Apply filters to SQL queries

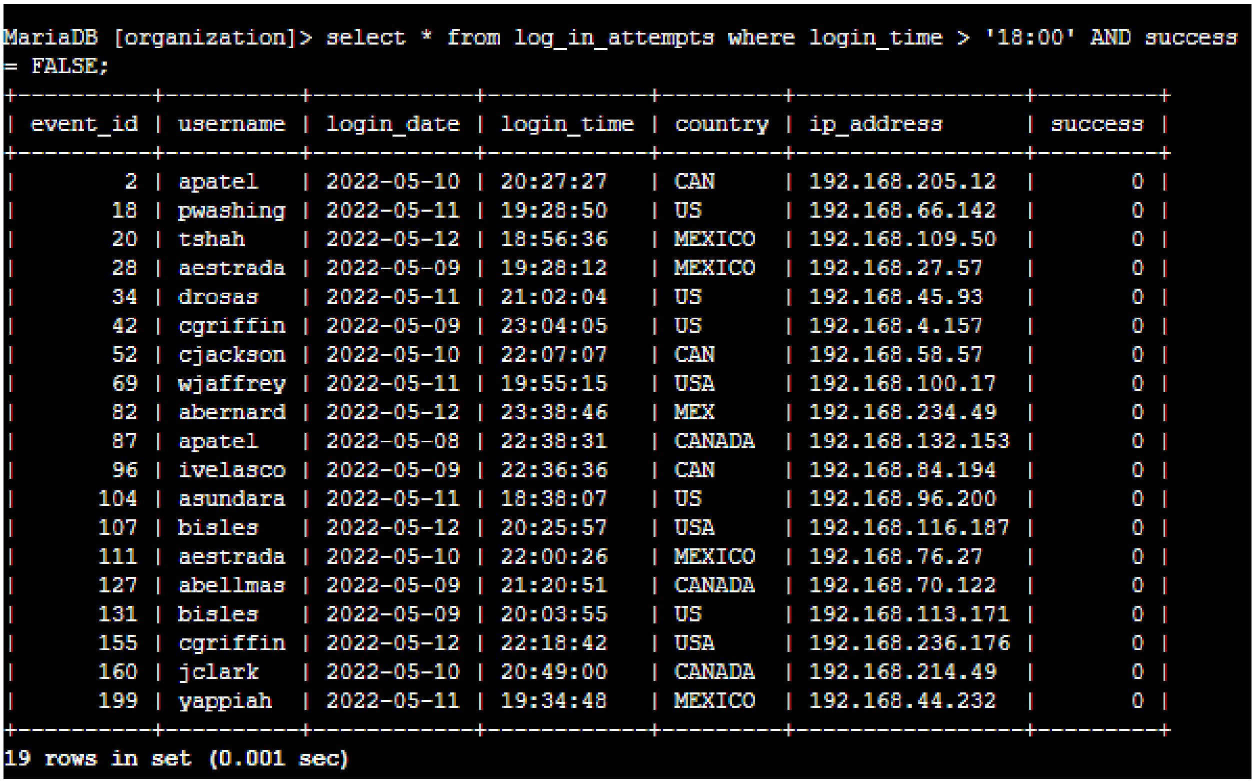
Project description

In my role overseeing security enhancements for our organization, my primary responsibility is to fortify the system against potential threats. I diligently investigate security issues and ensure that employee computers are promptly updated for optimal safety. In executing these tasks, I leverage SQL with filters to perform specific security-related actions. This involves implementing targeted queries to identify and address potential vulnerabilities, contributing to an overall more robust and secure system.

Retrieve after hours failed login attempts

There was a potential security incident that occurred after business hours (after 18:00). All after hours login attempts that failed need to be investigated.

The following code demonstrates how I created a SQL query to filter for failed login attempts that occurred after business hours.

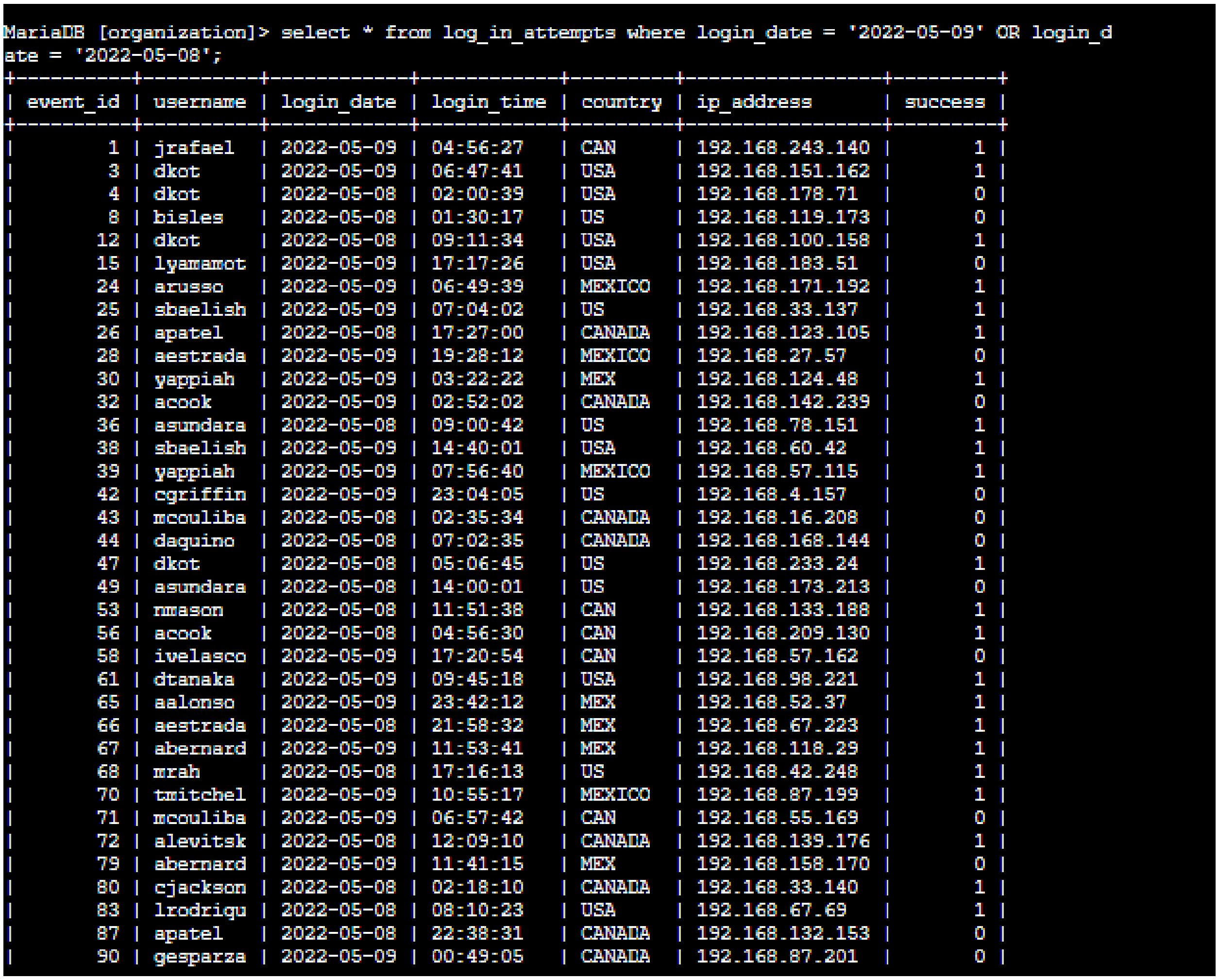


```
MariaDB [organization]> select * from log_in_attempts where login_time > '18:00' AND success
= FALSE;
+----------+----------+------------+------------+---------+------------------+---------+
| event_id | username | login_date | login_time | country | ip_address       | success |
+----------+----------+------------+------------+---------+------------------+---------+
|        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 | aestrada | 2022-05-09 | 19:28:12   | MEXICO  | 192.168.27.57    |       0 |
|       34 | drosas   | 2022-05-11 | 21:02:04   | US      | 192.168.45.93    |       0 |
|       42 | cgriffin | 2022-05-09 | 23:04:05   | US      | 192.168.4.157    |       0 |
|       52 | cjackson | 2022-05-10 | 22:07:07   | CAN     | 192.168.58.57    |       0 |
|       69 | wjaffrey | 2022-05-11 | 19:55:15   | USA     | 192.168.100.17   |       0 |
|       82 | abernard | 2022-05-12 | 23:38:46   | MEX     | 192.168.234.49   |       0 |
|       87 | apatel   | 2022-05-08 | 22:38:31   | CANADA  | 192.168.132.153  |       0 |
|       96 | ivelasco | 2022-05-09 | 22:36:36   | CAN     | 192.168.84.194   |       0 |
|      104 | asundara | 2022-05-11 | 18:38:07   | US      | 192.168.96.200   |       0 |
|      107 | bisles   | 2022-05-12 | 20:25:57   | USA     | 192.168.116.187  |       0 |
|      111 | aestrada | 2022-05-10 | 22:00:26   | MEXICO  | 192.168.76.27    |       0 |
|      127 | abellmas | 2022-05-09 | 21:20:51   | CANADA  | 192.168.70.122   |       0 |
|      131 | bisles   | 2022-05-09 | 20:03:55   | US      | 192.168.113.171  |       0 |
|      155 | cgriffin | 2022-05-12 | 22:18:42   | USA     | 192.168.236.176  |       0 |
|      160 | jclark   | 2022-05-10 | 20:49:00   | CANADA  | 192.168.214.49   |       0 |
|      199 | yappiah  | 2022-05-11 | 19:34:48   | MEXICO  | 192.168.44.232   |       0 |
+----------+----------+------------+------------+---------+------------------+---------+
19 rows in set (0.001 sec)
```

Retrieve login attempts on specific dates

A suspicious event occurred on 2022-05-09. Any login activity that happened on 2022-05-09 or on the day before needs to be investigated.

The following code demonstrates how I created a SQL query to filter for login attempts that occurred on specific dates.

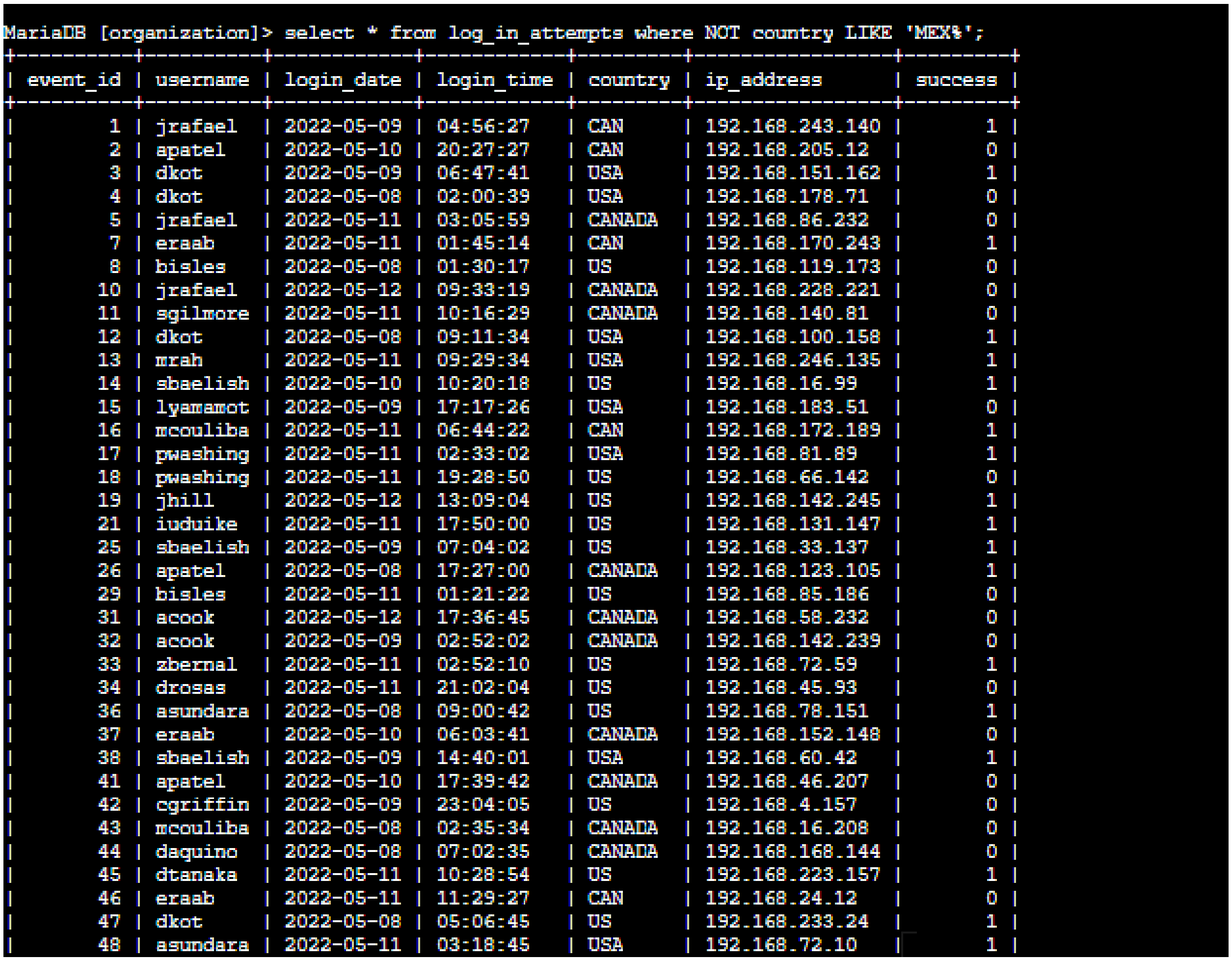


```
MariaDB [organization]> select * from log_in_attempts where login_date = '2022-05-09' OR login_d
ate = '2022-05-08';
+----------+----------+------------+------------+---------+-----------------+---------+
| event_id | username | login_date | login_time | country | ip_address      | success |
+----------+----------+------------+------------+---------+-----------------+---------+
|        1 | jrafael  | 2022-05-09 | 04:56:27   | CAN     | 192.168.243.140 |       1 |
|        3 | dkot     | 2022-05-09 | 06:47:41   | USA     | 192.168.151.162 |       1 |
|        4 | dkot     | 2022-05-08 | 02:00:39   | USA     | 192.168.178.71  |       0 |
|        8 | bisles   | 2022-05-08 | 01:30:17   | US      | 192.168.119.173 |       0 |
|       12 | dkot     | 2022-05-08 | 09:11:34   | USA     | 192.168.100.158 |       1 |
|       15 | lyamamot | 2022-05-09 | 17:17:26   | USA     | 192.168.183.51  |       0 |
|       24 | arusso   | 2022-05-09 | 06:49:39   | MEXICO  | 192.168.171.192 |       1 |
|       25 | sbaelish | 2022-05-09 | 07:04:02   | US      | 192.168.33.137  |       1 |
|       26 | apatel   | 2022-05-08 | 17:27:00   | CANADA  | 192.168.123.105 |       1 |
|       28 | aestrada | 2022-05-09 | 19:28:12   | MEXICO  | 192.168.27.57   |       0 |
|       30 | yappiah  | 2022-05-09 | 03:22:22   | MEX     | 192.168.124.48  |       1 |
|       32 | acook    | 2022-05-09 | 02:52:02   | CANADA  | 192.168.142.239 |       0 |
|       36 | asundara | 2022-05-08 | 09:00:42   | US      | 192.168.78.151  |       1 |
|       38 | sbaelish | 2022-05-09 | 14:40:01   | USA     | 192.168.60.42   |       1 |
|       39 | yappiah  | 2022-05-09 | 07:56:40   | MEXICO  | 192.168.57.115  |       1 |
|       42 | cgriffin | 2022-05-09 | 23:04:05   | US      | 192.168.4.157   |       0 |
|       43 | mcouliba | 2022-05-08 | 02:35:34   | CANADA  | 192.168.16.208  |       0 |
|       44 | daquino  | 2022-05-08 | 07:02:35   | CANADA  | 192.168.168.144 |       0 |
|       47 | dkot     | 2022-05-08 | 05:06:45   | US      | 192.168.233.24  |       1 |
|       49 | asundara | 2022-05-08 | 14:00:01   | US      | 192.168.173.213 |       0 |
|       53 | nmason   | 2022-05-08 | 11:51:38   | CAN     | 192.168.133.188 |       1 |
|       56 | acook    | 2022-05-08 | 04:56:30   | CAN     | 192.168.209.130 |       1 |
|       58 | ivelasco | 2022-05-09 | 17:20:54   | CAN     | 192.168.57.162  |       0 |
|       61 | dtanaka  | 2022-05-09 | 09:45:18   | USA     | 192.168.98.221  |       1 |
|       65 | aalonso  | 2022-05-09 | 23:42:12   | MEX     | 192.168.52.37   |       1 |
|       66 | aestrada | 2022-05-08 | 21:58:32   | MEX     | 192.168.67.223  |       1 |
|       67 | abernard | 2022-05-09 | 11:53:41   | MEX     | 192.168.118.29  |       1 |
|       68 | mrah     | 2022-05-08 | 17:16:13   | US      | 192.168.42.248  |       1 |
|       70 | tmitchel | 2022-05-09 | 10:55:17   | MEXICO  | 192.168.87.199  |       1 |
|       71 | mcouliba | 2022-05-09 | 06:57:42   | CAN     | 192.168.55.169  |       0 |
|       72 | alevitsk | 2022-05-08 | 12:09:10   | CANADA  | 192.168.139.176 |       1 |
|       79 | abernard | 2022-05-09 | 11:41:15   | MEX     | 192.168.158.170 |       0 |
|       80 | cjackson | 2022-05-08 | 02:18:10   | CANADA  | 192.168.33.140  |       1 |
|       83 | lrodriqu | 2022-05-08 | 08:10:23   | USA     | 192.168.67.69   |       1 |
|       87 | apatel   | 2022-05-08 | 22:38:31   | CANADA  | 192.168.132.153 |       0 |
|       90 | gesparza | 2022-05-09 | 00:49:05   | CANADA  | 192.168.87.201  |       0 |
```

Retrieve login attempts outside of Mexico

After investigating the organization’s data on login attempts, I believe there is an issue with the login attempts that occurred outside of Mexico. These login attempts should be investigated.

The following code demonstrates how I created a SQL query to filter for login attempts that occurred outside of Mexico.

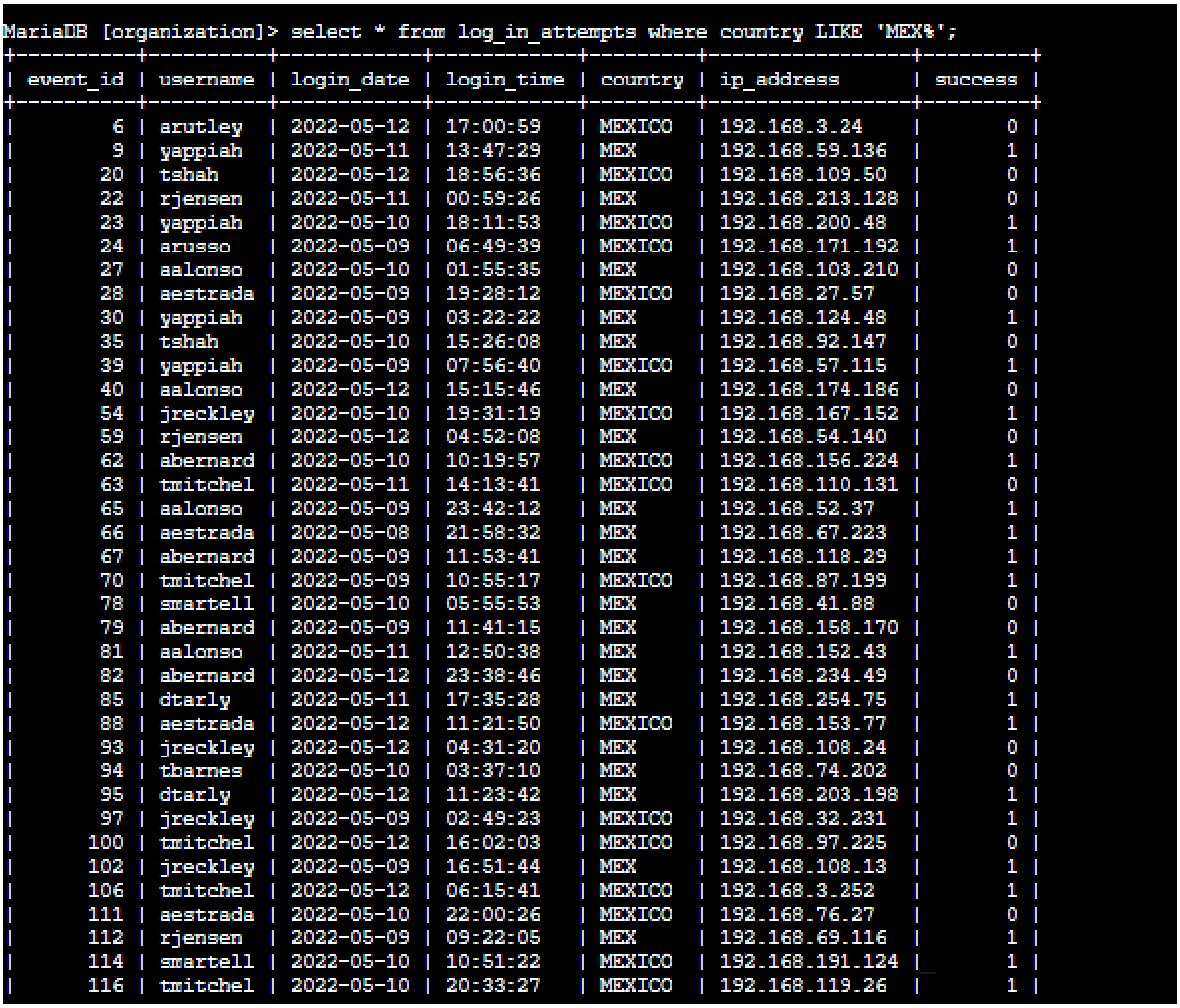


```
MariaDB [organization]> select * from log_in_attempts where NOT country LIKE 'MEX%';
+----------+----------+------------+------------+---------+-----------------+---------+
| event_id | username | login_date | login_time | country | ip_address      | success |
+----------+----------+------------+------------+---------+-----------------+---------+
|        1 | jrafael  | 2022-05-09 | 04:56:27   | CAN     | 192.168.243.140 |       1 |
|        2 | apatel   | 2022-05-10 | 20:27:27   | CAN     | 192.168.205.12  |       0 |
|        3 | dkot     | 2022-05-09 | 06:47:41   | USA     | 192.168.151.162 |       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 | eraab    | 2022-05-11 | 01:45:14   | CAN     | 192.168.170.243 |       1 |
|        8 | bisles   | 2022-05-08 | 01:30:17   | US      | 192.168.119.173 |       0 |
|       10 | jrafael  | 2022-05-12 | 09:33:19   | CANADA  | 192.168.228.221 |       0 |
|       11 | sgilmore | 2022-05-11 | 10:16:29   | CANADA  | 192.168.140.81  |       0 |
|       12 | dkot     | 2022-05-08 | 09:11:34   | USA     | 192.168.100.158 |       1 |
|       13 | mrah     | 2022-05-11 | 09:29:34   | USA     | 192.168.246.135 |       1 |
|       14 | sbaelish | 2022-05-10 | 10:20:18   | US      | 192.168.16.99   |       1 |
|       15 | lyamamot | 2022-05-09 | 17:17:26   | USA     | 192.168.183.51  |       0 |
|       16 | mcouliba | 2022-05-11 | 06:44:22   | CAN     | 192.168.172.189 |       1 |
|       17 | pwashing | 2022-05-11 | 02:33:02   | USA     | 192.168.81.89   |       1 |
|       18 | pwashing | 2022-05-11 | 19:28:50   | US      | 192.168.66.142  |       0 |
|       19 | jhill    | 2022-05-12 | 13:09:04   | US      | 192.168.142.245 |       1 |
|       21 | iuduike  | 2022-05-11 | 17:50:00   | US      | 192.168.131.147 |       1 |
|       25 | sbaelish | 2022-05-09 | 07:04:02   | US      | 192.168.33.137  |       1 |
|       26 | apatel   | 2022-05-08 | 17:27:00   | CANADA  | 192.168.123.105 |       1 |
|       29 | bisles   | 2022-05-11 | 01:21:22   | US      | 192.168.85.186  |       0 |
|       31 | acook    | 2022-05-12 | 17:36:45   | CANADA  | 192.168.58.232  |       0 |
|       32 | acook    | 2022-05-09 | 02:52:02   | CANADA  | 192.168.142.239 |       0 |
|       33 | zbernal  | 2022-05-11 | 02:52:10   | US      | 192.168.72.59   |       1 |
|       34 | drosas   | 2022-05-11 | 21:02:04   | US      | 192.168.45.93   |       0 |
|       36 | asundara | 2022-05-08 | 09:00:42   | US      | 192.168.78.151  |       1 |
|       37 | eraab    | 2022-05-10 | 06:03:41   | CANADA  | 192.168.152.148 |       0 |
|       38 | sbaelish | 2022-05-09 | 14:40:01   | USA     | 192.168.60.42   |       1 |
|       41 | apatel   | 2022-05-10 | 17:39:42   | CANADA  | 192.168.46.207  |       0 |
|       42 | cgriffin | 2022-05-09 | 23:04:05   | US      | 192.168.4.157   |       0 |
|       43 | mcouliba | 2022-05-08 | 02:35:34   | CANADA  | 192.168.16.208  |       0 |
|       44 | daquino  | 2022-05-08 | 07:02:35   | CANADA  | 192.168.168.144 |       0 |
|       45 | dtanaka  | 2022-05-11 | 10:28:54   | US      | 192.168.223.157 |       1 |
|       46 | eraab    | 2022-05-11 | 11:29:27   | CAN     | 192.168.24.12   |       0 |
|       47 | dkot     | 2022-05-08 | 05:06:45   | US      | 192.168.233.24  |       1 |
|       48 | asundara | 2022-05-11 | 03:18:45   | USA     | 192.168.72.10   |       1 |
```

Retrieve login attempts only in Mexico

After investigating the organization's data on login attempts, I believe there is an issue with the login attempts that occurred only in Mexico. These login attempts should be investigated.

The following code demonstrates how I created a SQL query to filter for login attempts that occurred inside of Mexico.

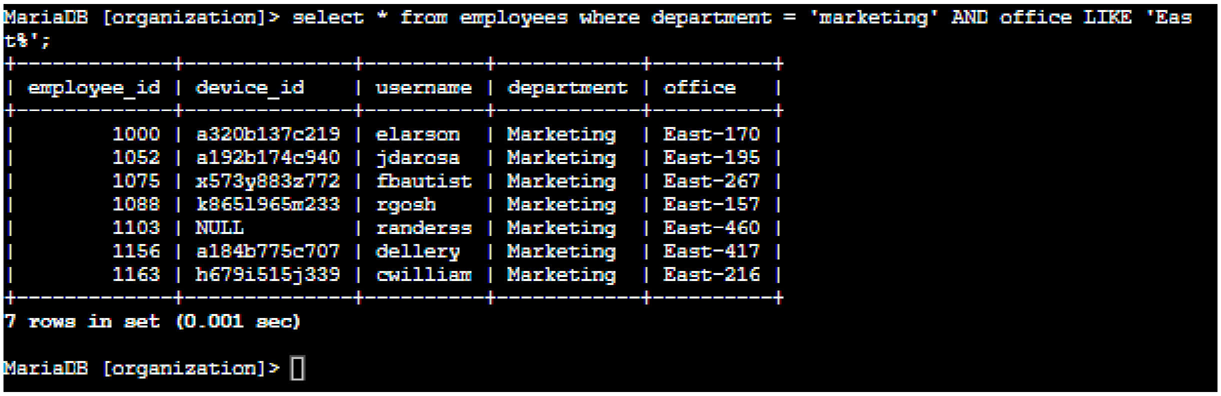


```
MariaDB [organization]> select * from log_in_attempts where country LIKE 'MEX%';
+----------+----------+------------+------------+---------+-----------------+---------+
| event_id | username | login_date | login_time | country | ip_address      | success |
+----------+----------+------------+------------+---------+-----------------+---------+
|        6 | arutley  | 2022-05-12 | 17:00:59   | MEXICO  | 192.168.3.24    |       0 |
|        9 | yappiah  | 2022-05-11 | 13:47:29   | MEX     | 192.168.59.136  |       1 |
|       20 | tshah    | 2022-05-12 | 18:56:36   | MEXICO  | 192.168.109.50  |       0 |
|       22 | rjensen  | 2022-05-11 | 00:59:26   | MEX     | 192.168.213.128 |       0 |
|       23 | yappiah  | 2022-05-10 | 18:11:53   | MEXICO  | 192.168.200.48  |       1 |
|       24 | arusso   | 2022-05-09 | 06:49:39   | MEXICO  | 192.168.171.192 |       1 |
|       27 | aalonso  | 2022-05-10 | 01:55:35   | MEX     | 192.168.103.210 |       0 |
|       28 | aestrada | 2022-05-09 | 19:28:12   | MEXICO  | 192.168.27.57   |       0 |
|       30 | yappiah  | 2022-05-09 | 03:22:22   | MEX     | 192.168.124.48  |       1 |
|       35 | tshah    | 2022-05-10 | 15:26:08   | MEX     | 192.168.92.147  |       0 |
|       39 | yappiah  | 2022-05-09 | 07:56:40   | MEXICO  | 192.168.57.115  |       1 |
|       40 | aalonso  | 2022-05-12 | 15:15:46   | MEX     | 192.168.174.186 |       0 |
|       54 | jreckley | 2022-05-10 | 19:31:19   | MEXICO  | 192.168.167.152 |       1 |
|       59 | rjensen  | 2022-05-12 | 04:52:08   | MEX     | 192.168.54.140  |       0 |
|       62 | abernard | 2022-05-10 | 10:19:57   | MEXICO  | 192.168.156.224 |       1 |
|       63 | tmitchel | 2022-05-11 | 14:13:41   | MEXICO  | 192.168.110.131 |       0 |
|       65 | aalonso  | 2022-05-09 | 23:42:12   | MEX     | 192.168.52.37   |       1 |
|       66 | aestrada | 2022-05-08 | 21:58:32   | MEX     | 192.168.67.223  |       1 |
|       67 | abernard | 2022-05-09 | 11:53:41   | MEX     | 192.168.118.29  |       1 |
|       70 | tmitchel | 2022-05-09 | 10:55:17   | MEXICO  | 192.168.87.199  |       1 |
|       78 | smartell | 2022-05-10 | 05:55:53   | MEX     | 192.168.41.88   |       0 |
|       79 | abernard | 2022-05-09 | 11:41:15   | MEX     | 192.168.158.170 |       0 |
|       81 | aalonso  | 2022-05-11 | 12:50:38   | MEX     | 192.168.152.43  |       1 |
|       82 | abernard | 2022-05-12 | 23:38:46   | MEX     | 192.168.234.49  |       0 |
|       85 | dtarly   | 2022-05-11 | 17:35:28   | MEX     | 192.168.254.75  |       1 |
|       88 | aestrada | 2022-05-12 | 11:21:50   | MEXICO  | 192.168.153.77  |       1 |
|       93 | jreckley | 2022-05-12 | 04:31:20   | MEX     | 192.168.108.24  |       0 |
|       94 | tbarnes  | 2022-05-10 | 03:37:10   | MEX     | 192.168.74.202  |       0 |
|       95 | dtarly   | 2022-05-12 | 11:23:42   | MEX     | 192.168.203.198 |       1 |
|       97 | jreckley | 2022-05-09 | 02:49:23   | MEXICO  | 192.168.32.231  |       1 |
|      100 | tmitchel | 2022-05-12 | 16:02:03   | MEXICO  | 192.168.97.225  |       0 |
|      102 | jreckley | 2022-05-09 | 16:51:44   | MEX     | 192.168.108.13  |       1 |
|      106 | tmitchel | 2022-05-12 | 06:15:41   | MEXICO  | 192.168.3.252   |       1 |
|      111 | aestrada | 2022-05-10 | 22:00:26   | MEXICO  | 192.168.76.27   |       0 |
|      112 | rjensen  | 2022-05-09 | 09:22:05   | MEX     | 192.168.69.116  |       1 |
|      114 | smartell | 2022-05-10 | 10:51:22   | MEXICO  | 192.168.191.124 |       1 |
|      116 | tmitchel | 2022-05-10 | 20:33:27   | MEXICO  | 192.168.119.26  |       1 |
```

Retrieve employees in Marketing

My team wants to update the computers for certain employees in the Marketing department. To do this, I have to get information on which employee machines to update.

The following code demonstrates how I created a SQL query to filter for employee machines from employees in the Marketing department in the East building.



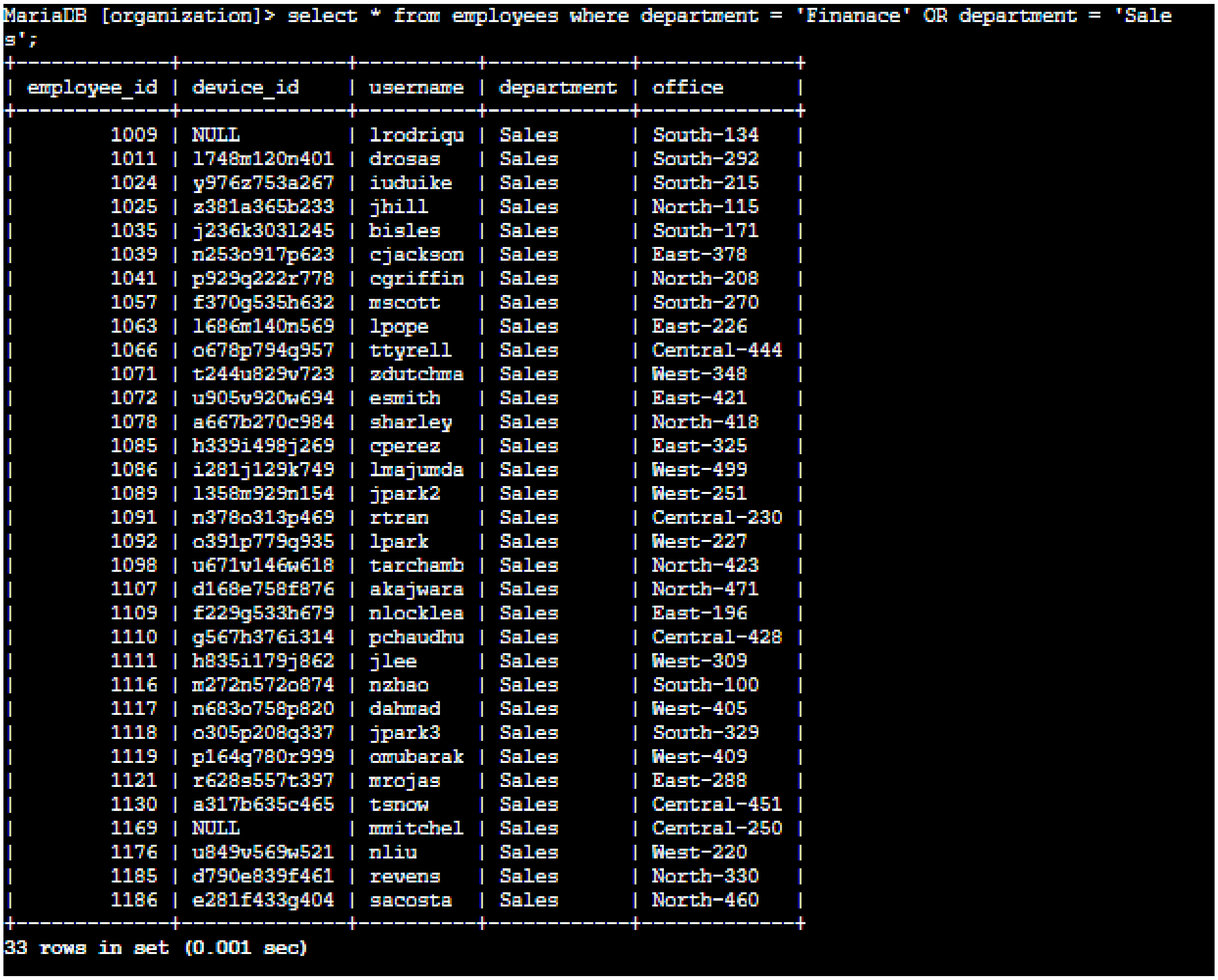
```
MariaDB [organization]> select * from employees where department = 'marketing' AND office LIKE 'Eas
t%';
+-------------+--------------+----------+------------+----------+
| employee_id | device_id    | username | department | office   |
+-------------+--------------+----------+------------+----------+
|        1000 | a320b137c219 | elarson  | Marketing  | East-170 |
|        1052 | a192b174c940 | jdarosa  | Marketing  | East-195 |
|        1075 | x573y883z772 | fbautist | Marketing  | East-267 |
|        1088 | k8651965m233 | 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 (0.001 sec)

MariaDB [organization]> 
```

Retrieve employees in Finance or Sales

The machines for employees in the Finance and Sales departments also need to be updated. Since a different security update is needed, I have to get information on employees only from these two departments.

The following code demonstrates how I created a SQL query to filter for employee machines from employees in the Finance or Sales departments.

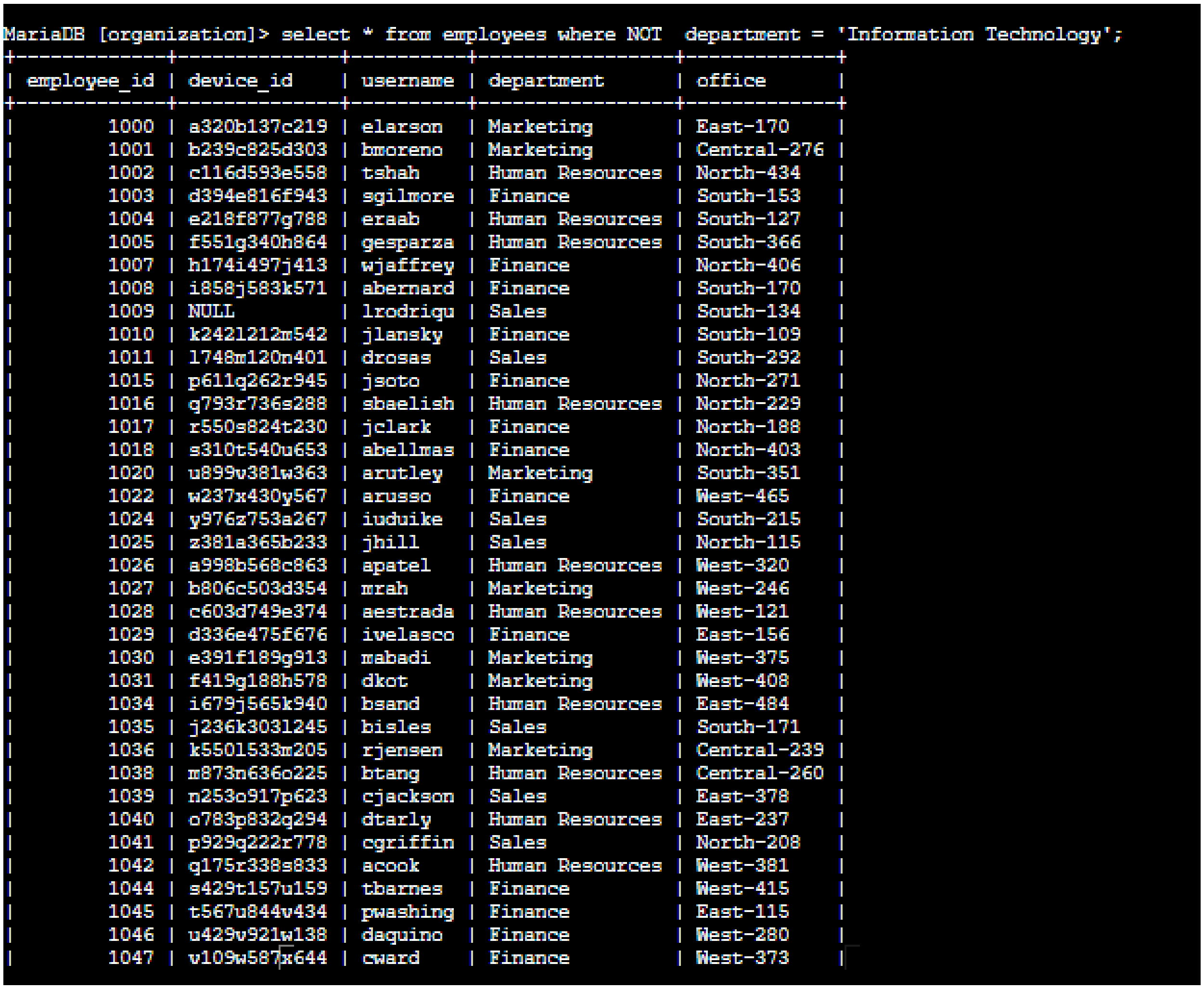


```
MariaDB [organization]> select * from employees where department = 'Finanace' OR department = 'Sale
s';
+-------------+--------------+----------+------------+-------------+
| employee_id | device_id    | username | department | office      |
+-------------+--------------+----------+------------+-------------+
|        1009 | NULL         | lrodrigu | Sales      | South-134   |
|        1011 | 1748m120n401 | drosas   | Sales      | South-292   |
|        1024 | y976z753a267 | iuduike  | Sales      | South-215   |
|        1025 | z381a365b233 | jhill    | Sales      | North-115   |
|        1035 | j236k3031245 | bisles   | Sales      | South-171   |
|        1039 | n253o917p623 | cjackson | Sales      | East-378    |
|        1041 | p929q222r778 | cgriffin | Sales      | North-208   |
|        1057 | f370g535h632 | mscott   | Sales      | South-270   |
|        1063 | 1686m140n569 | lpope    | Sales      | East-226    |
|        1066 | o678p794q957 | ttyrell  | Sales      | Central-444 |
|        1071 | t244u829v723 | zdutchma | Sales      | West-348    |
|        1072 | u905v920w694 | esmith   | Sales      | East-421    |
|        1078 | a667b270c984 | sharley  | Sales      | North-418   |
|        1085 | h339i498j269 | cperez   | Sales      | East-325    |
|        1086 | i281j129k749 | lmajumda | Sales      | West-499    |
|        1089 | 1358m929n154 | jpark2   | Sales      | West-251    |
|        1091 | n378o313p469 | rtran    | Sales      | Central-230 |
|        1092 | o391p779q935 | lpark    | Sales      | West-227    |
|        1098 | u671v146w618 | tarchamb | Sales      | North-423   |
|        1107 | d168e758f876 | akajwara | Sales      | North-471   |
|        1109 | f229g533h679 | nlocklea | Sales      | East-196    |
|        1110 | g567h376i314 | pchaudhu | Sales      | Central-428 |
|        1111 | h835i179j862 | jlee     | Sales      | West-309    |
|        1116 | m272n572o874 | nzhao    | Sales      | South-100   |
|        1117 | n683o758p820 | dahmad   | Sales      | West-405    |
|        1118 | o305p208q337 | jpark3   | Sales      | South-329   |
|        1119 | p164q780r999 | omubarak | Sales      | West-409    |
|        1121 | r628s557t397 | mrojas   | Sales      | East-288    |
|        1130 | a317b635c465 | tsnow    | Sales      | Central-451 |
|        1169 | NULL         | mmitchel | Sales      | Central-250 |
|        1176 | u849v569w521 | nliu     | Sales      | West-220    |
|        1185 | d790e839f461 | revens   | Sales      | North-330   |
|        1186 | e281f433g404 | sacosta  | Sales      | North-460   |
+-------------+--------------+----------+------------+-------------+
33 rows in set (0.001 sec)
```

Retrieve all employees not in IT

My team needs to make one more security update on employees who are not in the Information Technology department. To make the update, I first have to get information on these employees.

The following demonstrates how I created a SQL query to filter for employee machines from employees not in the Information Technology department.

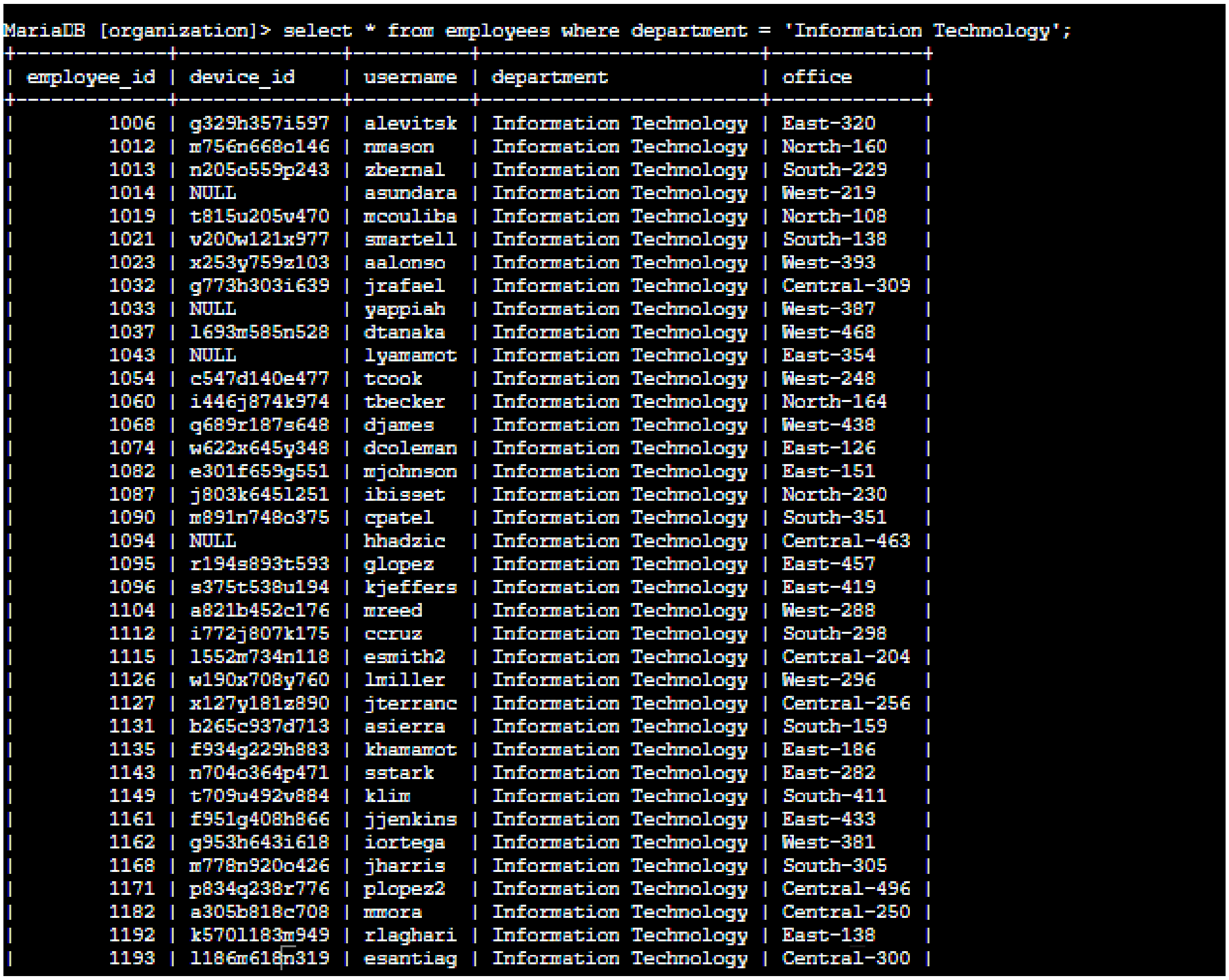


```
MariaDB [organization]> select * from employees where NOT  department = 'Information Technology';
+-------------+---------------+----------+-----------------+-------------+
| employee_id | device_id     | username | department      | office      |
+-------------+---------------+----------+-----------------+-------------+
|        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 | gesparza | Human Resources | South-366   |
|        1007 | h174i497j413 | wjaffrey | Finance         | North-406   |
|        1008 | i858j583k571 | abernard | Finance         | South-170   |
|        1009 | NULL          | lrodriqu | Sales           | South-134   |
|        1010 | k2421212m542 | jlansky  | Finance         | South-109   |
|        1011 | 1748m120n401 | drosas   | Sales           | South-292   |
|        1015 | p611q262r945 | jsoto    | Finance         | North-271   |
|        1016 | q793r736s288 | sbaelish | Human Resources | North-229   |
|        1017 | r550s824t230 | jclark   | Finance         | North-188   |
|        1018 | s310t540u653 | abellmas | Finance         | North-403   |
|        1020 | u899v381w363 | arutley  | Marketing       | South-351   |
|        1022 | w237x430y567 | arusso   | Finance         | West-465    |
|        1024 | y976z753a267 | iuduike  | Sales           | South-215   |
|        1025 | z381a365b233 | jhill    | Sales           | North-115   |
|        1026 | a998b568c863 | apatel   | Human Resources | West-320    |
|        1027 | b806c503d354 | mrah     | Marketing       | West-246    |
|        1028 | c603d749e374 | aestrada | Human Resources | West-121    |
|        1029 | d336e475f676 | ivelasco | Finance         | East-156    |
|        1030 | e391f189g913 | mabadi   | Marketing       | West-375    |
|        1031 | f419g188h578 | dkot     | Marketing       | West-408    |
|        1034 | i679j565k940 | bsand    | Human Resources | East-484    |
|        1035 | j236k3031245 | bisles   | Sales           | South-171   |
|        1036 | k5501533m205 | rjensen  | Marketing       | Central-239 |
|        1038 | m873n636o225 | btang    | Human Resources | Central-260 |
|        1039 | n253o917p623 | cjackson | Sales           | East-378    |
|        1040 | o783p832q294 | dtarly   | Human Resources | East-237    |
|        1041 | p929q222r778 | cgriffin | Sales           | North-208   |
|        1042 | q175r338s833 | acook    | Human Resources | West-381    |
|        1044 | s429t157u159 | tbarnes  | Finance         | West-415    |
|        1045 | t567u844v434 | pwashing | Finance         | East-115    |
|        1046 | u429v921w138 | daquino  | Finance         | West-280    |
|        1047 | v109w587x644 | cward    | Finance         | West-373    |
```

Retrieve all employees in IT

My team needs to make one more security update on employees who are in the Information Technology department. To make the update, I first have to get information on these employees.

The following demonstrates how I created a SQL query to filter for employee machines from employees in the Information Technology department.



```
MariaDB [organization]> select * from employees where department = 'Information Technology';
+-------------+--------------+----------+------------------------+-------------+
| employee_id | device_id    | username | department             | office      |
+-------------+--------------+----------+------------------------+-------------+
|        1006 | g329h357i597 | alevitsk | Information Technology | East-320    |
|        1012 | m756n668o146 | nmason   | Information Technology | North-160   |
|        1013 | n205o559p243 | zbernal  | Information Technology | South-229   |
|        1014 | NULL         | asundara | Information Technology | West-219    |
|        1019 | t815u205v470 | mcouliba | Information Technology | North-108   |
|        1021 | v200w121x977 | smartell | Information Technology | South-138   |
|        1023 | x253y759z103 | aalonso  | Information Technology | West-393    |
|        1032 | g773h303i639 | jrafael  | Information Technology | Central-309 |
|        1033 | NULL         | yappiah  | Information Technology | West-387    |
|        1037 | l693m585n528 | dtanaka  | Information Technology | West-468    |
|        1043 | NULL         | lyamamot | Information Technology | East-354    |
|        1054 | c547d140e477 | tcook    | Information Technology | West-248    |
|        1060 | i446j874k974 | tbecker  | Information Technology | North-164   |
|        1068 | q689r187s648 | djames   | Information Technology | West-438    |
|        1074 | w622x645y348 | dcoleman | Information Technology | East-126    |
|        1082 | e301f659g551 | mjohnson | Information Technology | East-151    |
|        1087 | j803k645l251 | ibisset  | Information Technology | North-230   |
|        1090 | m891n748o375 | cpatel   | Information Technology | South-351   |
|        1094 | NULL         | hhadzic  | Information Technology | Central-463 |
|        1095 | r194s893t593 | glopez   | Information Technology | East-457    |
|        1096 | s375t538u194 | kjeffers | Information Technology | East-419    |
|        1104 | a821b452c176 | mreed    | Information Technology | West-288    |
|        1112 | i772j807k175 | ccruz    | Information Technology | South-298   |
|        1115 | l552m734n118 | esmith2  | Information Technology | Central-204 |
|        1126 | w190x708y760 | lmiller  | Information Technology | West-296    |
|        1127 | x127y181z890 | jterranc | Information Technology | Central-256 |
|        1131 | b265c937d713 | asierra  | Information Technology | South-159   |
|        1135 | f934g229h883 | khamamot | Information Technology | East-186    |
|        1143 | n704o364p471 | sstark   | Information Technology | East-282    |
|        1149 | t709u492v884 | klim     | Information Technology | South-411   |
|        1161 | f951g408h866 | jjenkins | Information Technology | East-433    |
|        1162 | g953h643i618 | iortega  | Information Technology | West-381    |
|        1168 | m778n920o426 | jharris  | Information Technology | South-305   |
|        1171 | p834q238r776 | plopez2  | Information Technology | Central-496 |
|        1182 | a305b818c708 | mmora    | Information Technology | Central-250 |
|        1192 | k570l183m949 | rlaghari | Information Technology | East-138    |
|        1193 | l186m618n319 | esantiag | Information Technology | Central-300 |
```

Summary

I applied filters to SQL queries to get specific information on login attempts and employee machines. I used two different tables, log_in_attempts and employees. I used the AND, OR, and NOT operators to filter for the specific information needed for each task. I also used LIKE and the percentage sign (%) wildcard to filter for patterns.