SOEN 363: Database Project

Peer Review Report

April 18, 2025

Peer Review Information

Reviewer:	Baraa Chrit (40225403)
Reviewer's Team:	Team #29 - awesomeTeam
Reviewed Project:	Team #3 - Data Sorcerers
Project Title:	MusicHub
Team Members:	Poula Farid, Carmen Derderian, Julie Makary, George Ezzat

Evaluation

Overall presentation quality: Very Good (A)

The presentation followed a logical structure covering all project aspects from conception to implementation. The team clearly explained their database design choices and showed strong technical understanding throughout their demonstration of both relational and NoSQL implementations.

Complexity / Applicability of the database application: Excellent (A+)

MusicHub demonstrates exceptional complexity by integrating data from three different APIs (Spotify, Music Match, and Disgust API). The team implemented advanced database concepts including ISA relationships, weak entities, and aggregation relationships. The application has real-world relevance for music data management.

Use of Technology: Excellent (A+)

The team utilized a comprehensive technology stack including PostgreSQL, Python with Psycopg2 for data insertion, MongoDB Atlas for NoSQL implementation, and three external RESTful APIs. They demonstrated proficiency in both SQL and NoSQL environments, with particular attention to optimization techniques in both paradigms.

The Presenters addresses all challenges: Very Good (A)

The team thoroughly discussed multiple challenges encountered during development, including API rate limits requiring them to use additional data sources, data consistency issues between platforms, and the complexity of rebuilding relationships in MongoDB. Their solutions were practical and well-executed.

Teamwork and Participation: Good (A-)

All team members were involved in the presentation and contributed to the project. While I don't have access to their GitHub repository to assess individual contributions to the codebase, the presentation demonstrated coordinated teamwork in implementing the complex database system.

Additional comments / suggestions

- The presentation could benefit from more visual comparisons between SQL and NoSQL performance metrics beyond verbally mentioning the numbers.

- The design choices for embedding lyrics within tracks and using reference arrays in MongoDB were well-reasoned and demonstrate good understanding of NoSQL database optimization.
- The query examples were comprehensive and showcased mastery of both SQL and MongoDB querying capabilities.
- The performance improvements through indexing were impressive, particularly the 30x speedup for the most followed artist query.

Conclusion

Team #3 demonstrated strong technical skills in implementing both relational and NoSQL databases while maintaining data consistency across platforms. Their approach to handling API limitations was particularly resourceful, and their database design choices reflected good understanding of both paradigms. The project successfully fulfilled all requirements and showed practical applications for music data management.