TOP 70 SQL QUESTION

- All patterns
- Previous year questions
- All topic covered

SQL QUESTIONS

1Q.

How do you switch to the imdb database?

ANSWER:

```
USE imdb;
```

SQL QUESTIONS

2Q.

How do you list all tables in the current database?

ANSWER:

```
SHOW tables;
```

SQL QUESTIONS

3Q.

How do you display the structure of the movies table?

ANSWER:

```
DESCRIBE movies;
```

SQL QUESTIONS

4Q.

How do you select all columns from the movies table?

ANSWER:

```
SELECT * FROM movies;
```

SQL QUESTIONS

5Q.

How do you select the name and year columns from the movies table?

ANSWER:

```
SELECT name, year FROM movies;
```

SQL QUESTIONS

6Q.

How do you select the rank score and name columns from the movies table?

ANSWER:

```
SELECT rankscore, name
FROM movies;
```

SQL QUESTIONS

Keyword:

LIMIT

Restricts the number of rows returned in the result set.

OFFSET

Specifies the number of rows to skip before starting to return rows.

SQL QUESTIONS

7Q.

How do you get the first 20 rows of name and rankscore from movies?

ANSWER:

```
SELECT    name,    rankscore
FROM movies
 LIMIT 20;
```

SQL QUESTIONS

8Q.

Why to use LIMIT and OFFSET?

ANSWER:

LIMIT:

Efficient Resource Usage

OFFSET:

Enables Pagination

SQL QUESTIONS

9Q.

How do you get 20 rows of name and rankscore starting from the 41st row in movies?

ANSWER:

```
SELECT name, rankscore
FROM movies
LIMIT 20
OFFSET 40;
```

SQL QUESTIONS

Keyword:

ORDER BY

The ORDER BY clause in SQL is used to sort the result set by one or more columns. By default, it sorts in ascending order (ASC), but you can specify descending order (DESC) if needed.

SQL QUESTIONS

10Q.

How do you list the top 10 most recent movies by year, showing name, rankscore, and year?

ANSWER :

```
SELECT name, rankscore, year
FROM movies
ORDER BY year DESC
LIMIT 10;
```

SQL QUESTIONS

11Q.

How do you list the top 10 oldest movies by year, showing name, rankscore, and year?

ANSWER :

```
SELECT name, rankscore, year
FROM movies
ORDER BY year
 LIMIT 10;
```

SQL QUESTIONS

Keyword:

DISTINCT

The DISTINCT keyword in SQL is used to return only unique (distinct) values. It eliminates duplicate rows from the result set.

SQL QUESTIONS

12Q.

How do you list all unique genres from the movies_genres table?

ANSWER:

```
SELECT DISTINCT genre
FROM movies_genres;
```

SQL QUESTIONS

13Q.

How do you list all unique combinations of first_name and last_name from the directors table?

ANSWER:

```
SELECT DISTINCT first_name ,last_name
FROM directors;
```

SQL QUESTIONS

Keyword:

WHERE

The WHERE clause in SQL is used to filter rows based on a specified condition. It enables you to extract only the rows that meet the specified criteria.

SQL QUESTIONS

14Q.

How do you list all movies with a rankscore greater than 9, showing name, year, and rankscore?

ANSWER:

```
SELECT name, year, rankscore
FROM movies
WHERE rankscore > 9;
```

SQL QUESTIONS

15Q.

How do you list the top 20 movies with a rankscore greater than 9, sorted in descending order of rankscore?

ANSWER:

```
SELECT name, year, rankscore
FROM movies
WHERE rankscore > 9
ORDER BY rankscore DESC
LIMIT 20;
```

SQL QUESTIONS

16Q.

How do you list all records from movies_genres where the genre is 'Comedy'?

ANSWER:

```
SELECT * FROM movies_genres
WHERE genre = 'Comedy';
```

SQL QUESTIONS

17Q.

How do you list all records from movies_genres where the genre is not 'Horror'?

ANSWER:

```
SELECT *
FROM movies_genres
WHERE genre <> 'Horror';
```

SQL QUESTIONS

18Q.

What is the result of querying movies where rankscore equals NULL?

ANSWER:

```
SELECT name, year, rankscore
FROM movies
WHERE rankscore = NULL;
```

SQL QUESTIONS

19Q.

How do you list the first 20 movies where the rankscore is NULL?

ANSWER:

```
SELECT name, year, rankscore
FROM movies
WHERE rankscore IS NULL
LIMIT 20;
```

SQL QUESTIONS

20Q.

How do you list the first 20 movies where the rankscore is not NULL?

ANSWER:

```
SELECT name, year, rankscore
FROM movies
WHERE rankscore IS NOT NULL
 LIMIT 20;
```

SQL QUESTIONS

21Q.

How do you list the first 20 movies where the rankscore is not NULL?

ANSWER:

```
SELECT name, year, rankscore
FROM movies
WHERE rankscore IS NOT NULL
LIMIT 20;
```

SQL QUESTIONS

22Q.

How do you list the first 20 movies where the rankscore is not NULL?

ANSWER :

```
SELECT name, year, rankscore
FROM movies
WHERE rankscore IS NOT NULL
LIMIT 20;
```

SQL QUESTIONS

Keyword:

Logical Operators

In SQL, logical operators are used to combine multiple conditions in a WHERE clause. These operators include AND, OR, NOT, BETWEEN, IN, LIKE, etc.

SQL QUESTIONS

23Q.

How do you list movies with a rankscore greater than 9 and released after the year 2000?

ANSWER:

```
SELECT name, year, rankscore
FROM movies
WHERE rankscore > 9 AND year > 2000;
```

SQL QUESTIONS

24Q.

How do you list the first 20 movies released after the year 2000?

ANSWER :

```
SELECT name, year, rankscore
FROM movies
WHERE NOT year <= 2000 LIMIT 20;
```

SQL QUESTIONS

25Q.

How do you list movies with a rankscore greater than 9 or released after the year 2007?

ANSWER :

```
SELECT name, year, rankscore
FROM movies
WHERE rankscore > 9 OR year > 2007;
```

SQL QUESTIONS

26Q.

How do you list movies released between 1999 and 2000, inclusive?

ANSWER :

```
SELECT name, year, rankscore
FROM movies
WHERE year BETWEEN 1999 AND 2000;
```

SQL QUESTIONS

27Q.

1. How do you list records where the genre is either 'Comedy' or 'Horror'?

ANSWER:

```
SELECT director_id, genre
FROM directors_genres
WHERE genre IN ('Comedy', 'Horror');
```

SQL QUESTIONS

28Q.

How do you list movies with names starting with 'Tis'?

ANSWER:

```
SELECT name, year, rankscore
FROM movies
WHERE name LIKE 'Tis%';
```

SQL QUESTIONS

29Q.

How do you list actors whose first names end with 'es'?

ANSWER:

```
SELECT first_name, last_name
FROM actors
WHERE first_name LIKE '%es';
```

SQL QUESTIONS

30Q.

How do you list actors whose first names contain 'es'?

ANSWER:

```
SELECT first_name, last_name
FROM actors
WHERE first_name LIKE '%es%';
```

SQL QUESTIONS

31Q.

How do you list actors whose first names match 'Agn_s', where '_' is exactly one character?

ANSWER:

```
SELECT first_name, last_name
FROM actors
WHERE first_name LIKE 'Agn_s';
```

SQL QUESTIONS

32Q.

How do you list actors whose first names start with 'L' but do not start with 'Li'?

ANSWER:

```
SELECT first_name, last_name
FROM actors
WHERE first_name LIKE 'L%' AND first_name
NOT LIKE 'Li%';
```

SQL QUESTIONS

Keyword:

Aggregate Functions:

Aggregate functions in SQL compute a single value from a set of rows. Common aggregate functions include COUNT, MIN, MAX, SUM, and AVG.

SQL QUESTIONS

33Q.

How do you find the earliest year in the movies table?

ANSWER:

```
SELECT MIN(year)
FROM movies;
```

SQL QUESTIONS

34Q.

How do you find the most recent year in the movies table?

ANSWER:

```
SELECT MAX(year)
 FROM movies;
```

SQL QUESTIONS

35Q.

How do you count the total number of rows in the movies table?

ANSWER:

```
SELECT COUNT(*)
FROM movies;
```

SQL QUESTIONS

36Q.

How do you count the number of movies released after the year 2000?

ANSWER:

```
SELECT COUNT(*)
 FROM movies
WHERE year > 2000;
```

SQL QUESTIONS

37Q.

How do you count the number of non-NULL year values in the movies table?

ANSWER:

```
SELECT COUNT(year)
FROM movies;
```

SQL QUESTIONS

Keyword:

GROUP BY

The GROUP BY clause in SQL is used to arrange identical data into groups. This clause is often used with aggregate functions (COUNT, MIN, MAX, SUM, AVG) to perform operations on each group of data.

SQL QUESTIONS

38Q.

How do you find the number of movies released each year?

ANSWER:

```
SELECT year, COUNT(year)
FROM movies
GROUP BY year;
```

SQL QUESTIONS

39Q.

How do you find the number of movies released each year, ordered by year?

ANSWER

:

```
SELECT year, COUNT(year)
FROM movies
GROUP BY year
ORDER BY year;
```

SQL QUESTIONS

40Q.

How do you find the number of movies released each year, ordered by year?

ANSWER:

```
SELECT year, COUNT(year) AS year_count
FROM movies
 GROUP BY year
ORDER BY year_count;
```

SQL QUESTIONS

Keyword:

HAVING

The HAVING clause in SQL is used to specify conditions on groups created by the GROUP BY clause. It is similar to the WHERE clause, but HAVING is used to filter groups rather than individual rows. It is typically used with aggregate functions.

SQL QUESTIONS

41Q.

ow do you find years with more than 1000 movies?

ANSWER:

```
SELECT year, COUNT(year) year_count
FROM movies
GROUP BY year
HAVING year_count > 1000;
```

SQL QUESTIONS

42Q.

How do you list movies released after the year 2000 without using GROUP BY?

ANSWER:

```
SELECT name, year
FROM movies
HAVING year > 2000;
```

SQL QUESTIONS

43Q.

How do you find years with more than 20 movies that have a rankscore greater than 9?

ANSWER :

```
SELECT year, COUNT(year) year_count
    FROM movies
    WHERE rankscore > 9
    GROUP BY year
    HAVING year_count > 20;
```

SQL QUESTIONS

Additional Points

Order of Execution

1. GROUP BY: Groups rows that have the same values in specified columns.
2. Aggregate Function: Calculates aggregate values like COUNT, SUM, AVG, etc., on the grouped data.
3. HAVING: Filters the groups based on the specified condition.

SQL QUESTIONS

Additional Points

HAVING vs. WHERE:

1. WHERE is applied to individual rows before grouping.
2. HAVING is applied to groups after the aggregation.

SQL QUESTIONS

Keywords

JOIN

The JOIN clause in SQL is used to combine rows from two or more tables based on a related column between them. There are several types of joins including INNER JOIN, LEFT JOIN, RIGHT JOIN, and FULL OUTER JOIN.

SQL QUESTIONS

44Q.

How do you list the names and genres of movies, limiting the result to 20 rows?

ANSWER:

```
SELECT m.name, g.genre
 FROM movies m JOIN movies_genres g
ON m.id = g.movie_id
LIMIT 20;
```

SQL QUESTIONS

45Q.

What does the query return when joining two tables T1 and T2 using their common columns?

ANSWER:

```
SELECT *
FROM T1 JOIN T2;
```

SQL QUESTIONS

46Q.

How do you join two tables T1 and T2 on column C1 without specifying the ON keyword?

ANSWER:

```
SELECT *
FROM T1 JOIN T2 USING (C1);
```

SQL QUESTIONS

47Q.

How do you list the names and genres of movies, including movies with no genre, limiting the result to 20 rows?

ANSWER:

```
SELECT m.name, g.genre
FROM movies m LEFT JOIN
movies_genres g ON m.id = g.movie_id
LIMIT 20;
```

SQL QUESTIONS

48Q.

How do you list the first and last names of actors who acted in the movie 'Officer 444'?

ANSWER:

```
SELECT a.first_name, a.last_name
FROM actors a JOIN roles r ON
a.id = r.actor_id JOIN movies m
ON m.id = r.movie_id AND
m.name = 'Officer 444';
```

SQL QUESTIONS

Keywords

Sub-Queries

A sub-query, also known as a nested query or inner query, is a query within another SQL query. The sub-query is executed first, and its result is used by the outer query. Sub-queries can be used with various operators like IN, NOT IN, EXISTS, NOT EXISTS, ANY, ALL, and comparison operators.

SQL QUESTIONS

49Q.

How do you list all actors in the movie "Schindler's List"?

ANSWER:

```
SELECT first_name, last_name
FROM actors
WHERE id IN (SELECT actor_id FROM roles
WHERE movie_id IN (SELECT id FROM movies
WHERE name = 'Schindler''s List'));
```

SQL QUESTIONS

50Q.

How do you list all actors in the movie "Schindler's List"?

ANSWER:

```
SELECT *
FROM movies
WHERE rankscore >= ALL (SELECT
MAX(rankscore) FROM movies);
```

SQL QUESTIONS

Additional Points

1. IN: Checks if a value matches any value in a sub-query result.
2. NOT IN: Checks if a value does not match any value in a sub-query result.
3. EXISTS: Returns true if the sub-query returns one or more records.

SQL QUESTIONS

Additional Points

4. NOT EXISTS: Returns true if the sub-query returns no records.

5. **ANY: Returns true if any value in the sub-query meets the condition.**

6. ALL: Returns true if all values in the sub-query meet the condition.

SQL QUESTIONS

Keywords

Data Manipulation Language (DML):

DML is used to retrieve, insert, update, and delete data in a database. The primary DML commands are SELECT, INSERT, UPDATE, and DELETE.

SQL QUESTIONS

51Q.

How do you insert a new movie record with the ID 412321, name "Thor", year 2011, and rankscore 7?

ANSWER:

```
INSERT INTO movies
(id, name, year, rankscore)
VALUES (412321, 'Thor', 2011, 7);
```

SQL QUESTIONS

52Q.

How do you insert multiple movie records in a single query?

ANSWER:

```
INSERT INTO movies(id, name, year, rankscore)
VALUES (412321, 'Thor', 2011, 7),
 (412322, 'Iron Man', 2008, 7.9),
(412323, 'Iron Man 2', 2010, 7);
```

SQL QUESTIONS

52Q.

How do you copy rows from one table to another using a sub-query?

ANSWER:

```
INSERT INTO target_table (col1, col2)
SELECT col1, col2 FROM source_table WHERE
condition;
```

SQL QUESTIONS

53Q.

How do you update the rankscore of the movie with ID 412321 to 9?

ANSWER:

```
UPDATE movies SET rankscore = 9
WHERE id = 412321;
```

SQL QUESTIONS

54Q.

How do you update the rankscore of all movies released before 2010 to 8?

ANSWER:

```
UPDATE movies SET rankscore = 8
WHERE year < 2010;
```

SQL QUESTIONS

55Q.

How do you delete the movie record with ID 412321?

ANSWER:

```
DELETE FROM movies
WHERE id = 412321;
```

SQL QUESTIONS

56Q.

How do you remove all rows from the movies table?

ANSWER:

```
TRUNCATE TABLE movies;
```

SQL QUESTIONS

Keywords

Data Definition Language (DDL):

DDL is used to define and manage database schema objects like tables, indexes, and constraints. Common DDL commands include CREATE, ALTER, DROP, and TRUNCATE.

SQL QUESTIONS

57Q.

How do you create a new table named language with columns i (integer primary key) and lang (non-nullable variable character)?

ANSWER:

```
CREATE TABLE language (
id INT PRIMARY KEY,
lang VARCHAR(50) NOT NULL);
```

SQL QUESTIONS

Keywords

Constraints:

Constraints are rules applied to table columns to enforce data integrity.

SQL QUESTIONS

Keywords

- NOT NULL: Ensures that a column cannot have a NULL value.
- UNIQUE: Ensures that all values in a column are different.
- PRIMARY KEY: A combination of NOT NULL and UNIQUE. Uniquely identifies each row in a table.
- FOREIGN KEY: Uniquely identifies a row/record in another table.

SQL QUESTIONS

Keywords

- CHECK: Ensures that all values in a column satisfy a specific condition.
- DEFAULT: Sets a default value for a column when no value is specified.
- INDEX: Used to create and retrieve data from the database very quickly.

SQL QUESTIONS

58Q.

How do you ensure that the name column cannot have NUL values?

ANSWER:

```
CREATE TABLE users
(id INT, name VARCHAR(50) NOT NULL);
```

SQL QUESTIONS

59Q.

How do you ensure that all values in the email column are different?

ANSWER:

```
CREATE TABLE users
 (id INT, email VARCHAR(100) UNIQUE);
```

SQL QUESTIONS

60Q.

How do you uniquely identify each row in the users table?

ANSWER:

```
CREATE TABLE users
(id INT PRIMARY KEY, name VARCHAR(50));
```

SQL QUESTIONS

61Q.

How do you enforce that the user_id in the orders table uniquely identifies a record in the users table?

ANSWER:

```
CREATE TABLE orders
(order_id INT, user_id INT,
FOREIGN KEY (user_id) REFERENCES users(id));
```

SQL QUESTIONS

62Q.

How do you ensure that the price column in the products table is greater than 0?

ANSWER:

```
CREATE TABLE products
(id INT, price DECIMAL(10, 2), CHECK (price > 0));
```

SQL QUESTIONS

63Q.

How do you set a default value for the created_at column to the current timestamp?

ANSWER:

```
CREATE TABLE customers
(id INT, created_at TIMESTAMP DEFAULT
CURRENT_TIMESTAMP);
```

SQL QUESTIONS

64Q.

How do you create an index on the name column in the users table to speed up queries?

ANSWER:

```
CREATE INDEX idx_user_name ON users(name);
```

SQL QUESTIONS

65Q.

How do you create an index on the name column in the users table to speed up queries?

ANSWER:

```
CREATE INDEX idx_user_name ON users(name);
```

SQL QUESTIONS

Keywords

ALTER

The ALTER command is used to add, modify, or drop columns in an existing table.

SQL QUESTIONS

66Q.

How do you add a new column named country of type VARCHAR(50) to the language table?

ANSWER:

```
ALTER TABLE language ADD country
VARCHAR(50);
```

SQL QUESTIONS

67Q.

How do you change the country column in the language table to type VARCHAR(60)?

ANSWER:

```
ALTER TABLE language MODIFY country
VARCHAR(60);
```

SQL QUESTIONS

68Q.

How do you remove the country column from the language table?

ANSWER:

```
ALTER TABLE language DROP country;
```

SQL QUESTIONS

Keywords

DROP

Removes both the table and all of the data permanently.

SQL QUESTIONS

69Q.

How do you permanently remove a table named Tablename and all its data?

ANSWER:

```
DROP TABLE Tablename;
```

SQL QUESTIONS

70Q.

How do you safely remove a table named TableName only if it exists?

ANSWER:

```
DROP TABLE TableName IF EXISTS;
```

SQL QUESTIONS

71Q.

How do you remove all rows from a table named TableName?

ANSWER:

```
TRUNCATE TABLE TableName;
```