# Apply filters to SQL queries

## Project description

You are a security professional at a large organization. Part of your job is to investigate security issues to help keep the system secure. You recently discovered some potential security issues that involve login attempts and employee machines.

Your task is to examine the organization’s data in their **employees** and **log\_in\_attempts** tables. You’ll need to use SQL filters to retrieve records from different datasets and investigate the potential security issues.

## Retrieve after hours failed login attempts

**select \***

**from log\_in\_attempts**

**where login\_time > ‘18:00’ and success = 0;**

In this SQL query, we retrieve all of the columns of login attempts that were made after office hours, being 18:00 and were unsuccessful. Unsuccessful login attempts are stored as a 0 in the log\_in\_attempts table under the success column.

## Retrieve login attempts on specific dates: 2022-05-09 and the day before

**select \***

**from log\_in\_attempts**

**where login\_date = ‘2022-05-09’ or login\_date = ‘2022-05-08’;**

This SQL query retrieves all of the login attempts on the 9th of May and the 8th of May. We use the OR operator to attempts made on either day.

## Retrieve login attempts outside of Mexico

**select \***

**from log\_in\_attempts**

**where not country like ‘Mex%’;**

This SQL query finds the login attempts that were made outside of Mexico. Because some of the entries where the country would be Mexico, we use LIKE ‘Mex%’ to account for any entries that entered ‘Mex’ as short for Mexico.

## Retrieve employees in Marketing in the East Building

**select \***

**from employees**

**where department = ‘Marketing’ and office like ‘East%’;**

This SQL query finds all of the employees that are in the Marketing department in the East building. Because there are different sections of the East building, ‘East%’ is used to gather all in that building. The AND operator is used to search exclusively.

## Retrieve employees in Finance or Sales

**select \***

**from employees**

**where department = ‘Sales’ or department = ‘Finance’;**

This SQL query finds the employees who are a part of either the Finance department or the Sales department. Or is used to search inclusively.

## Retrieve all employees not in IT

**select \***

**from employees**

**where not department = ‘Information Technology’;**

This SQL query finds all of the employees who are not in IT. The =! operator could be used in place of not.

## Summary

This document shows how SQL queries can be used to filter databases to find information in databases. Operators can be used to get information filtered to match specific needs of the person querying the database.