

Apply filters to SQL queries

Project description

In this project, I learned how to use SQL filters to extract specific information from database tables. I narrowed down login and employee data using the WHERE clause and operators like AND, OR, and NOT. This assists in detecting anomalous login activity and organizing personnel information by department or location.

Retrieve after hours failed login attempts

After-hours means outside normal business hours (before 08:00 or after 17:00). Failed attempts have success = FALSE.

```
SELECT *
FROM log_in_attempts
WHERE success = FALSE
AND (login_time < '08:00:00' OR login_time > '17:00:00');
```

Retrieve login attempts on specific dates

This query returns all attempts on **2023-05-09**.

```
SELECT *
FROM log_in_attempts
WHERE login_date = '2023-05-09';
```

Retrieve login attempts outside of Mexico

This filters records where the login did *not* originate in Mexico.

```
SELECT *
FROM log_in_attempts
WHERE country <> 'Mexico';
```

Retrieve employees in Marketing

This returns all employees whose department equals “Marketing.”

```
SELECT *  
FROM employees  
WHERE department = 'Marketing';
```

Retrieve employees in Finance or Sales

This query uses the OR operator to return either department.

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

Retrieve all employees not in IT

This uses the NOT operator to exclude the IT department.

```
SELECT *  
FROM employees  
WHERE NOT department = 'IT';
```

Summary

These SQL tasks taught me how to filter data with criteria like AND, OR, and NOT. I utilized the WHERE clause to discover unsuccessful login attempts, analyze activity by date or country, and retrieve workers by department. These filtering abilities are critical for security analysts because they help identify odd activity, discover possible dangers, and properly arrange employee data.