

Writing Queries

SELECT Statement

The `SELECT *` statement returns all columns from the provided table in the result set.

The given query will fetch all columns and records (rows) from the `movies` table.

```
SELECT *  
FROM movies;
```

AS Clause

Columns or tables can be aliased using the `AS` clause. This allows columns or tables to be specifically renamed in the returned result set. The given query will return a result set with the column for `name` renamed to `movie_title`.

```
SELECT name AS 'movie_title'  
FROM movies;
```

DISTINCT Clause

Unique values of a column can be selected using a `DISTINCT` query. For a table `contact_details` having five rows in which the `city` column contains Chicago, Madison, Boston, Madison, and Denver, the given query would return:

- Chicago
- Madison
- Boston
- Denver

```
SELECT DISTINCT city  
FROM contact_details;
```

WHERE Clause

The `WHERE` clause is used to filter records (rows) that match a certain condition. The given query will select all records where the `pub_year` equals `2017`.

```
SELECT title  
FROM library  
WHERE pub_year = 2017;
```

LIKE Operator

The **LIKE** operator can be used inside of a **WHERE** clause to match a specified pattern. The given query will match any movie that begins with **Star** in its title.

_ Wildcard

The **_** wildcard can be used in a **LIKE** operator pattern to match any single unspecified character. The given query will match any movie which begins with a single character, followed by **ove**.

% Wildcard

The **%** wildcard can be used in a **LIKE** operator pattern to match zero or more unspecified character(s). The given query will match any movie that begins with **The**, followed by zero or more of any characters.

NULL Values

Column values can be **NULL**, or have no value. These records can be matched (or not matched) using the **IS NULL** and **IS NOT NULL** operators in combination with the **WHERE** clause. The given query will match all addresses where the address has a value or is not **NULL**.

BETWEEN Operator

The **BETWEEN** operator can be used to filter by a range of values. The range of values can be text, numbers, or date data. The given query will match any movie made between the years 1980 and 1990, inclusive.

```
SELECT name
FROM movies
WHERE name LIKE 'Star%';
```

```
SELECT name
FROM movies
WHERE name LIKE '_ove';
```

```
SELECT name
FROM movies
WHERE name LIKE 'The%';
```

```
SELECT address
FROM records
WHERE address IS NOT NULL;
```

```
SELECT *
FROM movies
WHERE year BETWEEN 1980 AND 1990;
```

AND Operator

The **AND** operator allows multiple conditions to be combined. Records must match both conditions that are joined by **AND** to be included in the result set. The given query will match any car that is blue and made after 2014.

```
SELECT model
FROM cars
WHERE color = 'blue'
      AND year > 2014;
```

OR Operator

The **OR** operator allows multiple conditions to be combined. Records matching either condition joined by the **OR** are included in the result set. The given query will match customers whose state is either **'CA'** or **'NY'**.

```
SELECT name
FROM customers
WHERE state = 'CA'
      OR state = 'NY';
```

ORDER BY Clause

The **ORDER BY** clause can be used to sort the result set by a particular column either alphabetically or numerically. It can be ordered in two ways:

- **DESC** is a keyword used to sort the results in descending order.
- **ASC** is a keyword used to sort the results in ascending order (default).

```
SELECT *
FROM contacts
ORDER BY birth_date DESC;
```

LIMIT Clause

The **LIMIT** clause is used to narrow, or limit, a result set to the specified number of rows. The given query will limit the result set to 5 rows.

```
SELECT *
FROM movies
LIMIT 5;
```