Using AND, OR, and NOT Operators in SQL

AND, OR, and NOT are important logical operators in SQL. They help you combine the conditions used to filter records. They are most commonly used in conjunction with the WHERE or HAVING clauses.

For our examples, imagine we operate and own a gym with different locations around the United States. When people sign up, they give us some basic information. This will be stored in our `members` table, which contains a unique ID for each member, along with their first and last names, their age, the date they joined the gym, and the location of their gym.

id	FirstName	LastName	Age	DateJoined	Location
1	Will	Smith	52	2020-08-23	Los Angeles
2	Brad	Pitt	56	2018-06-15	San Francisco
3	Tom	Hanks	64	2017-02-27	San Diego
4	Angelina	Jolie	45	2019-04-02	Los Angeles
5	Meryl	Streep	71	2014-03-21	Manhattan

- **SQL AND Syntax**
- The syntax for the AND operator is:
- SELECT column_1, column_2, ... column_n
- FROM table
- WHERE condition_1 AND condition_2 AND condition_n
- When multiple conditions are combined using the AND operator, all rows which meet *all* of the given conditions will be returned.

- SELECT *
- FROM members
- WHERE Age < 50 AND Location = 'Los Angeles';

id	FirstName	LastName	Age	DateJoined	Location
4	Angelina	Jolie	45	2019-04-02	Los Angeles

- **SQL OR Syntax**
- The syntax for the OR operator is:
- SELECT column_1, column_2, ... column_n
- FROM table
- WHERE condition_1 OR condition_2 OR condition_n
- When multiple conditions are combined using the OR operator, all **rows which meet *any* of the given conditions will be returned**. We can apply this to our **members** table by writing the following query:

- SELECT *
- FROM members
- WHERE Location = 'Los Angeles' OR LastName = 'Hanks'

id	FirstName	LastName	Age	DateJoined	Location
1	Will	Smith	52	2020-08-23	Los Angeles
3	Tom	Hanks	64	2017-02-27	San Diego
4	Angelina	Jolie	45	2019-04-02	Los Angeles

id	FirstName	LastName	Age	DateJoined	Location
1	Will	Smith	52	2020-08-23	Los Angeles
3	Tom	Hanks	64	2017-02-27	San Diego
4	Angelina	Jolie	45	2019-04-02	Los Angeles

- **SQL NOT Syntax**
- The syntax for the NOT operator is:
- SELECT column_1, column_2, ... column_n
- FROM table
- WHERE NOT condition
- When multiple conditions are combined using the NOT operator, all **rows which *do not meet* the given conditions will be returned**.

- **SQL NOT Syntax**
- The syntax for the NOT operator is:
- SELECT column_1, column_2, ... column_n
- FROM table
- WHERE NOT condition
- When multiple conditions are combined using the NOT operator, all **rows which *do not meet* the given conditions will be returned**.

- SELECT *
- FROM members
- WHERE NOT Location = 'Los Angeles'

id	FirstName	LastName	Age	DateJoined	Location
2	Brad	Pitt	56	2018-06-15	San Francisco
3	Tom	Hanks	64	2017-02-27	San Diego
5	Meryl	Streep	71	2014-03-21	Manhattan