CSE 305 Final Project Report

A. Group Members
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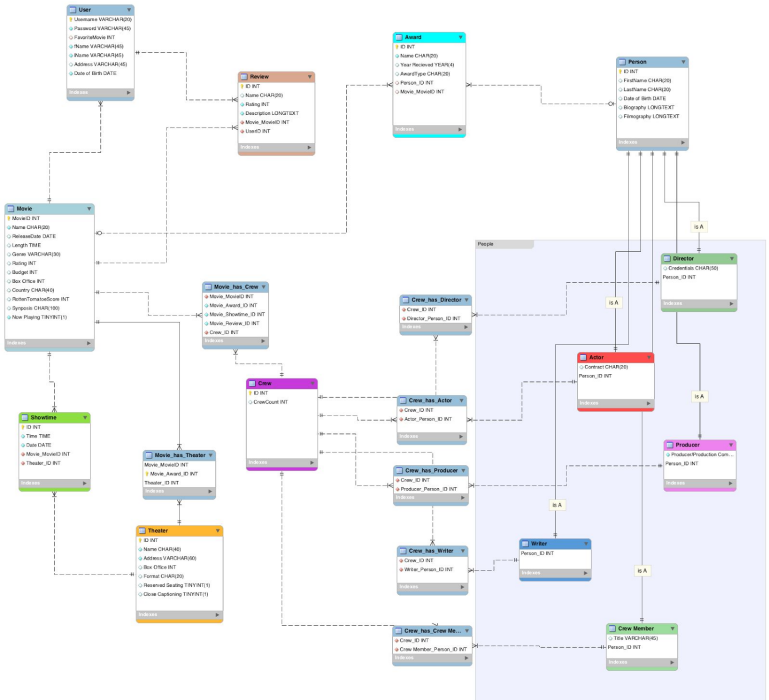
B. Stages of Development
   a. Entity-Relationship Diagram
      i. Being the first part of the project, the Entity-Relationship diagram was probably one of the most important parts. It was slightly overwhelming considering the amount of entities there were to take into account but after listing out attributes and relations for each table and figuring out how each table related with one another our first iteration of the ERD came together.

      ii. We used MySQLWorkbench to create the tables and relations. Many changes were made to our original workbench file until we got to what is now our final ERD. For instance, we originally had 5 tables to classify a person (Actor, Director, Writer, etc.). Each table had a first name column, last name column, date of birth column, biography column and filmography column. We quickly realized that there were too many repeating columns amongst different tables so we changed the diagram to show one overlying Person table and then the 5 more specific people extending from that table.

      iii. Our final ERD shown below.



b. Mapping E-R Diagrams to relationships
    i. Mapping the conceptual model to the relational schema was the next part of our project. This is where we translated the tables and relations that we had from the ERD's and turned them into schemas that can be read easily and then into the actual SQL statements. This part of the process was especially helpful when actually implementing the database.

c. Implementing transactions
    i. The workflow here was simple. First we would understand the transaction we wanted to execute. Then we would determine what tables we would be needing to take from. Once we had an idea for the query statement we would execute it in MySQLWorkbench to make sure it yielded the correct output. Finally, we took those statements and inserted them into our routing functions we had setup in our routes.py file. This would ensure that any issues we may have would not be because of an incorrect query statement thus making troubleshooting easier.

d. Working Transactions
    i. Displaying movies that are now playing in theaters.
    ii. Display the theater(s) that a specific movie is playing at.
    iii. Displaying all movies alphabetically.
    iv. Displaying all actors and actresses alphabetically.
    v. Displaying more information about a movie.
    vi. Displaying more information about an actor or actress.
    vii. Displaying the top 5 rated movies.

e. Project Contributions
    i. Austin Biegler
        1. Worked primarily on the Front-end.
        2. Created HTML template files and implemented the Bootstrap framework to access values from the python routing methods and to create a custom GUI.
        3. Assisted in setting up the mydb schema.
        4. Assisted in adding values to tables.
    ii. Omar Muy
        1. Worked primarily on the DB (SQL)
        2. Tested out our DB that we imported (mydb) from the previous homework to use for this one, making sure everything is functioning properly (select, delete, update, insert, etc.)
        3. Researched movies that are currently playing around this time so that we can have a specific section where movies are 'currently

playing and so that we can have specific theaters and showtimes for each movie.
4. Added values to the tables and connected each table together based on the specific foreign keys each requires while also keeping track of each primary key.

iii. Brian Lavelle
1. Set up the database for the project through aws
2. Chose the languages and frameworks that we would use for the project
3. Designed how all the aspects of the project would work together ie front end, back end, and sql and how the data was passed between the different layers
4. Worked on the backend which included making the route functions and the sql statements
5. Designed and implemented the initial functionality of the front end