

# Step-By-Step Instructions

Follow the instructions to complete each step of the activity.

## Step 1: Access the template

Access the template ( Apply filters to SQL queries)

## Step 2: Access supporting materials

The following supporting materials will help you complete this activity. Keep them open as you proceed to the next steps.

The **Instructions for including SQL queries** document provides instructions and best practices for including samples of SQL queries in your portfolio activity.

Navigate to the supporting material (Instructions for including SQL queries)

The **Table formats** document describes how the tables used for this portfolio activity are organized.

Navigate to supporting material (Table formats)

**Note:** It is recommended that you use the **Filter with AND, OR, and NOT** lab to complete this portfolio activity. If you're revisiting the lab, the **Table formats** document is optional. You will also be able to view the tables in the lab.

## Step 3: Retrieve after hours failed login attempts

You recently discovered a potential security incident that occurred after business hours. To investigate this, you need to query the `log_in_attempts` table and review after hours login activity. Use filters in SQL to create a query that identifies all failed login attempts that occurred after 18:00. (The time of the login attempt is found in the `login_time` column. The `success` column contains a value of `0` when a login attempt

failed; you can use either a value of `0` or `FALSE` in your query to identify failed login attempts.)

Describe your query and how it works in the **Retrieve after hours failed login attempts** section of the **Apply filters to SQL queries** template.

In the **Filter with AND, OR, and NOT** lab, take a screenshot of the SQL query you used and copy it into the template. Or, type this query directly into the template.

#### Step 4: Retrieve login attempts on specific dates

A suspicious event occurred on 2022-05-09. To investigate this event, you want to review all login attempts which occurred on this day and the day before. Use filters in SQL to create a query that identifies all login attempts that occurred on 2022-05-09 or 2022-05-08. (The date of the login attempt is found in the `login_date` column.)

Describe your query and how it works in the **Retrieve login attempts on specific dates** section of the **Apply filters to SQL queries** template.

In the **Filter with AND, OR, and NOT** lab, take a screenshot of the SQL query you used and copy it into the template. Or, type this query directly into the template.

#### Step 5: Retrieve login attempts outside of Mexico

There's been suspicious activity with login attempts, but the team has determined that this activity didn't originate in Mexico. Now, you need to investigate login attempts that occurred outside of Mexico. Use filters in SQL to create a query that identifies all login attempts that occurred outside of Mexico. (When referring to Mexico, the `country` column contains values of both `MEX` and `MEXICO`, and you need to use the `LIKE` keyword with `%` to make sure your query reflects this.)

Describe your query and how it works in the **Retrieve login attempts outside of Mexico** section of the **Apply filters to SQL queries** template.

In the **Filter with AND, OR, and NOT** lab, take a screenshot of the SQL query you used and copy it into the template. Or, type this query directly into the template.

## Step 6: Retrieve employees in Marketing

Your team wants to perform security updates on specific employee machines in the Marketing department. You're responsible for getting information on these employee machines and will need to query the `employees` table. Use filters in SQL to create a query that identifies all employees in the Marketing department for all offices in the East building.

(The department of the employee is found in the `department` column, which contains values that include `Marketing`. The office is found in the `office` column. Some examples of values in this column are `East-170`, `East-320`, and `North-434`. You'll need to use the `LIKE` keyword with `%` to filter for the East building.)

Describe your query and how it works in the **Retrieve employees in Marketing** section of the **Apply filters to SQL queries** template.

In the **Filter with AND, OR, and NOT** lab, take a screenshot of the SQL query you used and copy it into the template. Or, type this query directly into the template.

## Step 7: Retrieve employees in Finance or Sales

Your team now needs to perform a different security update on machines for employees in the Sales and Finance departments. Use filters in SQL to create a query that identifies all employees in the Sales or Finance departments. (The department of the employee is found in the `department` column, which contains values that include `Sales` and `Finance`.)

Describe your query and how it works in the **Retrieve employees in Finance or Sales** section of the **Apply filters to SQL queries** template.

In the **Filter with AND, OR, and NOT** lab, take a screenshot of the SQL query you used and copy it into the template. Or, type this query directly into the template.

## Step 8: Retrieve all employees not in IT

Your team needs to make one more update to employee machines. The employees who are in the Information Technology department already had this update, but employees in all other departments need it. Use filters in SQL to create a query which identifies all

employees not in the IT department. (The department of the employee is found in the **department** column, which contains values that include **Information Technology**.)

Describe your query and how it works in the **Retrieve all employees not in IT** section of the **Apply filters to SQL queries** template.

In the **Filter with AND, OR, and NOT** lab, take a screenshot of the SQL query you used and copy it into the template. Or, type this query directly into the template.

## Step 9: Finalize your document

To finalize the document and make its purpose clear to potential employers, be sure to complete the **Project description and Summary** sections of the **Apply filters to SQL queries** template.

In the Project description section, give a general overview of the scenario and what you accomplish through SQL. Write two to four sentences.

In the Summary section, provide a short summary of the previous tasks and connect them to the scenario. Write approximately two to four sentences.

## What to Include in Your Response

Be sure to include the following in your completed activity:

- Screenshots of your queries or typed versions of the queries
- Explanations of your queries
- A project description at the beginning
- A summary at the end
- Details on using **LIKE** to search for a pattern
- Details on filtering for dates and times
- Details on using **AND** and **OR** to filter on multiple conditions
- Details on using **NOT** in filters