# Apply filters to SQL queries

## Project description

In this scenario, my role is to investigate potential security issues within the organization by analyzing data from two tables, "log\_in\_attempts" and "employees." Through SQL queries, I aim to retrieve specific data to assess security concerns, such as after-hours login attempts, login attempts on specific dates, unauthorized login attempts from outside Mexico, and details of employees based on their department and location.

## Retrieve after hours failed login attempts

To investigate potential security incidents that occurred after business hours, I will query the "log\_in\_attempts" table using SQL filters. Specifically, I will retrieve all records of failed login attempts that occurred after 18:00 (6:00 PM).

SQL Query:

SELECT \*

FROM log\_in\_attempts

WHERE success = 0 AND TIME(login\_time) > '18:00:00';

## Retrieve login attempts on specific dates

To investigate a specific event, I will query the "log\_in\_attempts" table to retrieve login attempts that occurred on 2022-05-09 or 2022-05-08.

SQL Query:

SELECT \*

FROM log\_in\_attempts

WHERE login\_date IN ('2022-05-08', '2022-05-09');

## Retrieve login attempts outside of Mexico

To examine suspicious login attempts that occurred outside of Mexico, I will use SQL filters to retrieve records from the "log\_in\_attempts" table where the country is not Mexico (both "MEX" and "MEXICO" should be considered).

SQL Query:

SELECT \*

FROM log\_in\_attempts

WHERE country NOT LIKE 'MEX%';

## Retrieve employees in Marketing

To gather information about employees in the Marketing department located in the East building, I will query the "employees" table and apply SQL filters.

SQL Query:

SELECT \*

FROM employees

WHERE department = 'Marketing' AND office LIKE 'East%';

## Retrieve employees in Finance or Sales

To identify employees in the Finance or Sales departments, I will query the "employees" table using SQL filters.

SQL Query:

SELECT \*

FROM employees

WHERE department IN ('Finance', 'Sales');

## Retrieve all employees not in IT

To target all employees not belonging to the IT department, I will query the "employees" table using SQL filters.

SQL Query:

SELECT \*

FROM employees

WHERE department != 'Information Technology';

## Summary

Through SQL queries, I've conducted a comprehensive investigation into potential security issues, including after-hours login attempts, suspicious login attempts on specific dates, login attempts from outside Mexico, and employee details based on department and location. These queries assist in enhancing the organization's security by identifying and addressing potential vulnerabilities and risks.