2020

Project Writeup

DEVELOPMENT OF AN ANIME AND LIST DATABASE FOR WEBSITE USAGE

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**Introduction**

*Statement of the Problem*

As society consumes more created content, it can become troublesome to remember everything that one has watched. Rather than straining one’s brain to recall content, many people have taken to writing a journal or a notepad document that contains each show that they have watched.

Unfortunately, as more entries are added to these forms of documentation, it becomes increasingly hard to organize and sort this type of information. This is especially true if a person decides to add other forms of information such as the producer or studio that has made the show.

This can be exceedingly difficult when it comes to anime, or Japanese created animations, which often have unconventional naming schemas and long names that are hard to pronounce. Not only this, but with how quickly anime is being produced, each anime is inconspicuous compared to the next.

*Goals and Objectives*

The goal in this project is to create a database that contains a large list of anime in which users can interact with. With this method, each unique user will have a unique list that they can modify themselves which is then presented in a format that is clear and concise. The objective is to create a resource that is superior to most conventional means, bringing more users to the website. The database will allow for queries that can easily describe what anime is popular among various other analytics.

*Description of the Project*

This project will focus on developing the database backend for the website. This project will be developed using SQL Server. The database will have many to many relationships between all the main entities.

Entities of the database: Anime, User, Producer, Genre

Linking Tables: AnimeList, AnimeProducer, AnimeGenre

*Business Rules*

The following are the rules that express details about the entities, the relationship between the entities, and the attributes within the entities:

1.A user is someone who creates an account on the website.

2. Anime are Japanese Animated shows.

3. A genre is an identifier of how anime may have similarities in form and style.

4. A producer is a franchise, company, business, or individual, etc. that produces an anime.

5. A USER may watch 0 or more ANIME.

6. An ANIME may be watched by 0 or more USERS.

7.Every ANIME can be assigned 0 or more GENRE.

8.Every GENRE can be assigned to 0 or more ANIME.

9.Every ANIME may be made by 0 or more PRODUCERS.

10.Every PRODUCER may produce 0 or more ANIME.

11. Each User contains a userName, gender, dateofbirth, and and a userId.

12. An Anime contains a title, sourceMaterial, episodeCount, and has an animeId.

13. A genre has a genreName, genreId.

14. A producer has a name and producerId.

15. The associative entity between User and Anime will be AnimeList.

16. The associative entity between Anime and Genre will be AnimeGenre.

17. The associative entity between Anime and Producer will be AnimeProducer.

18. The associative entities will have the foreign keys of each table and their own primary keys.

19. userName, title, genreName, and producerName will have uniqueness constraints applied to them (Unique index).

20. episodeCount and sourceMaterial will have non-unique indexes applied to them.

*Conceptual Model:*

A close up of a map

Description automatically generated

*Logical Model:*

*A screenshot of a video game

Description automatically generated*

*Timeline*

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| January 27, 2019 | Project Proposal Due |
| February 3, 2019 | Business Rules Due |
| February 10, 2019 | Conceptual Model Due |
| February 24, 2019 | Logical Model Due |
| March 3, 2019 | Data Dictionary |
| March 24, 2019 | Table Creation Script Due |
| March 31, 2019 | Constraints and Index Script Due |
| April 7, 2019 | Physical Data Model Due |
| April 14, 2019 | Sample Reports Due |
| April 21, 2019 | Stored Procedures |
| April 22, 2019 | Present Final Project |

*Analysis*

With the successful completion of my Anime Database, I can safely assume that Database design and management has been my favorite class I have taken so far. While I believe I comprehend the material rather well, there have been a lot of changes and errors I have made since the beginning. One example is when designing my initial conceptual model, I included the “List” associative entity as its own unique entity. While this made sense to me, I realized that it was simply a linking table to represent each anime to each user, and had no reason being its own strong entity. This news was upsetting to me as I figured I knew what I was talking about, and couldn’t comprehend why it was wrong, and so I assumed it would instead become a one to many relationship. However, after talking with Professor Ellison, I updated my conceptual model appropriately and took it out, only to add it again as a linking table in my logical model.

Another example of what I changed is the fact that I had initially put the “Producer” and “Genre” as attributes inside of the “Anime” entity. While this works, I know that an anime can have multiple producers and genre, so I would have to create more columns that would be null for others. I quickly made it a many to many relationship and added linking tables for them as well.

One final change I made to my database occurred on the completion of my physical model. I did not know that my associative entities needed primary keys themselves, which makes sense now, as they need their own identifier. I have since added primary keys to these tables.

Overall, I have enjoyed the creation of this database and I am interested in learning more.

*References*

“Anime and Manga Database and Community.” *MyAnimeList.net*, myanimelist.net/.

Peres, Ricardo. *Databases Illuminated, 3rd Edition.* Jones & Bartlett Learning,August 2015.

Viescas, John L. *SQL Queries for Mere Mortals: A Hands-On Guide to Data Manipulation in SQL, 4th Edition.* Addison-Wesley Professional*,* February 2018.