

WORKSHEET 5 SQL

Refer the following ERD and answer all the questions in this worksheet. You have to write the queries using MySQL for the required Operation.

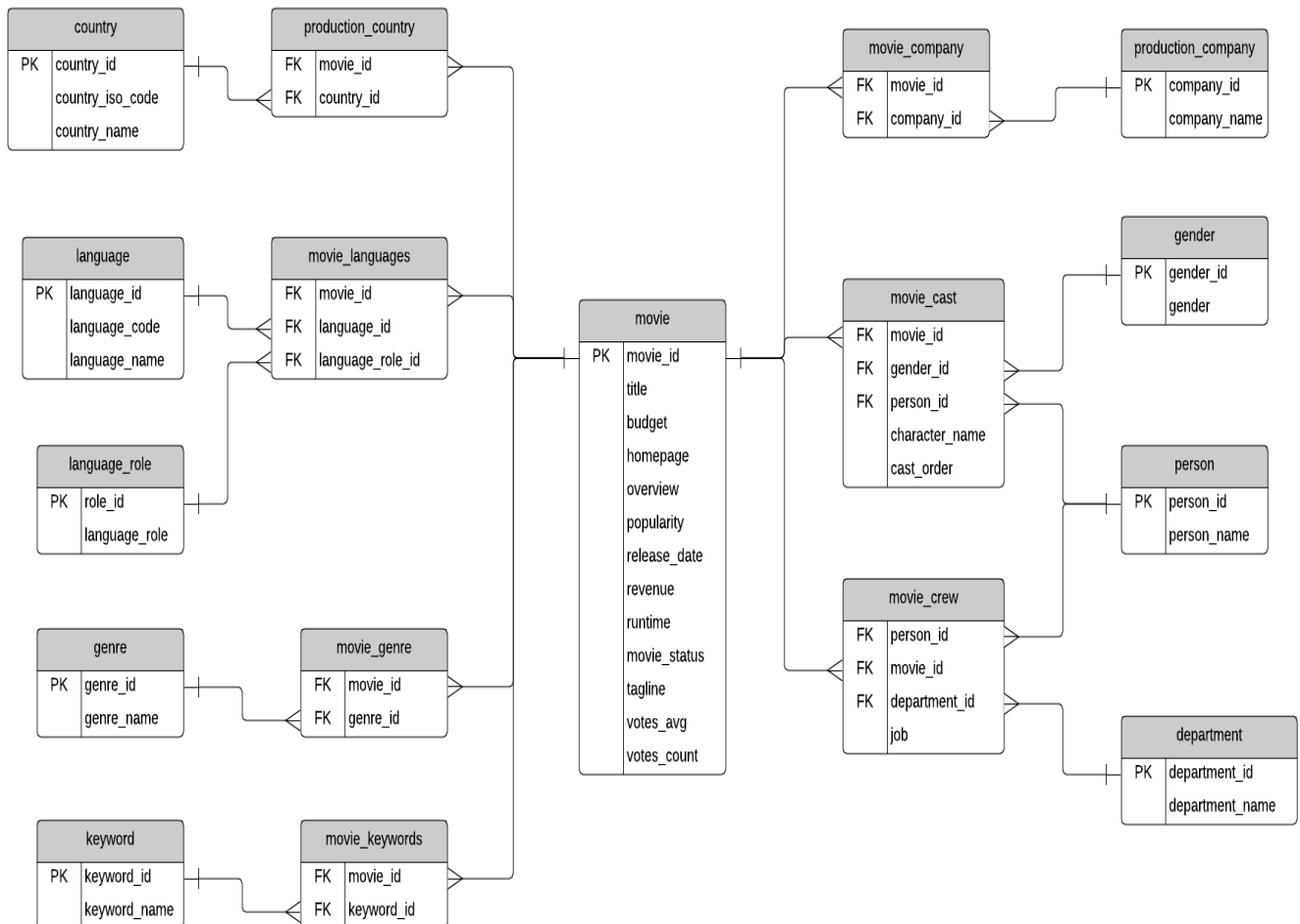


Table Explanations:

- The **movie** table contains information about each movie. There are text descriptions such as title and overview. Some fields are more obvious than others: revenue (the amount of money the movie made), budget (the amount spent on creating the movie). Other fields are calculated based on data used to create the data source: popularity, votes_avg, and votes_count. The status indicates if the movie is Released, Rumoured, or in Post-Production.
- The **country** list contains a list of different countries, and the **movie_country** table contains a record of which countries a movie was filmed in (because some movies are filmed in multiple countries). This is a standard many-to-many table, and you'll find these in a lot of databases.
- The same concept applies to the **production_company** table. There is a list of production companies and a many-to-many relationship with movies which is captured in the **movie_company** table.
- The **languages** table has a list of languages, and the **movie_languages** captures a list of languages in a movie. The difference with this structure is the addition of a **language_role** table.
- This **language_role** table contains two records: Original and Spoken. A movie can have an original language (e.g. English), but many Spoken languages. This is captured in the **movie_languages** table along with a role.
- Genres** define which category a movie fits into, such as Comedy or Horror. A movie can have multiple genres, which is why the **movie_genres** table exists.

- The same concept applies to **keywords**, but there are a lot more keywords than genres. I'm not sure what qualifies as a keyword, but you can explore the data and take a look. Some examples as "paris", "gunslinger", or "saving the world".
- The cast and crew section of the database is a little more complicated. Actors, actresses, and crew members are all people, playing different roles in a movie. Rather than have separate lists of names for crew and cast, this database contains a table called **person**, which has each person's name.
- The **movie_cast** table contains records of each person in a movie as a cast member. It has their character name, along with the **cast_order**, which I believe indicates that lower numbers appear higher on the cast list.
- The **movie_cast** table also links to the gender table, to indicate the gender of each character. The gender is linked to the **movie_cast** table rather than the **person** table to cater for characters which may be a different gender than the person, or characters of unknown gender. This means that there is no gender table linked to the **person** table, but that's because of the sample data.
- The **movie_crew** table follows a similar concept and stores all crew members for all movies. Each crew member has a job, which is part of a **department** (e.g. Camera).

QUESTIONS:

1. Write SQL query to show all the data in the Movie table.

Ans:- SELECT * FROM movie;

2. Write SQL query to show the title of the longest runtime movie.

**Ans:- SELECT title FROM movie
ORDER BY runtime DESC
LIMIT 1;**

3. Write SQL query to show the highest revenue generating movie title.

**Ans:- SELECT title FROM movie
ORDER BY revenue DESC
LIMIT 1;**

4. Write SQL query to show the movie title with maximum value of revenue/budget.

**Ans:- SELECT title FROM movie
ORDER BY revenue/budget DESC
LIMIT 1;**

5. Write a SQL query to show the movie title and its cast details like name of the person, gender, character name, cast order.

**Ans:- SELECT movie.title, person.name, person.gender, movie_cast.character_name,
movie_cast.cast_order FROM movie
JOIN movie_cast ON movie.id = movie_cast.movie_id
JOIN person ON person.id = movie_cast.person_id;**

6. Write a SQL query to show the country name where maximum number of movies has been produced, along with the number of movies produced.

**Ans:- SELECT country.name, COUNT(*) as num_movies FROM movie_country
JOIN country ON movie_country.country_id = country.id
GROUP BY country.name
ORDER BY num_movies DESC
LIMIT 1;**

7. Write a SQL query to show all the genre_id in one column and genre_name in second column.

Ans:- SELECT id as genre_id, name as genre_name FROM genre;

8. Write a SQL query to show name of all the languages in one column and number of movies in that particular column in another column.

**Ans:- SELECT language.name, COUNT(*) as num_movies FROM movie_languages
JOIN language ON movie_languages.language_id = language.id
GROUP BY language.name;**

9. Write a SQL query to show movie name in first column, no. of crew members in second column and number of cast members in third column.

**Ans:- SELECT movie.title, COUNT(DISTINCT movie_crew.person_id) as num_crew_members,
COUNT(DISTINCT movie_cast.person_id) as num_cast_members FROM movie
LEFT JOIN movie_crew ON movie.id = movie_crew.movie_id
LEFT JOIN movie_cast ON movie.id = movie_cast.movie_id
GROUP BY movie.title;**

10. Write a SQL query to list top 10 movies title according to popularity column in decreasing order.

**Ans:- SELECT title FROM movie
ORDER BY popularity DESC
LIMIT 10;**

11. Write a SQL query to show the name of the 3rd most revenue generating movie and its revenue.

**Ans:- SELECT title, revenue FROM movie
ORDER BY revenue DESC
LIMIT 1 OFFSET 2;**

12. Write a SQL query to show the names of all the movies which have “rumoured” movie status.

**Ans:- SELECT title FROM movie
WHERE status = 'Rumoured';**

13. Write a SQL query to show the name of the “United States of America” produced movie which generated maximum revenue.

**Ans:- SELECT title FROM movie
JOIN movie_country ON movie.id = movie_country.movie_id
JOIN country ON movie_country.country_id = country.id
WHERE country.name = 'United States of America'
ORDER BY revenue DESC
LIMIT 1;**

14. Write a SQL query to print the movie_id in one column and name of the production company in the second column for all the movies.

**Ans:- SELECT movie.id, production_company.name FROM movie_company
JOIN movie ON movie.id = movie_company.movie_id
JOIN production_company ON movie_company.company_id = production_company.id;**

15. Write a SQL query to show the title of top 20 movies arranged in decreasing order of their budget.

**Ans:- SELECT title FROM movie
ORDER BY budget DESC
LIMIT 20;**
