

# Apply filters to SQL queries

## Project description

The project is about retrieving information from a database using SQL.

## Retrieve after hours failed login attempts

Queried the log\_in\_attempts table and review after hours login activity, using filters in SQL to create a query that identifies all failed login attempts that occurred after 18:00.

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

event_id	username	login_date	login_time	country	ip_address	success
2	apatel	2022-05-10	20:27:27	CAN	192.168.205.12	0
18	pwashing	2022-05-11	19:28:50	US	192.168.66.142	0
20	tshah	2022-05-12	18:56:36	MEXICO	192.168.109.50	0
28	asstrada	2022-05-09	19:28:12	MEXICO	192.168.27.57	0

## Retrieve login attempts on specific dates

Reviewed all login attempts which occurred on 2022-05-09 and the day before, using filters in SQL to create a query that identifies all login attempts that occurred on 2022-05-09 or 2022-05-08.

```

MariaDB [organization]> SELECT *
->
-> FROM log_in_attempts
->
-> WHERE login_date = '2022-05-09' OR login_date = '2022-05-08';
+-----+-----+-----+-----+-----+-----+
--+-----+
| event_id | username | login_date | login_time | country | ip_address |
| success |
+-----+-----+-----+-----+-----+-----+
--+-----+
|          1 | jrafael  | 2022-05-09 | 04:56:27   | CAN     | 192.168.243.14 |
0 |          1 |
|          3 | dkot     | 2022-05-09 | 06:47:41   | USA     | 192.168.151.16 |
2 |          1 |
|          4 | dkot     | 2022-05-08 | 02:00:39   | USA     | 192.168.178.71 |
|          0 |
|          8 | bisles   | 2022-05-08 | 01:30:17   | US      | 192.168.119.17 |
3 |          0 |
|         12 | dkot     | 2022-05-08 | 09:11:34   | USA     | 192.168.100.15 |

```

## Retrieve login attempts outside of Mexico

Investigated the login attempts that occurred outside of Mexico, using filters in SQL to create a query that identifies all login attempts that occurred outside of Mexico.

```

MariaDB [organization]> SELECT *
->
-> FROM log_in_attempts
->
-> WHERE NOT country LIKE 'MEX%';
+-----+-----+-----+-----+-----+-----+
--+-----+
| event_id | username | login_date | login_time | country | ip_address |
| success |
+-----+-----+-----+-----+-----+-----+
--+-----+
|          1 | jrafael  | 2022-05-09 | 04:56:27   | CAN     | 192.168.243.14 |
0 |          1 |
|          2 | apatel   | 2022-05-10 | 20:27:27   | CAN     | 192.168.205.12 |
|          0 |
|          3 | dkot     | 2022-05-09 | 06:47:41   | USA     | 192.168.151.16 |
2 |          1 |
|          4 | dkot     | 2022-05-08 | 02:00:39   | USA     | 192.168.178.71 |
|          0 |
|          5 | jrafael  | 2022-05-11 | 03:05:59   | CANADA  | 192.168.86.232 |
|          0 |
|          7 | erash    | 2022-05-11 | 01:45:14   | CAN     | 192.168.170.24 |

```

## Retrieve employees in Marketing

Queried the employees table using filters in SQL to create a query that identifies all employees in the Marketing department for all offices in the East building.

```
MariaDB [organization]> SELECT *
-> FROM employees
-> WHERE department = 'Marketing' AND office LIKE 'East%';
+-----+-----+-----+-----+-----+
| employee_id | device_id      | username | department | office      |
+-----+-----+-----+-----+-----+
| 1000        | a320b137c219   | elarson  | Marketing  | East-170    |
| 1052        | a192b174c940   | jdarosa  | Marketing  | East-195    |
| 1075        | x573y883z772   | fbautist | Marketing  | East-267    |
| 1088        | k865l965m233   | rgosh    | Marketing  | East-157    |
| 1103        | NULL           | randerss | Marketing  | East-460    |
| 1156        | a184b775c707   | dellery  | Marketing  | East-417    |
| 1163        | h679i515j339   | cwilliam | Marketing  | East-216    |
+-----+-----+-----+-----+-----+
7 rows in set (0.018 sec)
```

## Retrieve employees in Finance or Sales

Used filters in SQL to create a query that identifies all employees in the Sales or Finance departments.

```
MariaDB [organization]> SELECT * FROM employees WHERE department = 'Finance' OR department = 'Sales';
+-----+-----+-----+-----+-----+
| employee_id | device_id      | username | department | office      |
+-----+-----+-----+-----+-----+
| 1003        | d394e816f943   | sgilmore | Finance    | South-153   |
| 1007        | h174i497j413   | wjaffrey | Finance    | North-406   |
| 1008        | i858j583k571   | abernard | Finance    | South-170   |
| 1009        | NULL           | lrodriqu | Sales      | South-134   |
| 1010        | k242l212m542   | jlansky  | Finance    | South-109   |
| 1011        | l748m120n401   | drosas   | Sales      | South-292   |
| 1015        | p611c262r945   | isoto    | Finance    | North-271   |
+-----+-----+-----+-----+-----+
```

## Retrieve all employees not in IT

Used filters in SQL to create a query which identifies all employees not in the IT department.

```

MariaDB [organization]> SELECT *
-> FROM employees
-> WHERE NOT department = 'Information Technology';
+-----+-----+-----+-----+-----+
| employee_id | device_id | username | department | office |
+-----+-----+-----+-----+-----+
| 1000 | a320b137c219 | elarson | Marketing | East-170 |
| 1001 | b239c825d303 | bmoreno | Marketing | Central-276 |
| 1002 | c116d593e558 | tshah | Human Resources | North-434 |
| 1003 | d394e816f943 | sgilmore | Finance | South-153 |
| 1004 | e218f877g788 | eraab | Human Resources | South-127 |
| 1005 | f551g340h864 | gsnarzo | Human Resources | South-366 |

```

## Summary

Created SQL queries to retrieve the information needed in different situations.