You can choose your problem set from old website of the course[1] or you can propose a different subject.

- Explain your problem set.
- Explain the roles in it.
- What should be stored in the database?
- How is it going to be used?

After you analyze your problem environment, you are going to desing your database. Your dataset has to contain:

- More than one weak entity sets.
- More than one one-to-one, exactly-one, one-to-many, and many-to-many relations.
- At least one subclass.
- More than one descriptive attributes in its relations.
- At least 20 relations (tables).

Your final database design can be slightly different than the one you delivered in the first phase. You can always finetune your database and patch your design. However, changes you will commit later, must be minimal. Major changes will be penalized.

You should carefully define all entity sets-tables and relations among them which are essential in any database model. After determination of entity sets/relations, you should draw ER model and relational scheme with all the details. In your ER model and relational scheme, key attributes should be clearly explained.

[1] http://vtlab.cs.hacettepe.edu.tr/Proje.html

Report

You are expected to write a detailed report which contains a brief overview of the problem, details of your implementation and the experimental results together with discussions.

- Project definition
- Projects main functions
- The role of all entity sets and relations in the project.
- ER Diagram.

What to Hand In

Your submission format will be:

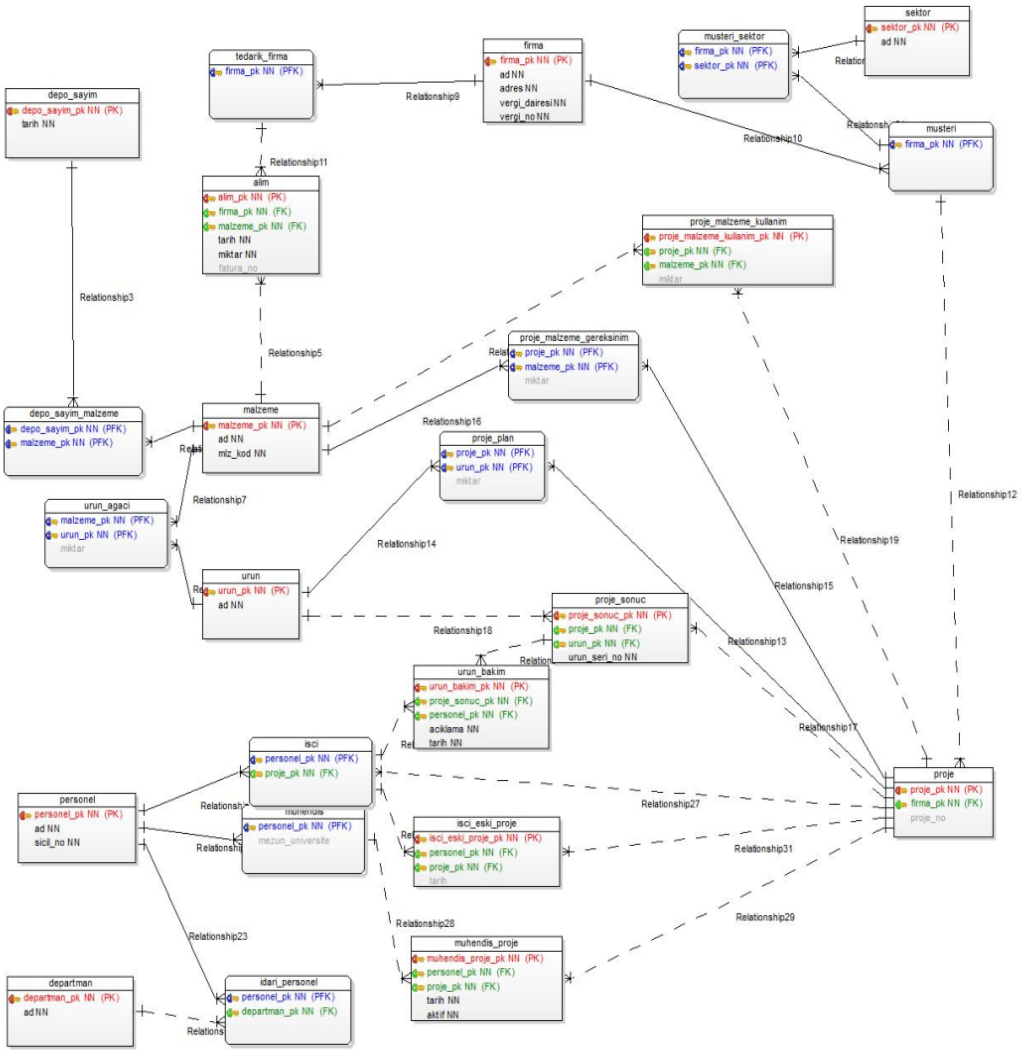
- `diagram/*.png, jpg, jpeg, pdf` *(directory containing all ER diagrams)*
- `scheme/*.png, jpg, jpeg, pdf` *(directory containing all relational scheme)*
- `report.pdf` A pdf file.

Archive this folder as `<student number>.zip` and submit to submit.cs.hacettepe.edu.tr

Academic Integrity

All work on assignments must be done individually unless stated otherwise. You are encouraged to discuss with your classmates about the given assignments, but these discussions should be carried out in an abstract way. That is, discussions related to a particular solution to a specific problem (either in actual code or in the pseudocode) will not be tolerated. In short, turning in someone elses work, in whole or in part, as your own will be considered as a violation of academic integrity. Please note that the former condition also holds for the material found on the web as everything on the web has been written by someone else. You have to keep your implementation until it is evaluated.

Sample ER Diagram



Sample Relational Scheme

Books(*book_id*:*string*, book_name: *string*, author_name: *string*, price: *float*)