Queries

AS

Renames a column or table with an alias for display, does not permanently change table/column names in the database.

> **AS**
>> is a keyword in SQL that allows you to *rename* a column or table using an alias
>>> 1. SELECT name AS 'Titles' FROM movies;

DISTINCT

is used to return unique values in the output. It filters out all duplicate values in the specified column(s).

- SELECT DISTINCT genre FROM movies;

WHERE

We can restrict our query results using the WHERE
clause in order to obtain only the information we want.

- SELECT * FROM movies WHERE imdb_rating < 5;

LIKE

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> LIKE
>> can be a useful operator when you want to compare similar values.

- SELECT * FROM movies WHERE name LIKE 'Se_en';
- The **LIKE** operator returns TRUE if its first text argument matches the wildcard pattern in its second argument.
- The percentage sign % is another wildcard character that can be used with Like. Returns `TRUE` if its first text argument matches the wildcard pattern in its second argument.
-
  .SELECT *
  FROM movies
  WHERE name LIKE '%man%';
  - Select * from movies where name like 'The %'

IS NULL

Unknown values are indicated by NULL.

It is not possible to test for NULL values with comparison operators, such as = and !=.

Instead, we will have to use these operators:

IS NULL

IS NOT NULL

SELECT name FROM movies WHERE imdb_rating IS NOT NULL;

SELECT name FROM movies WHERE imdb_rating IS NULL;

Between
- The BETWEEN operator is used in a WHERE clause to filter the result set within a certain range. It accepts two values that are either numbers, text or dates.
- Selects values, inclusively of beginning and end values, within a given range. BETWEEN works with numbers, text, or date data types.
- Using the `BETWEEN` operator, write a query that selects all information about movies whose `name` begins with the letters 'D', 'E', and 'F'.
  Answer: select * from movies where name between 'D' and 'G'
- Using the `BETWEEN` operator, write a new query that selects all information about movies that were released from the year 1970 up to and including 1979.
  Answer: select * from movies where year between 1970 and 1979

And

Sometimes we want to *combine multiple conditions* in a where clause to make the result set more specific and useful.
SELECT * FROM movies WHERE year BETWEEN 1990 AND 1999
   AND genre = 'romance';

Or

 the `OR` operator can also be used to combine multiple conditions in where clause
AND - operator displays a row if *all* the conditions are true.

OR - operator displays a row if *any* condition is true.
SELECT * FROM movies WHERE year > 2014 OR genre = 'action';

Order By

We can *sort* the results using order by either alphabetically or numerically.
Sorting the results often makes the data more useful and easier to analyze.
SELECT * FROM movies ORDER BY name;

SELECT * FROM movies WHERE imdb_rating > 8 ORDER BY year DESC;

Limit

- SELECT * FROM movies LIMIT 10;

- Limit is a clause that lets you specify the maximum number of rows the result set will have. This saves space on our screen and makes our queries run faster.
- Specifies, or limits, the maximum number of rows the result set will have.
- `LIMIT` always goes at the very end of the query. Also, it is not supported in all SQL databases.

Case

- Case statement allows us to create different outputs
- SQL's way of handling [if-then](#) logic.

```
SELECT name,
 CASE
  WHEN imdb_rating > 8 THEN 'Fantastic'
  WHEN imdb_rating > 6 THEN 'Poorly Received'
  ELSE 'Avoid at All Costs'
 END
FROM movies;
```

Summarize

`SELECT` is the clause we use every time we want to query information from a database.

`AS` renames a column or table.

`DISTINCT` return unique values.

`WHERE` is a popular command that lets you filter the results of the query based on conditions that you specify.

`LIKE` and `BETWEEN` are special operators.

`AND` and `OR` combines multiple conditions.

`ORDER BY` sorts the result.

`LIMIT` specifies the maximum number of rows that the query will return.

`CASE` creates different outputs.

Quiz

1. What is order by? A clause that sorts the result set alphabetically or numerically
2. How would you query all the unique genres from the books table?
   Select DISTINCT genres from books;
3. What is LIMIT? Specify the maximum number of rows that the result set will have.
4. What is the correct syntax to query both the name and date columns from the database?
   SELECT _name, date_____ FROM album;
5. Find the error in this code:
   SELECT name,
   CASE
       WHEN imdb_rating > 8 THEN 'Oscar'

WHEN imdb_rating > 7 THEN 'Good'
WHEN imdb_rating > 6 THEN 'Fair'
FROM movies; answer: Missing END statemet
6. IS NULL condition returns true if the field has no value. True
7. What does the wildcard character % in the following SQL statement do?
SELECT * FROM sports WHERE name LIKE '%ball'; It matches all sports that end with 'ball'
8. What is the correct query to select only the cities with temperatures less than 35?
Select * from cities where temperature < 35;
9. What is LIKE? A special operator that can be used with the WHERE clause to search for a pattern
10. Which of the following is NOT a comparison operator in SQL? ~ (tilde)
11. What code would you add to this query to place the colors in reverse alphabetical order (Z to A) by name? Select * from colors —--------------
Answer: ORDER BY name DESC

Links