MovieVerse!

G2 Software
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1   Introduction

We at G2 software intend to develop a program within the movie domain as our primary choice. Our product aims to be a social platform that provides users an ecosystem centralized around the visual entertainment industry. We aim to simplify the movie-exploration and discussion experience, by providing the users with the ability to curate their own collections of movies, obtain recommendations based on their collections, and rank their favorites so that others can discover hidden gems or new blockbusters. Through a friend-system, we aim to connect like-minded moviegoers and recommend new films to users based on the preferences found in their friend group, as well as offer features such as chatting amongst one's friends during a watch party.

In the event that the movie domain is not available, then we intend to develop an application for the music domain as our backup option. In this case, our product would emulate much of the functionality present in the application described for the movie domain, however, instead of focusing on the film industry, we would prioritize recommendations and social connections centering around the music entertainment industry.

The backend of our program will be developed in the Java programming language, with a graphical user interface utilizing the JavaFX library for the front-end. The back-end of the service will implement the PostgreSQL

database management system in which we will store information about films (or music), users, and other relevant information.

2 Design

2.1 Conceptual Model

Use this section to include your EER diagram and describe any consideration made during its design.

2.2 Reduction to tables

Include in this section the reduction of your EER diagram to tables and explain how each entity type and relationship type have been converted.

2.3 Data Requirements/Constraints

Use this section to list all the data domains and constraints that cannot be captured in your EER diagram but must be enforced by the database system. For example, there may be attribute types with a restricted domain, you must list those attribute types here and their domains. Similarly, attribute types with restrictions like uniqueness or required must be also listed here.

2.4 Sample instance data

Use this section to include sample of entities for every entity type in your EER diagram. Include also sample of relationships for every relationship type. For example, assume you have an entity type *Course* in your EER diagram with the attribute types *ID* and *name*. A sample of a *Course* entity can be *CSCI320, Principles of Data Management*.

Include 5 samples for every entity type and relationship type.

3 Implementation

Use this section to describe the overall implementation of your database. Include samples of SQL statements to create the tables (DDL statements)

and a description of the ETL process, including examples of the SQL insert statements used to populate each table initially.

Include also sample of the SQL insert statements used in your application program to insert new data in the database. Finally, add an appendix of all the SQL statements created in your application during Phase 4 and a description of the indexes created to boost the performance of your application.

4   Data Analysis

4.1   Hypothesis

Use this section to state the objectives of your data analysis; what are the observations you are expecting to find. Note that your final observations may end up differing from your proposal, that is also a valid result.

4.2   Data Preprocessing

Use this section to describe the preprocessing steps you have performed to prepare the data for the analytics. Preprocessing steps may include: data cleaning (e.g., filling missing values, fixing outliers), formatting the data (e.g., resolving issues like inconsistent abbreviations, multiples date format in the data), combining or splitting fields, add new information (data enrichness).

Explain how the data was extracted from the database for the analysis; if you used complex queries or views, or both.

4.3   Data Analytics & Visualization

Use this section to explain the process/techniques used to analyze the data, use data visualization to present the results, and explain them.

4.4   Conclusions

Use this section to explain the conclusions drawn from your data analysis.

Table 1: Feelings about Issues

Flavor	Percentage	Comments
Issue 1	10%	Loved it a lot
Issue 2	20%	Disliked it immensely
Issue 3	30%	Didn't care one bit
Issue 4	40%	Duh?

5 Lessons Learned

Use this section to describe the issues you faced during the project and how you overcame them. Also, describe what you learned during this effort; this section, like the others, plays a critical component in determining your final grade.

The next subsection is meant to provide you with some help in dealing with figures, tables and references, as these are sometimes hard for folks new to LaTeX. Your figures and tables may be distributed all over your paper (not just here), as appropriate for your paper.

Please delete the following subsection before you make any submissions!

5.1 Tables, Figures, and Citations/References

Tables, figures, and references in technical documents need to be presented correctly. As many students are not familiar with using these objects, here is a quick guide extracted from the ACM style guide.

First, note that figures in the report must be original, that is, created by the student: please do not cut-and-paste figures from any other paper or report you have read or website. Second, if you do need to include figures, they should be handled as demonstrated here. State that Figure 1 is a simple illustration used in the ACM Style sample document. Never refer to the figure below (or above) because figures may be placed by LaTeX at any appropriate location that can change when you recompile your source *.tex* file. Incidentally, in proper technical writing (for reasons beyond the scope of this discussion), table captions are above the table and figure captions are below the figure. So the truly junk information about flavors is shown in

Table 1.

Figure 1: A sample black & white graphic (JPG).

6   Resources

Include in this section the resources you have used in your project beyond the normal code development such as data sets or data analytic tools (i.e. Weka, R).