Apply filters to SQL queries

Project description

With SQL I was able to query the organization's database to gather information on activity happening throughout the organization. First, I'll retrieve all failed login attempts after business hours. Second, I'll retrieve all login attempts that occurred on specific dates. Third, I'll retrieve logins that didn't originate in Mexico. Fourth, I'll retrieve information about certain employees in the Marketing department. Fifth, I'll retrieve information about employees in the Finance or the Sales department. Finally, I'll obtain information about employees who are not in the Information Technology department.

Retrieve after hours failed login attempts

```
MariaDB [organization]> SELECT *
    ->
    -> FROM log_in_attempts
    ->
    -> WHERE login_time > '18:00' AND success = "0";
```

The above screenshot shows the command used to find all failed login attempts into the system logged after business hours. “`SELECT *`” selects all fields in the table “`FROM log_in_attempts`” specifies the name of the table, “ `WHERE login_time > '18:00' AND success = "0";`” is the conditions to describe failed (as the boolean for false is 0) logins past “`18:00`”.

Retrieve login attempts on specific dates

```
MariaDB [organization]> SELECT *
    ->
    -> FROM log_in_attempts
    ->
    -> WHERE login_date = '2022-05-09' OR login_date = '2022-05-08';
```

The above screenshot shows the command used to retrieve login attempts that occurred on specific dates, the “`WHERE`” specifies the conditions for the two dates described, using the “`OR`” operator to allow the search of both.

Retrieve login attempts outside of Mexico

```
SELECT *   FROM log_in_attempts  WHERE NOT country LIKE 'MEX%';
```

The above screenshot shows the command used to retrieve logins that did not originate from Mexico. In the “WHERE” conditions I used the “NOT” operator to specify the query to not return values associated with the following wildcard “MEX%” which describes any values that starts with the phrase “MEX”, which then filtered out the word “MEXICO”.

Retrieve employees in Marketing

```
MariaDB [organization]> SELECT *
    ->
    -> FROM employees where department = "Marketing" and office like "East%";
```

The above screenshot shows the command used to retrieve information about certain employees in the Marketing department. The “where” conditions contain the name of the department we are interested in as well as the specifically offices that start with the phrase “East” as noted by the wildcard condition.

Retrieve employees in Finance or Sales

```
SELECT *   FROM employees where department = "Finance" OR department = "Sales";
```

The screenshot above shows the command used to retrieve information about employees in the Finance or the Sales department. Due to specifying two departments connecting them with the “OR” operator, the condition must be repeated for each department.

Retrieve all employees not in IT

```
SELECT *   FROM employees where not department = "Information Technology";
```

The screenshot above shows the command used to obtain information about employees who are not in the Information Technology department. The “NOT” operator was used to remove records with the values “Information Technology” found in the “department” field.

Summary

In this project I:

- Run SQL queries to retrieve information from a database and
- Applied AND, OR, and NOT operators to filter SQL queries.
- Used (%) wildcards to specify conditions