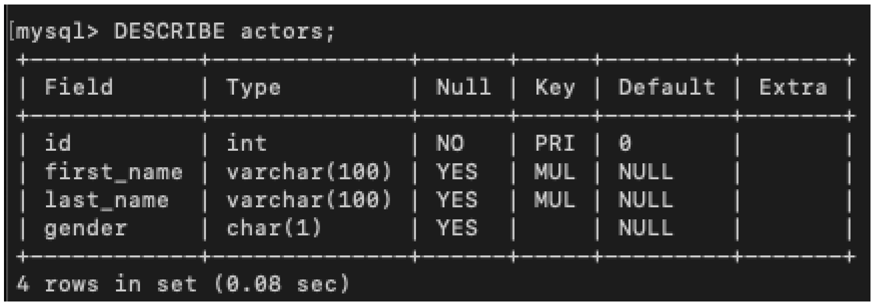
SQL

- **How to create a MySQL database (imdb) from sql file (imbd.sql)?**
    - mysql> CREATE DATABASE imdb; → It will create a database called “imdb”
    - mysql> USE imdb;
    - mysql> SOURCE /user/Downloads/SQL/imbd.sql; → It has to dump the “imdb.sql” data into the “imdb” database.

- **What are MySQL Server and MySQL databases?**
    - MySQL Server:
        - It is your computer or “local host” (/usr/local/sql-9….). MySQL server refers to the computer MySQL is running on or the MySQL application.
        - “MySQL Server” is a running MySQL database program, while a MySQL database is the data managed by a MySQL database program. To be pedantic, a single MySQL server can manage many local MySQL databases.)
    - MySQL database refers to an individual database that is running on a MySQL server. A single MySQL server may contain multiple MySQL databases.

Some Commands of SQL:

- *mysql -u root -p* → It is saying that you want to enter the database as a root user. Note: lower case letters will also work (use imdb). It is just a good habit as a programmer to use capital letters to specify that it is a SQL command.
- *USE imdb* → You want to use the “imdb” database for the work. Here the “USE” can be used to change the current database to another one like “*USE amazon*”. Note: lower case letters will also work (use imdb). It is just a good habit as a programmer to use capital letters to specify that it is a SQL command.
- *control + L* → Clear the screen.
- *SHOW TABLES;* → Don’t forget to use the semicolon at the end. Otherwise, it will wait for it by showing this sign “→”. This command will show the “tables” present in “imdb” database.
- *DESCRIBE actors;* → To describe one of the tables from the database, you can use this command.



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[mysql> DESCRIBE actors;
+------------+--------------+------+-----+---------+-------+
| Field      | Type         | Null | Key | Default | Extra |
+------------+--------------+------+-----+---------+-------+
| id         | int          | NO   | PRI | 0       |       |
| first_name | varchar(100) | YES  | MUL | NULL    |       |
| last_name  | varchar(100) | YES  | MUL | NULL    |       |
| gender     | char(1)      | YES  |     | NULL    |       |
+------------+--------------+------+-----+---------+-------+
4 rows in set (0.08 sec)
```

    - **Field:** There are four columns in the actor's table. (id, first_name, last_name, gender)
    - **Type:** It tells you the datatypes of the content present in the each table. For example, id → all the rows in this column is integer. varchar(100) → There can be variable lengths of characters in this column row, like Arjun, Ajay etc.
    - **Null:** It tells you whether the rows in this column can have “NULL” values or not. For example, id → It can be NULL. It must have some value. gender → It can have null values.
    - **Key:** It shows which of the columns is Primary and Mul. By primary, it means every row in the column will have unique values. For example, id → So, for actors, there will be only one unique id. Mul → Multiple values can be present, such as the first_name of many actors being the same.
    - **Default:** It shows what the given value should be if no value is present—for example, 0 for id and NULL for others.

- *SELECT * FROM movies;* → It will show all the columns and the content present in the table movies.

But what if I want to select only two columns (year, name) from the imdb database?

- *SELECT name,year FROM movies;* → The result it gives is another table having name and year as a column. This query is faster than the above query, so always recommend asking for those queries that you need.
  Note: If you want to change the order of the columns of the result table, you can just switch the name in the query. For example, *SELECT year, name FROM movies;*.

- *SELECT name, year FROM movies LIMIT 20;* → In this, we are getting only the top 20 rows of the column names and years.

But what if I want to get only rows from 20 to 40?

- *SELECT name, year FROM movies LIMIT 40 OFFSET 20;* → It says in my result table I want 40 rows but offset (ignore) the first 20 rows and then give the result table. OFFSET: It says how many rows from the start you want to ignore.