

LAB 3

In this Lab you will implement the Library Management System (LMS) available on Canvas. Make sure to read that document first.

You will progressively implement features until you have a complete LMS, so the labs are accumulative! Make sure to backup all your files.

Presentation

For the lab presentation, make sure you have the following ready to be shown to the TA:

- The previously detailed queries created in Lab 1 and 2 ready to be executed.
- Database diagram with all the tables and relations.
- Code for the database alteration showing keys, foreign keys, triggers etc.
- New and edited code used to connect the database to the UI.

Project Background

After creating your own database and making sure it all works as intended, KTH Library has requested us to create a User Interface (UI) so they can retrieve the information in a more visual, easier way. This UI is a simple website that you can use to display the information stored in your database.

In this Lab, we will ask you to add some constraints and create your own, simple UI for the Lab to display the information stored in the database and handle the interaction between the users and our database.

Required features

You are required to implement the following features in order to pass this lab:

- Alter the LMS database with the following criteria:
 1. Add key constraints and foreign key constraints to every attribute you deem necessary.
 2. Add at least 5 total check constraints you find appropriate for the LMS to any of your tables.
- Create a User Interface (UI) to display all the required interaction as described in the section “System features” in the Case Study file. A few details about this:
 - You can use a local database (like MySQL or PostgreSQL) instead of the online KTH one if you find it easier to handle the connection from the UI to the database.

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- Even though in the Case Study is mentioned “any kind of library resource”, we just require Books for the Labs.
- “Create and edit a Library Resource” refers to Create, Edit and **Delete** a LR.
- “Create and handle users” refers to only Create and Edit a User.
- If you feel more comfortable by creating your UI with any other tools that are not a website, feel free to do so.

OBS! Focus on implementing the features rather than making the UI visually pleasing, since we will not be evaluating the looks but the functionality you have implemented.