

INST 327

Section: 0103

Team 10

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## **Team Project Final Report**

### **Introduction**

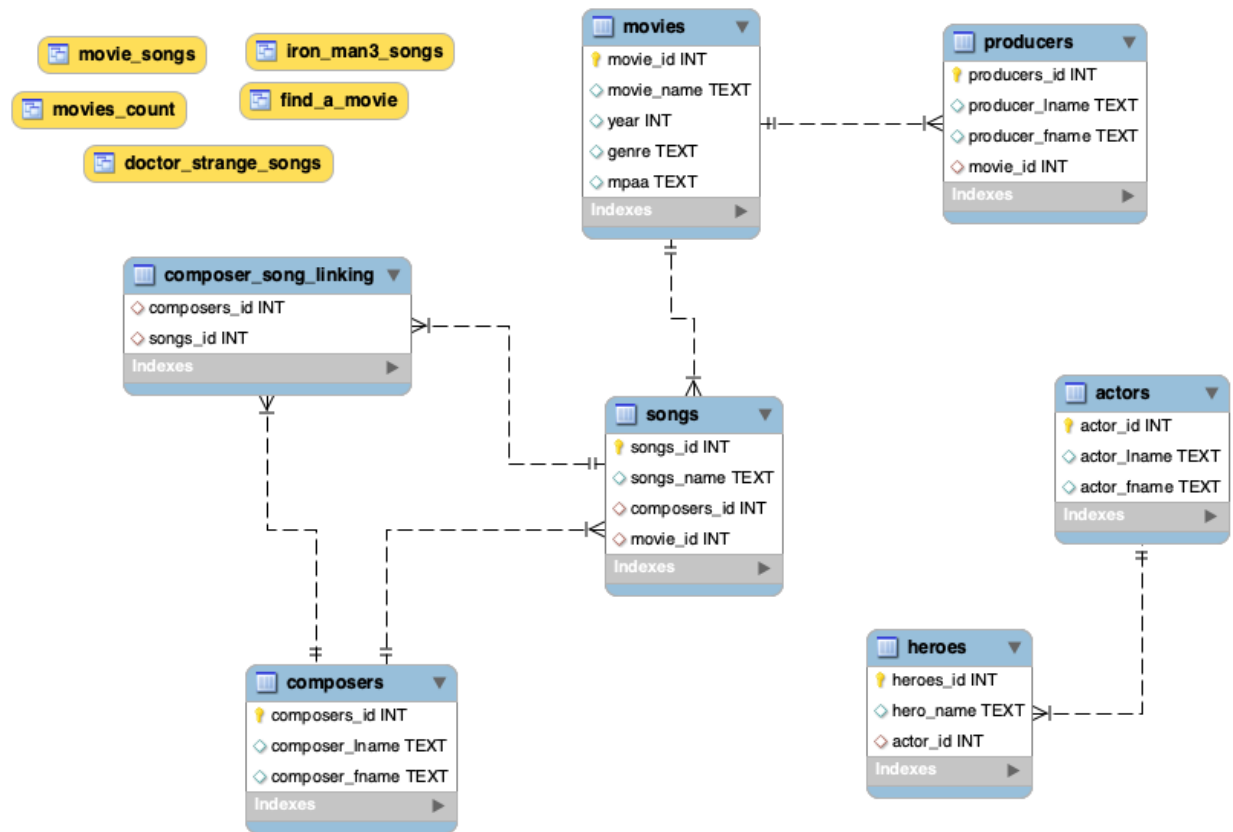
Marvel superhero movies have been a great source of entertainment beginning in the 21st century. Along with these entertaining movies come *marvelous* film scores. Our group will collect a database of film scores from Marvel movies on Spotify. A film score is original (usually instrumental) music composed and recorded especially for a film. Written by a single composer, though sometimes more, it is designed to fit the film and its story perfectly, adhering to a strict timecode. Film scores were traditionally performed by orchestras, and many still are, but today a film score might feature all manner of sounds and instruments.

The list of movies we will collect the soundtrack from is listed in the Sample data section of this report. By collecting film scores for each hero, it would be used by some other directors of Marvel company as an inspiration or asset for their movies. Our target audience is Marvel fans, any movie director who is creating a movie, and movie fanatics. Movie directors would use this database to acquire some inspiration for soundtracks on their upcoming movies. This database can help both Marvel fans and movie directors easily organize and compile a playlist of their favorite Marvel sounds and scores.

### **Database Description:**

## o Logical Design

The image below shows our marvel ERD that will become our physical database. We created seven different tables: composer\_song\_linking, composers, movies, songs, producers, actors, and heroes.



## o Physical Database

Our database focuses on providing original film score information from marvel movies. The database includes tables that provide names of songs and composers, selected 15 marvel movies that used the songs, producers of movies, and actors who played marvel heroes. To create the database, we first created separate csv files for each table, and then did forward engineering to create a schema, and then imported all the csv files to tables. However, we encountered a problem of no data being imported to our database when we imported the csv to our database. The solution was to select a “create new table” option and we were able to import all data successfully. Also, we could not figure out how to use the composer\_song\_linking table. This table is a linking table that connects composers and songs. We were going to make a linking

table that connects the producers and movie table, but the number of information in the producers table was not sufficient, so we decided to link the songs and composers table.

#### o Sample Data

We made sample data to effectively demonstrate table operation. We added 15 sample records for the music inserted in the movie. Because our data sample was a relatively easy database to find real data, we used real data sources. All the data were sample data that could be obtained through Spotify. As mentioned in the introduction, we used this software to get movie film scores. It can extract a lot of data through this.

Number	Songs	Links
1	Iron man 1	<a href="https://open.spotify.com/album/2kZIE8a2e1hUalAJzCCBJT?autoplay=true">https://open.spotify.com/album/2kZIE8a2e1hUalAJzCCBJT?autoplay=true</a>
2	Iron man 2	<a href="https://open.spotify.com/album/6bnGdcfwPDRSkj6H8GcbAh">https://open.spotify.com/album/6bnGdcfwPDRSkj6H8GcbAh</a>
3	Iron man 3	<a href="https://open.spotify.com/album/7x6etI9jQ2ePxZUOQaPrbi?highlight=spotify:track:7u5XbHnht6dyoRXRBb5soK">https://open.spotify.com/album/7x6etI9jQ2ePxZUOQaPrbi?highlight=spotify:track:7u5XbHnht6dyoRXRBb5soK</a>
4	Thor 1	<a href="https://open.spotify.com/album/3OCSaoAx2IdkeUtd4T5cuS?autoplay=true">https://open.spotify.com/album/3OCSaoAx2IdkeUtd4T5cuS?autoplay=true</a>
5	Thor : The Dark World	<a href="https://open.spotify.com/album/2dTEXpN7fg9cJPKCCyDJ1y?autoplay=true">https://open.spotify.com/album/2dTEXpN7fg9cJPKCCyDJ1y?autoplay=true</a>
6	Thor : Ragnarok	<a href="https://open.spotify.com/album/4gecrZPDxMlVxBtpobpxr?autoplay=true">https://open.spotify.com/album/4gecrZPDxMlVxBtpobpxr?autoplay=true</a>
7	Captain America : The First Avenger	<a href="https://open.spotify.com/album/0La1Tskamjd6akysepE8r5?autoplay=true">https://open.spotify.com/album/0La1Tskamjd6akysepE8r5?autoplay=true</a>

8	Captain America : The Winter Soldier	<a href="https://open.spotify.com/album/3nWTffckeFVKV26BNZgKCI?autoplay=true">https://open.spotify.com/album/3nWTffckeFVKV26BNZgKCI?autoplay=true</a>
9	Black Widow	<a href="https://open.spotify.com/album/6ov95v1bTRaC6ds2FaIcK?si=6EIy9YnTROaYckI3Stxr-A">https://open.spotify.com/album/6ov95v1bTRaC6ds2FaIcK?si=6EIy9YnTROaYckI3Stxr-A</a>
10	Black Panther	<a href="https://open.spotify.com/album/7KDslrXaOYS28ferZi5UVK?si=QamovVM6RfSIl-tIbKnDA">https://open.spotify.com/album/7KDslrXaOYS28ferZi5UVK?si=QamovVM6RfSIl-tIbKnDA</a>
11	Guardians of the Galaxy	<a href="https://open.spotify.com/album/3KxwtSwqC6Ed49laQpSlJM?si=XZ8kqJ6HQjiwds7zngxE4Q">https://open.spotify.com/album/3KxwtSwqC6Ed49laQpSlJM?si=XZ8kqJ6HQjiwds7zngxE4Q</a>
12	SpiderMan : Intro the Spider-verse	<a href="https://open.spotify.com/album/5KP2NReDL2Bv0QLzHSvUwM?si=MdP9sh0MSKuG16EGDWnu9A">https://open.spotify.com/album/5KP2NReDL2Bv0QLzHSvUwM?si=MdP9sh0MSKuG16EGDWnu9A</a>
13	Captain Marvel	<a href="https://open.spotify.com/album/7JkLtKFARIE47ungawDy0?si=VbyckF9uT_etxHObq0YzvA">https://open.spotify.com/album/7JkLtKFARIE47ungawDy0?si=VbyckF9uT_etxHObq0YzvA</a>
14	Doctor Strange	<a href="https://open.spotify.com/album/6wLxqu3cGnJoJZyiA3Pe10?si=o5kMVrFOSBquWZ5ILTC-nQ">https://open.spotify.com/album/6wLxqu3cGnJoJZyiA3Pe10?si=o5kMVrFOSBquWZ5ILTC-nQ</a>
15	Shang-Chi and the Legend of the Ten Rings	<a href="https://open.spotify.com/album/72LIvmrUE6L6bBO5gzvbya?si=LMPB0OybToeN2jAcws9z4g">https://open.spotify.com/album/72LIvmrUE6L6bBO5gzvbya?si=LMPB0OybToeN2jAcws9z4g</a>

## o Views / Queries

View Name	Req. A	Req. B	Req. C	Req. D	Req. E
Query_movie_songs	X	X			
Query_IronMan3_songs	X				
Query_Doctor_strange_songs	X	X	X		
Query_movies_count	X	X	X	X	
Query_find_a_movie		X			X

## Changes From Original Design:

The change from our original design is removing the awards table. The awards table creates a many-to-many relationship which ruins our table structure. Our table structure became very complicated when we tried to build relationships with other tables including movies, songs, producers, and composers. For example, an Academic Awards have relationships with at least 5 different marvel movies and 7 songs. After we tried to normalize the data and used the data, many errors from MySQL occurred.

**Database Ethics Considerations:**

Our team observes zero data elements that might lead to compromised privacy in case of a flawed user access policy or a potential database breach. There are some biases toward Marvel Cinematic Universe and DC Comics which could lead to DC fans not knowing any of these soundtracks due to favoritism. There's also the issue that people who haven't seen any Marvel movies will have no idea what our database is so it's not as inclusive.

**Lessons Learned:**

The most important lesson we learned from creating a database from scratch is that creating an EER diagram is the most important step and this step should be done very thoroughly. Looking back to our project, we were failing at building a good EER diagram including column definition because we needed to make constant changes while working through our project. The second lesson learned is to consider data types before creating a database in MySQL because when we were creating foreign keys, many errors popped up because of unmatched data types. The third lesson learned is ensuring there is enough data to work on when creating a csv file because an insufficient amount of data did not provide a useful database when we tried to query.

**Potential Future Work:**

As a team, we faced many challenges and mistakes but we were able to work through it and complete our ERD, forward engineering the ERD and create queries for our project. Potential future tasks are to better understand our linking table and link our tables together correctly.