**Activity: Perform a SQL query**

**Overview:** In this lab activity, you’ll use SELECT and FROM in SQL to return the information you need from a database. You’ll also use the ORDER BY keyword to sequence the information returned by a query based on a specified column.

**Scenario:** In this scenario, you have to determine which employee devices must be updated. You also need to investigate user login activity to explore if any unusual activity has occurred. **First**, you’ll obtain information on the employee devices that must be updated. **Next**, you’ll examine the login attempts for unusual activity. **Finally**, you’ll use the ORDER BY keyword to sort the data returned by your SQL queries.

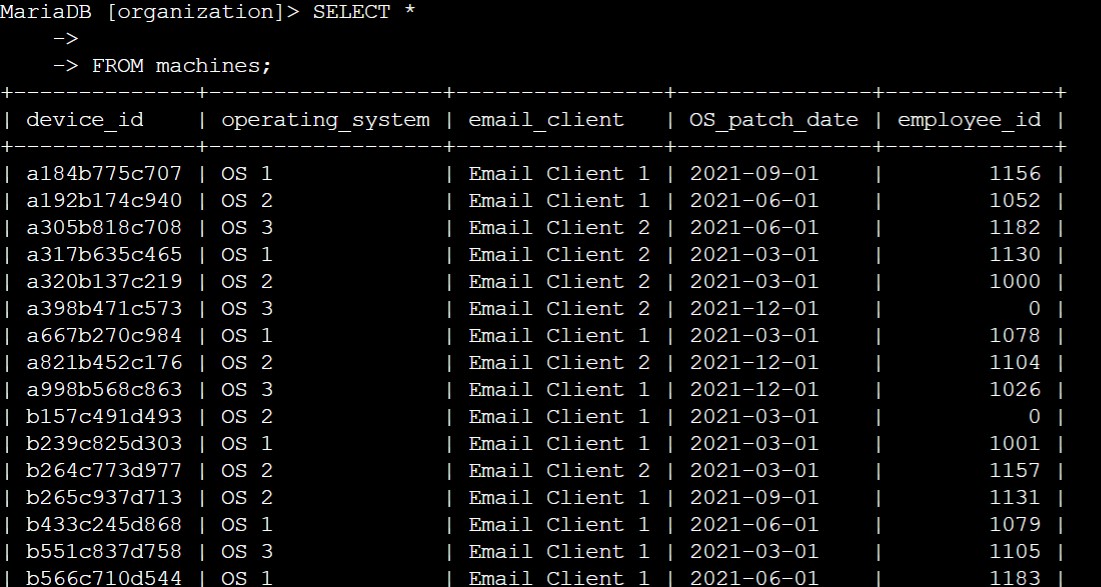
**Start your lab:** click on “start lab” to start the lab.

**Task 1. Retrieve employee device data**

In this task, you need to obtain information on employee devices because your team needs to update them. The information you need is in the machines table in the organization database.

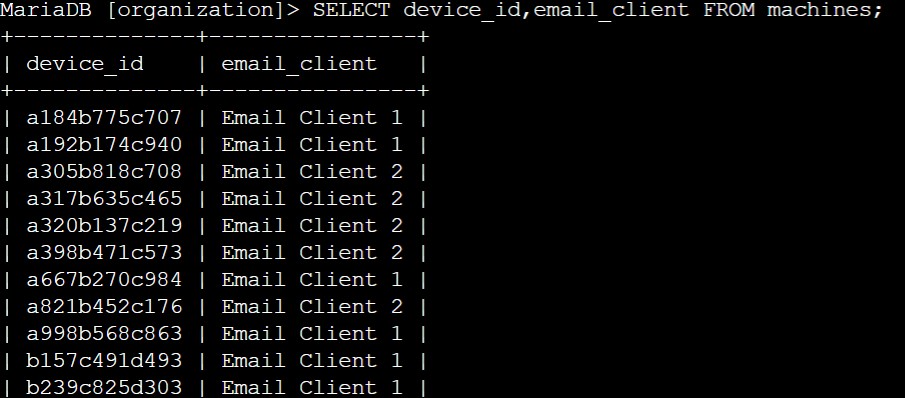
1. Run the following query to select all device information from the machines table:

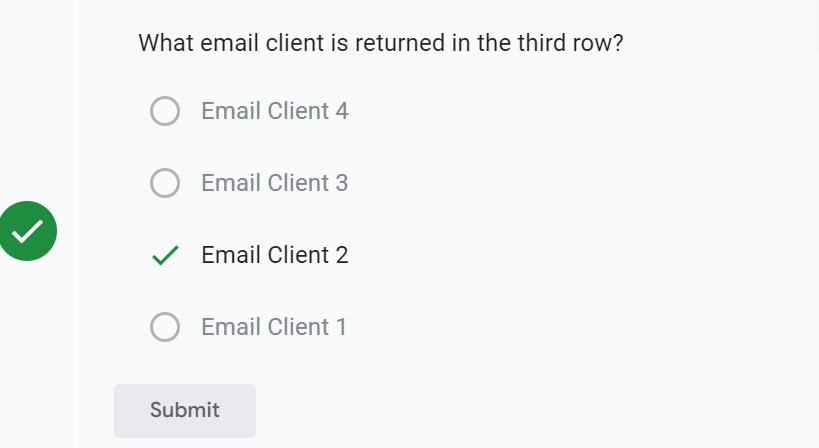
**$SELECT \* FROM machines;**

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1. Run the following query to select onlythe device\_id and email\_client columns from the machines table.

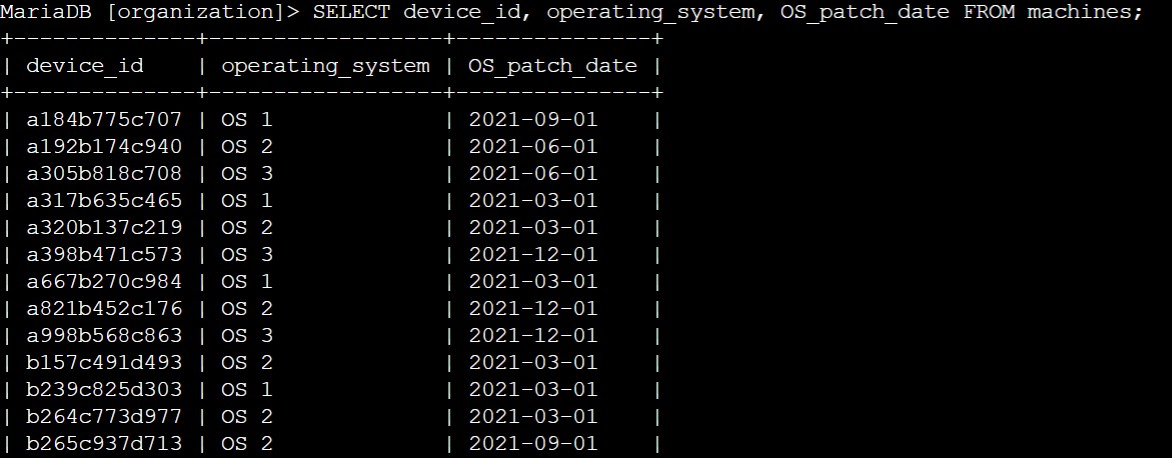
**$ SELECT device\_id, email\_client FROM machines;**

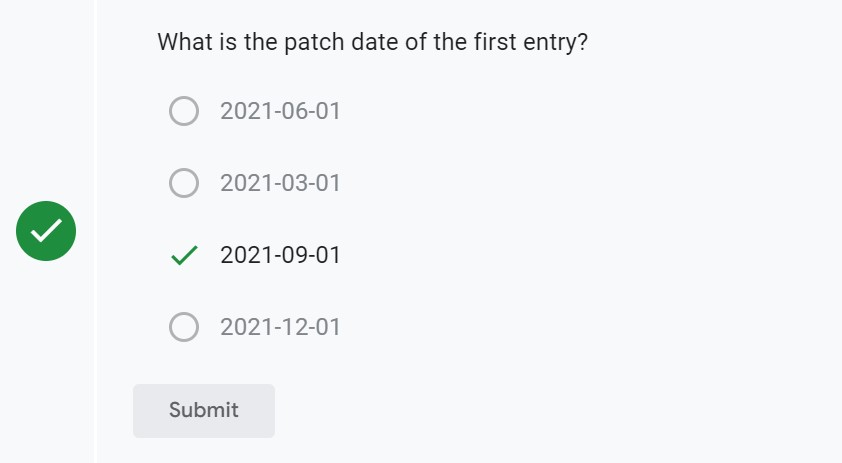




1. Complete the query to return only the device\_id, operating\_system, and OS\_patch\_date columns from the machines table.

**$SELECT device\_id, operating\_system, OS\_patch\_date FROM machines;**



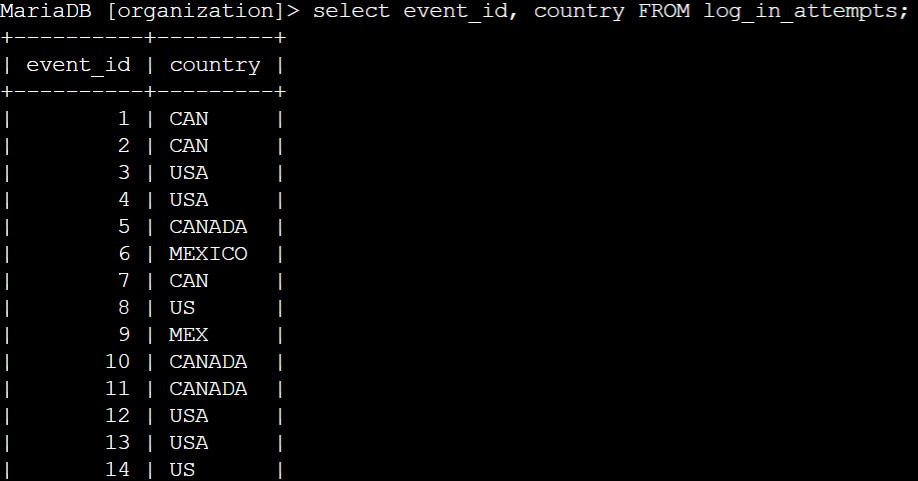


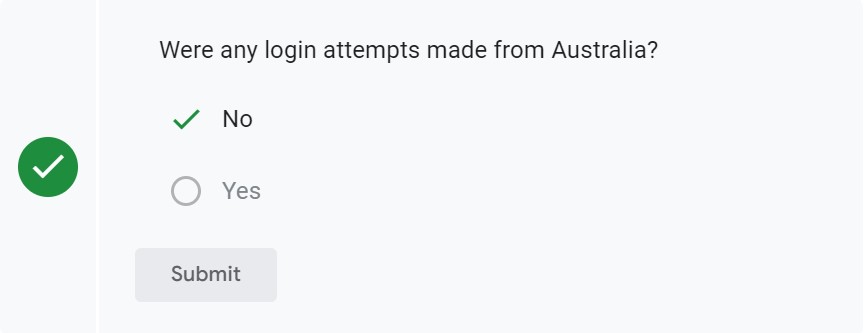
**Task 2. Investigate login activity**

In this task, you need to analyze the information from the log\_in\_attempts table to determine if any unusual activity has occurred.

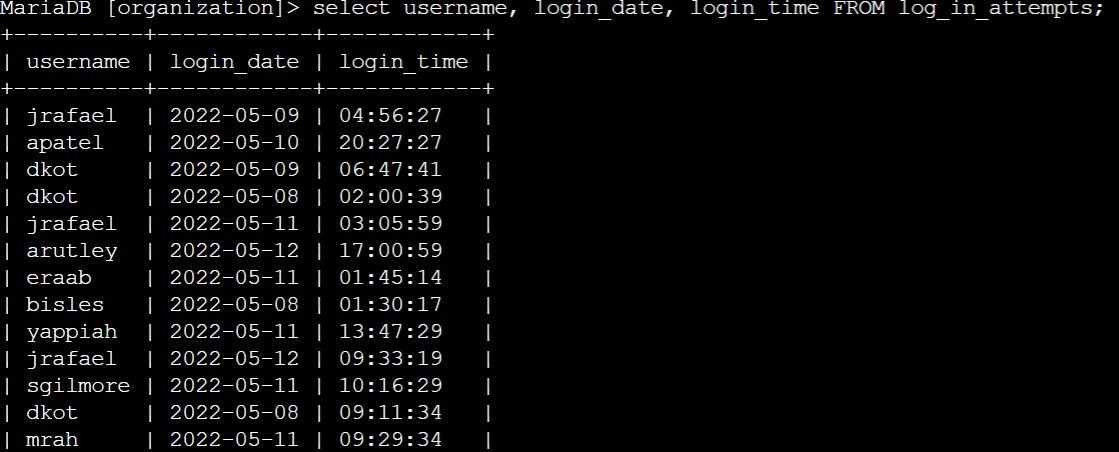
1. Write a SQL query to select the event\_id and country columns from the log\_in\_attempts table.

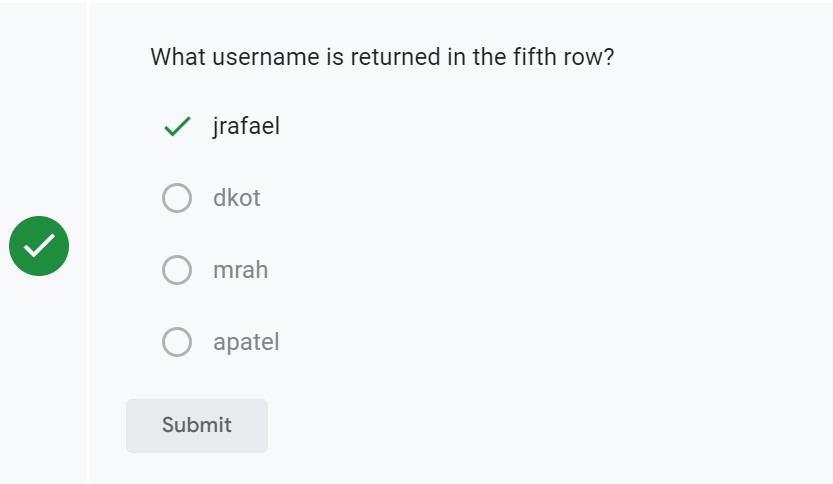
**$SELECT events\_id, country FROM log\_in\_attempts;**



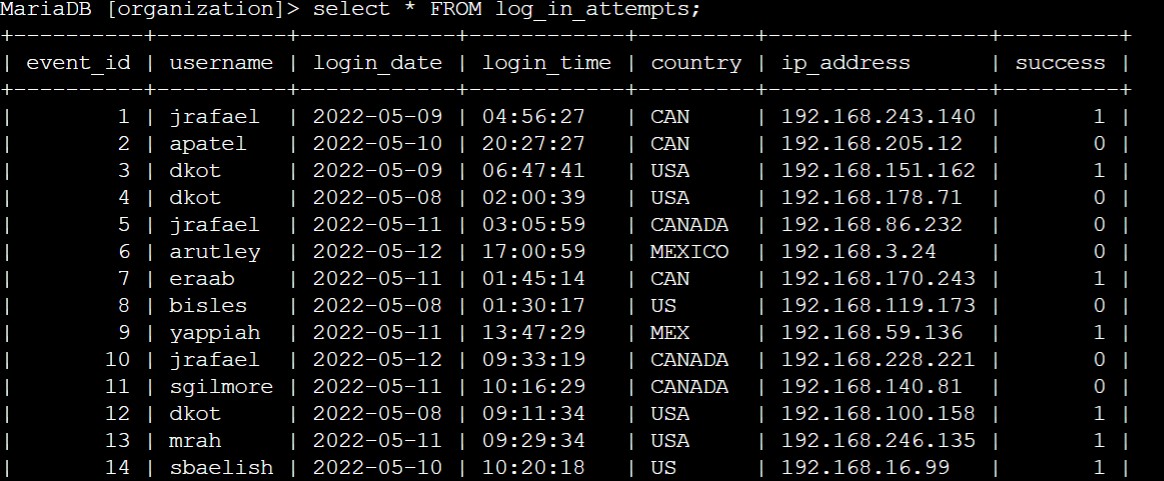


1. Write a SQL query that selects the username, login\_date, and login\_time columns from the log\_in\_attempts table.

**$SELECT username, login\_date, login\_time** FROM log\_in\_attempts;



1. Write a SQL query that selects all columns from the log\_in\_attempts table, using a single symbol after the SELECT keyword.

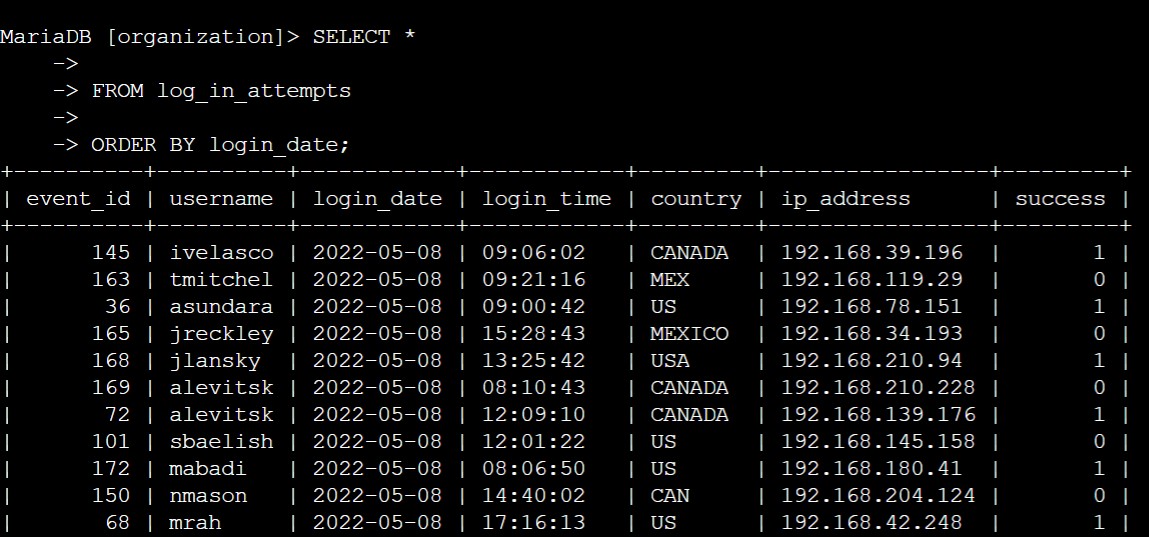
**$SELECT \* FROM log\_in\_attempts;**

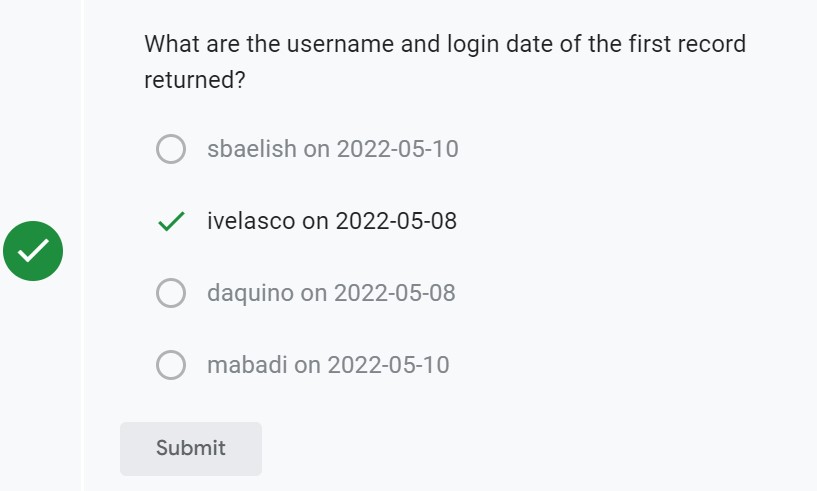
## **Task 3. Order login attempts data**

In this task, you need to use the ORDER BY keyword. You'll sequence the data that your query returns according to the login date and time.

1. Run the following query, which orders log\_in\_attempts data by login\_date:

**$SELECT \* FROM log\_in\_attempts ORDER BY login\_date;**

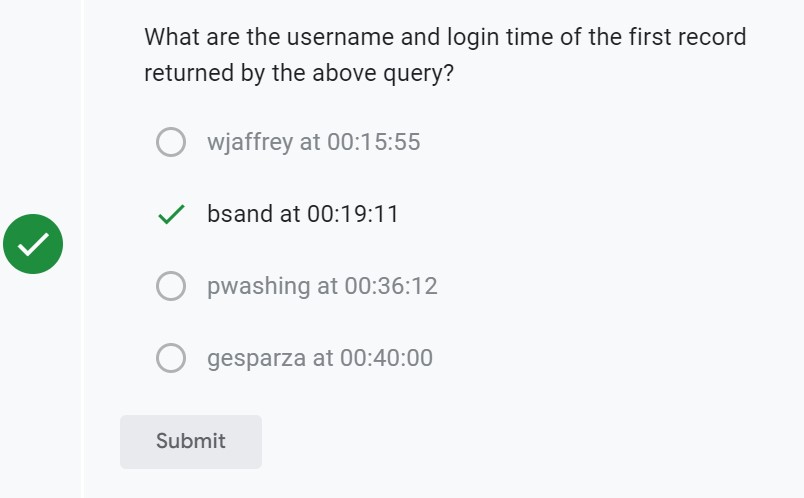




1. Modify the query from the previous step by adding the login time to the ORDER BY clause. You must replace X with the appropriate column name:

**$ SELECT \* FROM log\_in\_attempts ORDER BY login\_date, login\_time;**





**Conclusion:**

I have completed this activity, and I now have practical experience in running basic SQL queries to

* select specific columns from a table,
* select all columns from a table by using an asterisk (\*), and
* sort query results using the ORDER BY keyword.