# Apply filters to SQL queries

## Project description

This project is to examine the organization of data in the tables and make the system more secure. The programming language used to examine these tables is SQL which can filter and find data within a database.

## Retrieve after hours failed login attempts

This SQL record retrieves and identifies all failed login attempts that occurred after 18:00. The first part of the query is selecting all data from the FROM log\_in\_attempts, so in this process will output the record of all attempts. But, the whole process is to get the login\_time that passes 18:00 and where the success is False. The use of > operator is useful along with AND which specify the success of the login processes.

SELECT \*

FROM log\_in\_attempts   
WHERE login\_time > ‘18:00’ AND success = FALSE;

## Retrieve login attempts on specific dates

This SQL query retrieves and identifies all login attempts that occurred on 2022-05-09 or 2022-05-08 by using the filter OR operator.

The first part of the query is selecting all data from the FROM log\_in\_attempts, so in this process will output the record of all attempts. However, in this query the login\_time has to use a OR operator to specify either 2022-05-09 or 2022-05-08. It filters all the records and specifies the exact time in the query.   
  
SELECT \*

FROM log\_in\_attempts   
WHERE login\_time = ‘2022-05-09 ’ OR login\_time = ‘2022-05-08’’;

## Retrieve login attempts outside of Mexico

This SQL query retrieves and identifies all login attempts that occurred outside of Mexico by using the operator NOT which excludes all the countries that are not Mexico in the record. The first part of the query is selecting all data from the FROM log\_in\_attempts, so in this process will output the record of all attempts. In this query the NOT operator negates the country the attempt is looking for. It filters out all the countries except for MEX. Along with LIKE where it will look through for specific MEX in the database.   
  
SELECT \*

FROM log\_in\_attempts

WHERE NOT country LIKE ‘MEX%’;

## Retrieve employees in Marketing

This SQL query retrieves and identifies all employees in the Marketing department for all offices in the East building. By using LIKE and AND operators to specify the table or record. The first part of the query is selecting all data from the FROM employees, so in this process will output the record of each department and offices. It specifies Marketing as the department using AND operator to combine with LIKE to specify the office that starts with EAST by using the percentage sign.

SELECT \*

FROM employees

WHERE department = ‘Marketing’ AND office LIKE ‘East%’; ’

## Retrieve employees in Finance or Sales

This query retrieves and identifies all employees in the Sales or Finance departments. The first part of the query is selecting all data from the FROM employees, so in this process will output the record of each department either Finance or Sales. Using the OR operator specifies the data.

SELECT \*

FROM employees

WHERE department = ‘Finance’ OR department = ‘Sales’;

## Retrieve all employees not in IT

This SQL query retrieves and identifies all employees not in the IT department. The first part of the query is selecting all data from the FROM employees, so in this process will output the record of each department as Information Technology. Using the NOT operator to exclude any other departments but Information technology.   
  
SELECT \*

FROM employees

WHERE NOT department = ‘Information Technology’;

## Summary

This project demonstrates how to use basic SQL queries to retrieve and filter data from organizational databases. It is an easier way to analyze and identify any action or events that are occurring in a database of a company. This project uses regular and basic queries operators such as LIKE , AND OR and % for filter patterns. These operators help to filter data while we are looking deeper in our records.