Booktropolis Database Project Prioritization and ToDo's

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- **Requirements specification**

  1. Select an arbitrary problem and write a specification of requirements for your database application.

- **ER Diagram**

  1. Create an Entity-Relationship diagram for the database.

  2. Ensure the diagram contains at least 7 entities, includes many-to-many, one-to-many, and one-to-one relationships, as well as at least one weak entity set.

- **Transforming ER-diagram into Relational Model**

  1. Convert the ER diagram into a relational schema represented in SQL.

  2. Check whether database relations satisfy at least 3NF.

  3. Declare relations using SQL DDL statements.

  4. Include at least two views, one stored procedure, and 7 advanced SQL queries.

  5. Define secondary indexes on chosen attributes.

- **Application Development**

  1. Develop a web application with a graphical user interface to execute corresponding business functions.

  2. Implement the backend using Python.

  3. Use a Python framework for web programming such as Flask and SQLAlchemy.

  4. Implement the frontend using a Python framework or another technology.

- **Submission**

  1. Submit the preliminary specification of the project.

  2. Submit the final documentation, source code, and a database dump file.

  3. Record a video presenting the project.

  4. Wrap up the application and database in Docker containers.

- **Evaluation**

  1. The evaluation will be based on the ER diagram and DDL, SQL queries, normalization, and application.