CSC 370 – Database Systems

Dr. Sean Chester

Movie Rating System

Project Sprint: 1 Revision

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1) Addressing Feedback for **[Planning]Improvement wrt course-level competencies:**

For the Course Level Competency, we are currently at *Level-1* for both *Data Modelling* and *Data Analytics* as we have accomplished these.

Considering the information from the competencies from lecture, in detail:

We have achieved Level 1 for Data Analytics, demonstrating the ability to write code that effectively manipulates relational databases to achieve specific outcomes, anticipate query results, and express query intents using declarative SQL and relational operators. This includes accurately extracting data with selection predicates and attribute projections, combining data from multiple tables using appropriate JOIN operations, and modifying data in bulk with set-theoretic SQL DML queries. Additionally, we have mastered Level 1 data modelling, which include storing data in tables with suitable data types, implementing relational designs, loading data from .CSV formats without loss, appending new data to existing tables, adjusting their structures as needed, and documenting table relationships using accurate entity-relationship diagrams. These competencies form a strong foundation for managing and manipulating data effectively within relational database systems.

Current Limitations:

- We haven't identified a plausible set of functional dependencies.
- We don't have any foreign key relationship.
- There might be some BCNF normalization that is needed.
- We need more complex query logic that involves grouping data into equivalence classes or nesting queries within queries to specify conditional behaviour.

By the **end of next Sprint** i.e., Sprint 2, We will accomplish the *Level-2* for both *Data Modelling* and *Data Analytics*.

2) Addressing Feedback for **[Planning] Coverage of next sprint plan with newly covered module competencies:**

For individual command, please see the file in the folder 'csv_commands.sql'

Uploading CSV files:

```
mysql> CREATE DATABASE Movie_Rating_System;
\Query OK, 1 row affected (0.02 sec)

mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| Movie_Rating_System |
| mysql              |
| performance_schema |
| Student            |
| sys                |
+--------------------+
6 rows in set (0.00 sec)

mysql> USE DATABASE Movie_Rating_System;
ERROR 1049 (42000): Unknown database 'database'
mysql> USE  Movie_Rating_System;
Database changed
mysql> SHOW TABLES;
Empty set (0.00 sec)

mysql>
```

```
 ->    `movie_episode_id` INT,
 ->      `episode_number` INT,
 ->    PRIMARY KEY (`genre_id`, `movie_episode_id`, `episode_number`)
 -> );
Query OK, 0 rows affected (0.02 sec)

mysql>
mysql> SHOW TABLES;
+-------------------------------+
| Tables_in_movie_rating_system |
+-------------------------------+
| Assign_Genres_to_Movie_Episodes |
| Casts                         |
| Genres                        |
| Movie_Episodes                |
| Rates                         |
| Stars_In                      |
| Users                         |
+-------------------------------+
7 rows in set (0.02 sec)

mysql> SELECT * FROM `Users`;
Empty set (0.01 sec)

mysql>
```

```
mysql> LOAD DATA LOCAL INFILE '/path/to/your/data.csv'
    -> INTO TABLE users
    -> FIELDS TERMINATED BY ','
    -> ENCLOSED BY '"'
    -> LINES TERMINATED BY '\n'
    -> IGNORE 1 LINES
    -> (user_id, username, password, email, full_name, @is_admin, created_at)
    -> SET is_admin = IF(@is_admin = 'TRUE', 1, 0);
ERROR 2 (HY000): File '/path/to/your/data.csv' not found (Errcode: 2 - No such file or directory)
mysql> LOAD DATA LOCAL INFILE '/Users/karangosal/Downloads/UVIC/SUMMER_2024/CSC_370/Project/Csv_Files/Users.csv' INTO
 TABLE `Users` FIELDS TERMINATED BY ',' ENCLOSED
    -> BY '"' LINES TERMINATED BY '\r\n' IGNORE 1 LINES (user_id, username, password, email, full_name, @is_admin, cr
eated_at)
    -> SET is_admin = IF(@is_admin = 'TRUE', 1, 0);
Query OK, 2 rows affected (0.01 sec)
Records: 2  Deleted: 0  Skipped: 0  Warnings: 0

mysql> SELECT * FROM `Users`;
+---------+----------+----------------+-----------------------+-------------+----------+---------------------+
| user_id | username | password       | email                 | full_name   | is_admin | created_at          |
+---------+----------+----------------+-----------------------+-------------+----------+---------------------+
|       1 | johndoe  | securepassword | johndoe@example.com   | John Doe    |        0 | 2024-06-01 12:34:00 |
|       2 | sidhum   | testpassword   | sidhumoose@example.com | Sidhu Moose |        1 | 2024-06-01 12:50:00 |
+---------+----------+----------------+-----------------------+-------------+----------+---------------------+
2 rows in set (0.00 sec)
```

```
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql> SELECT * FROM Genres;
+----------+------------+
| genre_id | genre_name |
+----------+------------+
|        0 | Scary      |
|        1 | Comedy     |
|        2 | Romance    |
|        3 | Action     |
|        4 | Thriller   |
+----------+------------+
5 rows in set (0.01 sec)

mysql>
```

```
|         2 | Romance     |
|         3 | Action      |
|         4 | Thriller    |
+-----------+-------------+
5 rows in set (0.01 sec)

mysql> LOAD DATA LOCAL INFILE '/Users/karangosal/Downloads/UVIC/SUMMER_2024/CSC_370/Project/Csv_Files/Casts.csv' INTO
 TABLE `Casts` FIELDS TERMINATED BY ',' ENCLOSED
    -> BY '"' LINES TERMINATED BY '\r\n' IGNORE 1 LINES;
Query OK, 5 rows affected (0.04 sec)
Records: 5  Deleted: 0  Skipped: 0  Warnings: 0

mysql> SELECT * FROM Casts;
+---------+-------------+-------------+
| cast_id | first_name  | last_name   |
+---------+-------------+-------------+
|       1 | Johnny      | Galecki     |
|       2 | Jim         | Parsons     |
|       3 | Kaley       | Cuoco       |
|       4 | Bruce       | Willis      |
|       5 | Justin      | Long        |
+---------+-------------+-------------+
5 rows in set (0.01 sec)

mysql>
```

```
mysql> LOAD DATA LOCAL INFILE '/Users/karangosal/Downloads/UVIC/SUMMER_2024/CSC_370/Project/Csv_Files/Movie_Episodes.csv' IN
TO TABLE `Movie_Episodes` FIELDS TERMINATED BY ',' ENCLOSED
    -> BY '"' LINES TERMINATED BY '\r\n' IGNORE 1 LINES;
Query OK, 4 rows affected (0.01 sec)
Records: 4  Deleted: 0  Skipped: 0  Warnings: 0

mysql> SELECT * FROM Movie_Episodes;
+------------------+----------------+------------------------+--------------+----------------------------------------------
| movie_episode_id | episode_number | title                  | release_year | synopsis
                                          | has_episodes |
+------------------+----------------+------------------------+--------------+----------------------------------------------
|                1 |              0 | Die Hard               |         2014 | John McClane and a young hacker join forces
to take down master cyber-terrorist in Washington D.C. |            0 |
|                2 |              0 | Big Bang Theory        |         2005 | A woman who moves into an apartment across t
he hall from two brilliant scientists.                  |            1 |
|                2 |              1 | S01: Pilot             |         2005 | Meet all the characters first time.
                                          |            0 |
|                2 |              2 | S02: Leonard meets Penny |       2005 | In this Leonard meets Penny for the first ti
me.                                                     |            0 |
+------------------+----------------+------------------------+--------------+----------------------------------------------
4 rows in set (0.00 sec)
```

```
|                2 |              2 | S02: Leonard meets Penny |       2005 | In this Leonard meets Penny for the first ti
me.                                                     |            0 |
+------------------+----------------+------------------------+--------------+----------------------------------------------
4 rows in set (0.00 sec)

mysql> LOAD DATA LOCAL INFILE '/Users/karangosal/Downloads/UVIC/SUMMER_2024/CSC_370/Project/Csv_Files/Assign_Genres_to_Movie
_Episodes.csv' INTO TABLE `Assign_Genres_to_Movie_Episodes` FIELDS TERMINATED BY ',' ENCLOSED
    -> BY '"' LINES TERMINATED BY '\r\n' IGNORE 1 LINES;
Query OK, 5 rows affected (0.01 sec)
Records: 5  Deleted: 0  Skipped: 0  Warnings: 0

mysql> SELECT * FROM Assign_Genres_to_Movie_Episodes;
+----------+------------------+----------------+
| genre_id | movie_episode_id | episode_number |
+----------+------------------+----------------+
|        1 |                2 |              0 |
|        1 |                2 |              1 |
|        2 |                2 |              0 |
|        3 |                1 |              0 |
|        4 |                1 |              0 |
+----------+------------------+----------------+
5 rows in set (0.00 sec)

mysql>
```

```
|           4 |           1 |           0 |
+-------------+-------------+-------------+
5 rows in set (0.00 sec)

mysql> LOAD DATA LOCAL INFILE '/Users/karangosal/Downloads/UVIC/SUMMER_2024/CSC_370/Project/Csv_Files/Stars_In.csv' INTO TAB
LE `Stars_In` FIELDS TERMINATED BY ',' ENCLOSED
    -> BY '"' LINES TERMINATED BY '\r\n' IGNORE 1 LINES;
Query OK, 7 rows affected (0.01 sec)
Records: 7  Deleted: 0  Skipped: 0  Warnings: 0

mysql> SELECT * FROM Stars_In;
+---------+-----------------+----------------+
| cast_id | movie_episode_id | episode_number |
+---------+-----------------+----------------+
|       1 |               2 |              1 |
|       1 |               2 |              2 |
|       2 |               2 |              1 |
|       3 |               2 |              1 |
|       3 |               2 |              2 |
|       4 |               1 |              0 |
|       5 |               1 |              0 |
+---------+-----------------+----------------+
7 rows in set (0.00 sec)

mysql>
```

```
    -> SET show_username = IF(@show_username = 'TRUE', 1, 0);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for
 the right syntax to use near 'OAD DATA LOCAL INFILE '/Users/karangosal/Downloads/UVIC/SUMMER_2024/CSC_370/Proj' at line 1
mysql> LOAD DATA LOCAL INFILE '/Users/karangosal/Downloads/UVIC/SUMMER_2024/CSC_370/Project/Csv_Files/Rates.csv'
    -> INTO TABLE `Rates`
    -> FIELDS TERMINATED BY ','
    -> ENCLOSED BY '"'
    -> LINES TERMINATED BY '\r\n'
    -> IGNORE 1 LINES
    -> (user_id, movie_episode_id, episode_number, rating, review, @show_username)
    -> SET show_username = IF(@show_username = 'TRUE', 1, 0);
Query OK, 3 rows affected (0.01 sec)
Records: 3  Deleted: 0  Skipped: 0  Warnings: 0

mysql> SELECT * FROM Rates;
+---------+------------------+----------------+--------+------------------------+---------------+
| user_id | movie_episode_id | episode_number | rating | review                 | show_username |
+---------+------------------+----------------+--------+------------------------+---------------+
|       1 |                1 |              0 |      5 | Great Movie            |             1 |
|       2 |                2 |              1 |      4 | Excellent pilot episode |            0 |
|       2 |                2 |              2 |      5 | Enjoyable show         |             1 |
+---------+------------------+----------------+--------+------------------------+---------------+
3 rows in set (0.00 sec)

mysql>
```

Example for the JOIN:


```
mysql --local-infile=1 -u root -p

Query OK, 3 rows affected (0.01 sec)
Records: 3  Deleted: 0  Skipped: 0  Warnings: 0

mysql> SELECT * FROM Rates;
+---------+-----------------+----------------+--------+-----------------------+----------------+
| user_id | movie_episode_id | episode_number | rating | review                | show_username  |
+---------+-----------------+----------------+--------+-----------------------+----------------+
|       1 |               1 |              0 |      5 | Great Movie           |              1 |
|       2 |               2 |              1 |      4 | Excellent pilot episode |            0 |
|       2 |               2 |              2 |      5 | Enjoyable show        |              1 |
+---------+-----------------+----------------+--------+-----------------------+----------------+
3 rows in set (0.00 sec)

mysql> SELECT Users.user_id, Users.username
    -> FROM Users
    -> JOIN Rates ON Users.user_id = Rates.user_id
    -> WHERE Users.`user_id` = 1;
+---------+----------+
| user_id | username |
+---------+----------+
|       1 | johndoe  |
+---------+----------+
1 row in set (0.01 sec)

mysql>
```