

Project 2: Improve the database FilmDB and Course Materials

Introduction

The provided database example, `filmdb.sql`, serves as a valuable resource for this course. However, its content requires updating to include recent movies. This project aims to refresh the database by incorporating newly released movies and to enhance the course materials.

Tasks

1. Database Enhancement

- Identify a list of recent movies that are not currently included in the database.
- Design and execute a strategy to incorporate these new movies into the database while ensuring data consistency and integrity.
- Describe the methods used to get the movie data, and the steps taken to validate the data.
- Ensure the updated database maintains all necessary relationships and constraints.
- [new] Ensure the updated `filmdb.sql` can be supported by both PostgreSQL and openGauss. If it cannot, please provide two different SQL files for PostgreSQL and openGauss specifically.

2. Lecture Notes Review

- Review all lecture notes and identify outdated content, errors, or areas requiring improvement.
- Provide specific recommendations for updates, including corrected information, additional explanations, or improved examples.
- [new] Add examples and contents related to openGauss since the current version does not contain openGauss.

3. Course Content Proposal

- Suggest new topics or modules to be added to the course.
- Justify their relevance and explain how they align with current trends in database management or related fields.
- For each proposed topic, provide a brief outline of the content, including key concepts, learning objectives, and potential practical exercises.

Report Requirements

This is an individual project. Each student must submit a separate report and supporting files. The report should include the following sections:

1. Database Update Process:

- A detailed description of the methods used to identify and incorporate new movie data into the database.
- An explanation of how data integrity and consistency were maintained during the update process.

2. Lecture Notes Evaluation:

- A list of specific sections in the lecture notes that require updates, along with proposed corrections or improvements.

3. Course Enhancement Suggestions:

- A list of proposed new topics for the course, with justifications and detailed content outlines.

Submission Rules

1. The project deadline is **23:59 on December 14th**. Submissions after the deadline will receive a score of 0.
2. Submit the report as a PDF file (named **report.pdf**) along with any supporting documents.
Do **NOT** compress the files into a single archive.
3. You may use AI tools (e.g., DeepSeek, ChatGPT) to assist in understanding concepts or configuring software. However:
 - Do not use AI to generate low-quality or irrelevant text.
 - Ensure all content is meaningful, concise, and valuable to the reader.
4. The report should be clear, well-structured, and highlight the key aspects of the project effectively.

Recognition of Contribution

Note: High-quality submissions may be used to improve the course for future academic years. Students whose data and suggestions are adopted will be acknowledged for their contribution in the subsequent year's course materials.