Apply filters to SQL queries

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Project description

Through SQL, you are able to retrieve all sorts of data from different databases. In this activity, we are using SQL to query and analyze login attempt records and employee information from an organizational database.

Retrieve after hours failed login attempts

To retrieve failed login attempts after hours, we can use an SQL query of:

- SELECT * FROM log_in_attempts WHERE login_time > '18:00' AND success = '0';

This essentially searches through the log_in_attempts to find people who have failed to login after 6:00 PM, using the "WHERE" clause with an "AND" operator.

Retrieve login attempts on specific dates

To retrieve login attempts on specific dates, we can use an SQL query of:

- SELECT * FROM log_in_attempts WHERE login_date = '2022-05-09' OR login_date = '2022-05-08';

This query returns all login attempts that occurred on May 9th 2022 and May 8th 2022, using the "WHERE" clause with an "OR" operator.

Retrieve login attempts outside of Mexico

To retrieve login attempts from outside of Mexico, we can use an SQL query of:

- SELECT * FROM log_in_attempts WHERE NOT country LIKE 'MEX%';

This query returns all login attempts that occurred outside of Mexico using the "WHERE" clause with a "NOT" filter to return countries other than Mexico. I also used "LIKE" with "MEX%" as the pattern to match because there are inconsistencies in the dataset, where Mexico is represented by both "MEX" and "MEXICO".

Retrieve employees in Marketing

To retrieve employees in the Marketing department, we can use an SQL query of:

- SELECT * FROM employees WHERE department = 'Marketing' AND office LIKE 'East%';

This query returns all of the employees in the Marketing department, using the "WHERE" clause and the "AND" filter to filter through the department and the building.

Retrieve employees in Finance or Sales

To retrieve employees in Finance or Sales, we can use an SQL query of:

- SELECT * FROM employees WHERE department = 'Finance' OR department = 'Sales';

This query returns all of the employees in both the Finance and Sales departments, using the "WHERE" clause and the "OR" operator to filter through the departments and retrieve all employees who are in either department.

Retrieve all employees not in IT

To retrieve employees who are NOT in Information Technology, we can use an SQL query of:

- SELECT * FROM employees WHERE NOT department = 'Information Technology';

This query returns all of the employees who are not in the IT department, using the "WHERE" clause alongside "NOT" to filter through the departments and retrieve all employees who aren't in the department.

Summary

In conclusion, I applied filters to SQL queries to get specific information on login attempts and employee devices/machines. I used two different tables (log_in_attempts and employees) along with many operators (AND, OR, and NOT) to filter for specific information. I also used LIKE and (%) to filter for patterns.