

Apply filters to SQL queries

Project description

I will be applying filters to SQL queries in order to retrieve after hours failed login attempts. Other queries will also be made to verify login activity, perform security updates on specific machines, and on other machines not in the IT department.

Retrieve after hours failed login attempts

```
1  SELECT *
2  FROM log_in_attempts
3  WHERE login_time > '18:00' AND success = FALSE;
```

This query returns every column in the log_in_attempts table and every record (row) where the login time was after 6pm and was unsuccessful.

Retrieve login attempts on specific dates

```
1  SELECT *
2  FROM log_in_attempts
3  WHERE login_date = '2022-05-09' OR login_date = '2022-05-08';
```

This query retrieves every column in the log_in_attempts table and every record where the login date was either May 8th, 2022 or May 9th, 2022.

****Note that in SQL: var = “value” means var == “value” in Python. We are comparing the login_date column’s entry in that row to the specified value of “2022-05-09”, not assigning that value to the login_date variable****

Retrieve login attempts outside of Mexico

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

This query retrieves every row and column in the log_in_attempts table where the record does not have a string that starts with “MEX” in the country column. Reviewing the column data of the log_in_attempts table, some of the entries have MEX and some have MEXICO and both of these represent MEXICO so we use the % symbol to indicate that 0 or more characters may follow MEX and the query will not retrieve this record.

Retrieve employees in Marketing

```
1 SELECT *
2 FROM employees
3 WHERE department = 'Marketing' AND office LIKE 'East%';
```

This query returns every row and column in the employees table where the employee’s department is “Marketing” and their office is in the “East” building. The offices are numbered and so the office column contains values like East-149 and East772 (both should be returned), so as long as the beginning of the string is “East”, their office is in the East building.

Retrieve employees in Finance or Sales

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

This query returns all columns in the employees table and every row where the employee works in either the Finance or the Sales department.

Retrieve all employees not in IT

```
1  SELECT *
2  FROM employees
3  WHERE NOT department = 'Information Technology';
```

This query returns all columns in the employees table and every row where the employee does not work in the “Information Technology” department.

Summary

These queries have all successfully executed and retrieved the relevant information to either update machines needing security patches or to investigate suspicious login activity and attempts.