Apply filters to SQL queries

Project description

Discovered some potential security issues that involve login attempts and employee machines. Examine the organizations data in their employees and log_in_attempts

Retrieve after hours failed login attempts:

The query retrieves failed login attempts that occurred after business hours (after 18:00). It uses the **login_time** and **success** columns to filter login attempts made after 6 PM and where the login was unsuccessful (**success = 0**).

```
MariaDB [organization]> clear
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 | 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 (0.169 sec)
```

Retrieve login attempts on specific dates:

The query retrieves all login attempts made on **'2022-05-08'** and **'2022-05-09'** by using the **login_date** column. The **OR** operator is used to filter for records matching either of these dates.

```
MariaDB [organization]> SELECT *
    -> FROM log_in_attempts
    -> WHERE login_date = '2022-05-08' OR login_date = '2022-05-09';
+----------+-----------+------------+------------+---------+-----------------+---------+
| 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 |
|       92 | pwashing  | 2022-05-08 | 00:36:12   | US      | 192.168.247.219 |       0 |
|       96 | ivelasco  | 2022-05-09 | 22:36:36   | CAN     | 192.168.84.194  |       0 |
```

97	jreckley	2022-05-09	02:49:23	MEXICO	192.168.32.231	1
101	sbaelish	2022-05-08	12:01:22	US	192.168.145.158	0
102	jreckley	2022-05-09	16:51:44	MEX	192.168.108.13	1
108	daquino	2022-05-09	21:30:48	CANADA	192.168.15.110	1
110	mabadi	2022-05-09	00:01:54	USA	192.168.90.124	1
112	rjensen	2022-05-09	09:22:05	MEX	192.168.69.116	1
117	bsand	2022-05-08	00:19:11	USA	192.168.197.187	0
120	tmitchel	2022-05-09	02:58:17	MEXICO	192.168.134.62	0
127	abellmas	2022-05-09	21:20:51	CANADA	192.168.70.122	0
128	jclark	2022-05-09	10:45:59	CANADA	192.168.122.169	0
131	bisles	2022-05-09	20:03:55	US	192.168.113.171	0
134	iuduike	2022-05-09	06:46:40	USA	192.168.22.115	1
135	bsand	2022-05-09	14:06:33	US	192.168.91.238	0
144	daquino	2022-05-09	11:09:32	CANADA	192.168.139.9	0
145	ivelasco	2022-05-08	09:06:02	CANADA	192.168.39.196	1
147	yappiah	2022-05-08	06:04:34	MEX	192.168.65.245	0
148	daquino	2022-05-08	06:15:55	CANADA	192.168.135.6	1
150	nmason	2022-05-08	14:40:02	CAN	192.168.204.124	0
151	mabadi	2022-05-09	16:29:46	USA	192.168.30.225	1
158	smartell	2022-05-09	19:30:32	MEXICO	192.168.190.178	1
161	abellmas	2022-05-09	13:25:50	CAN	192.168.180.205	0
162	yappiah	2022-05-09	04:51:22	MEXICO	192.168.162.100	0
163	tmitchel	2022-05-08	09:21:16	MEX	192.168.119.29	0
165	jreckley	2022-05-08	15:28:43	MEXICO	192.168.34.193	0
168	jlansky	2022-05-08	13:25:42	USA	192.168.210.94	1
169	alevitsk	2022-05-08	08:10:43	CANADA	192.168.210.228	0
170	sbaelish	2022-05-09	16:43:18	USA	192.168.65.113	0
172	mabadi	2022-05-08	08:06:50	US	192.168.180.41	1
178	sgilmore	2022-05-08	12:27:22	CAN	192.168.52.216	0
184	alevitsk	2022-05-08	03:09:48	CAN	192.168.33.70	0
186	bisles	2022-05-09	04:29:17	USA	192.168.40.72	0
187	arusso	2022-05-09	00:36:26	MEX	192.168.77.137	0
189	nmason	2022-05-08	05:37:24	CANADA	192.168.168.117	1
190	jsoto	2022-05-09	05:09:21	USA	192.168.25.60	0
191	cjackson	2022-05-08	06:46:07	CANADA	192.168.7.187	0
193	lrodriqu	2022-05-08	07:11:29	US	192.168.125.240	0
197	jsoto	2022-05-08	09:05:09	US	192.168.36.21	0

75 rows in set (0.033 sec)

Retrieve login attempts outside of Mexico:

The query retrieves login attempts that did **not** originate in Mexico by filtering out records where the `country` field starts with **'MEX'** or is **'MEXICO'**. The **NOT** operator is used in conjunction with the **LIKE** operator to accomplish this.

```
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 |
|       49 | asundara | 2022-05-08 | 14:00:01   | US      | 192.168.173.213 |       0 |
|       50 | jclark   | 2022-05-10 | 10:48:02   | CANADA  | 192.168.174.117 |       0 |
|       51 | jrafael  | 2022-05-10 | 22:40:01   | CANADA  | 192.168.148.115 |       1 |
|       52 | cjackson | 2022-05-10 | 22:07:07   | CAN     | 192.168.58.57   |       0 |
|       53 | nmason   | 2022-05-08 | 11:51:38   | CAN     | 192.168.133.188 |       1 |
|       55 | jlansky  | 2022-05-11 | 05:15:34   | US      | 192.168.6.170   |       0 |
```

```
|  185 | jsoto     | 2022-05-10 | 13:34:58 | USA    | 192.168.151.91  |    0 |
|  186 | bisles    | 2022-05-09 | 04:29:17 | USA    | 192.168.40.72   |    0 |
|  188 | jsoto     | 2022-05-11 | 00:39:09 | USA    | 192.168.21.88   |    0 |
|  189 | nmason    | 2022-05-08 | 05:37:24 | CANADA | 192.168.168.117 |    1 |
|  190 | jsoto     | 2022-05-09 | 05:09:21 | USA    | 192.168.25.60   |    0 |
|  191 | cjackson  | 2022-05-08 | 06:46:07 | CANADA | 192.168.7.187   |    0 |
|  192 | bisles    | 2022-05-10 | 08:32:03 | USA    | 192.168.201.40  |    1 |
|  193 | lrodriqu  | 2022-05-08 | 07:11:29 | US     | 192.168.125.240 |    0 |
|  194 | jclark    | 2022-05-12 | 14:11:04 | CAN    | 192.168.197.247 |    0 |
|  195 | alevitsk  | 2022-05-11 | 06:59:13 | CANADA | 192.168.236.78  |    1 |
|  196 | acook     | 2022-05-10 | 09:56:48 | CAN    | 192.168.52.90   |    0 |
|  197 | jsoto     | 2022-05-08 | 09:05:09 | US     | 192.168.36.21   |    0 |
|  200 | jclark    | 2022-05-12 | 01:11:45 | CANADA | 192.168.91.103  |    1 |
+------+-----------+------------+----------+--------+-----------------+------+
144 rows in set (0.018 sec)
```

Retrieve employees in Marketing:

The query retrieves information about employees in the **'Marketing'** department who are located in any office within the **East building**. It uses the `department` column to filter for 'Marketing' and the `office` column with the **LIKE** operator to match offices starting with **'East'**.

```
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 | 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)
```

Retrieve employees in Finance or Sales:

The query retrieves records for employees in either the **'Finance'** or **'Sales'** department. It specifies both conditions for the `department` column using the **OR** operator to ensure both departments are included.

```
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 | p611q262r945  | jsoto      | Finance     | North-271    |
|        1017 | r550s824t230  | jclark     | Finance     | North-188    |
|        1018 | s310t540u653  | abellmas   | Finance     | North-403    |
|        1022 | w237x430y567  | arusso     | Finance     | West-465     |
|        1024 | y976z753a267  | iuduike    | Sales       | South-215    |
|        1025 | z381a365b233  | jhill      | Sales       | North-115    |
|        1029 | d336e475f676  | ivelasco   | Finance     | East-156     |
|        1035 | j236k303l245  | bisles     | Sales       | South-171    |
|        1039 | n253o917p623  | cjackson   | Sales       | East-378     |
|        1041 | p929q222r778  | cgriffin   | Sales       | North-208    |
|        1044 | s429t157u159  | tbarnes    | Finance     | West-415     |
|        1045 | t567u844v434  | pwashing   | Finance     | East-115     |
|        1046 | u429v921w138  | daquino    | Finance     | West-280     |
|        1047 | v109w587x644  | cward      | Finance     | West-373     |
|        1048 | w167x592y375  | tmitchel   | Finance     | South-288    |
|        1049 | NULL          | jreckley   | Finance     | Central-295  |
|        1050 | y132z930a114  | csimmons   | Finance     | North-468    |
|        1057 | f370g535h632  | mscott     | Sales       | South-270    |
|        1062 | k367l639m697  | redwards   | Finance     | North-180    |
|        1063 | l686m140n569  | lpope      | Sales       | East-226     |
|        1066 | o678p794q957  | ttyrell    | Sales       | Central-444  |
|        1069 | NULL          | jpark      | Finance     | East-110     |
|        1071 | t244u829v723  | zdutchma   | Sales       | West-348     |
|        1072 | u905v920w694  | esmith     | Sales       | East-421     |
|        1076 | y347z204a710  | fgarcia    | Finance     | Central-270  |
|        1078 | a667b270c984  | sharley    | Sales       | North-418    |
|        1081 | d647e310f618  | qcorbit    | Finance     | South-290    |
|        1083 | f840g812h544  | gkoshi     | Finance     | West-165     |
|        1085 | h339i498j269  | cperez     | Sales       | East-325     |
|        1086 | i281j129k749  | lmajumda   | Sales       | West-499     |
|        1089 | l358m929n154  | jpark2     | Sales       | West-251     |
|        1091 | n378o313p469  | rtran      | Sales       | Central-230  |
|        1092 | o391p779q935  | lpark      | Sales       | West-227     |
|        1098 | u671v146w618  | tarchamb   | Sales       | North-423    |
```

```
| 1099 | v283w690x104 | anaser   | Finance | West-357     |
| 1105 | b551c837d758 | kmei     | Finance | Central-232  |
| 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     |
| 1122 | s103t952u851 | btorres  | Finance | West-319     |
| 1130 | a317b635c465 | tsnow    | Sales   | Central-451  |
| 1136 | g299h520i457 | jhawes   | Finance | West-416     |
| 1138 | i671j355k725 | sromero  | Finance | South-329    |
| 1142 | m674n127o823 | lsilva   | Finance | East-440     |
| 1144 | NULL         | erobinso | Finance | Central-266  |
| 1147 | r454s225t299 | tvega    | Finance | West-177     |
| 1148 | s328t505u907 | dharvey  | Finance | South-181    |
| 1159 | d881e710f732 | jshen    | Finance | East-193     |
| 1164 | i682j513k442 | fsmeltz  | Finance | North-163    |
| 1169 | NULL         | mmitchel | Sales   | Central-250  |
| 1174 | s371t911u987 | eortiz   | Finance | North-428    |
| 1175 | t959u687v394 | jclark2  | Finance | North-194    |
| 1176 | u849v569w521 | nliu     | Sales   | West-220     |
| 1181 | z803a233b718 | sessa    | Finance | South-207    |
| 1185 | d790e839f461 | revens   | Sales   | North-330    |
| 1186 | e281f433g404 | sacosta  | Sales   | North-460    |
| 1187 | f963g637h851 | bbode    | Finance | East-351     |
| 1188 | g164h566i795 | noshiro  | Finance | West-252     |
| 1195 | n516o853p957 | orainier | Finance | East-346     |
+----------+--------------+----------+---------+-------------+
71 rows in set (0.001 sec)
```

Retrieve all employees not in IT:

The query retrieves records for employees who are **not** in the **'Information Technology'** department. It uses the **NOT** operator to filter out any employees belonging to that 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 | k242l212m542  | jlansky   | Finance          | South-109   |
|        1011 | l748m120n401  | 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 | j236k303l245  | bisles    | Sales            | South-171   |
|        1036 | k550l533m205  | 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    |
```

```
|  1145 | p752q137r169 | msosa     | Human Resources | South-345   |
|  1146 | q228r135s755 | ulemere   | Human Resources | Central-171 |
|  1147 | r454s225t299 | tvega     | Finance         | West-177    |
|  1148 | s328t505u907 | dharvey   | Finance         | South-181   |
|  1150 | u554v512w139 | lmarin    | Marketing       | Central-364 |
|  1151 | v852w513x954 | sshah     | Human Resources | North-272   |
|  1152 | NULL         | nwilliam  | Marketing       | Central-170 |
|  1153 | x677y330z296 | ncardena  | Marketing       | Central-363 |
|  1154 | y765z123a548 | obryand   | Marketing       | North-182   |
|  1155 | z942a966b589 | zjones    | Human Resources | East-122    |
|  1156 | a184b775c707 | dellery   | Marketing       | East-417    |
|  1157 | b264c773d977 | lstein    | Human Resources | Central-343 |
|  1158 | c406d877e950 | bnaser    | Human Resources | Central-243 |
|  1159 | d881e710f732 | jshen     | Finance         | East-193    |
|  1160 | e127f591g924 | spham     | Marketing       | West-353    |
|  1163 | h679i515j339 | cwilliam  | Marketing       | East-216    |
|  1164 | i682j513k442 | fsmeltz   | Finance         | North-163   |
|  1165 | j713k893l832 | nwords    | Marketing       | South-128   |
|  1166 | k495l234m708 | nyoung    | Marketing       | Central-397 |
|  1167 | l738m922n515 | tblackwe  | Marketing       | North-443   |
|  1169 | NULL         | mmitchel  | Sales           | Central-250 |
|  1170 | o156p302q359 | lalvarez  | Human Resources | North-278   |
|  1172 | q372r826s628 | akhan     | Marketing       | Central-360 |
|  1173 | r537s849t690 | ialcazar  | Marketing       | South-429   |
|  1174 | s371t911u987 | eortiz    | Finance         | North-428   |
|  1175 | t959u687v394 | jclark2   | Finance         | North-194   |
|  1176 | u849v569w521 | nliu      | Sales           | West-220    |
|  1177 | v691w183x928 | aezra     | Human Resources | East-190    |
|  1178 | w986x187y885 | nlannist  | Marketing       | North-196   |
|  1179 | x174y934z376 | asalas    | Human Resources | North-445   |
|  1180 | y131z211a578 | medwards  | Human Resources | Central-340 |
|  1181 | z803a233b718 | sessa     | Finance         | South-207   |
|  1183 | b566c710d544 | lquraish  | Human Resources | East-400    |
|  1184 | c986d200e170 | ptsosie   | Human Resources | Central-247 |
|  1185 | d790e839f461 | revens    | Sales           | North-330   |
|  1186 | e281f433g404 | sacosta   | Sales           | North-460   |
|  1187 | f963g637h851 | bbode     | Finance         | East-351    |
|  1188 | g164h566i795 | noshiro   | Finance         | West-252    |
|  1189 | h784i120j837 | slefkowi  | Human Resources | West-342    |
|  1190 | NULL         | kcarter   | Marketing       | Central-270 |
|  1191 | NULL         | shakimi   | Marketing       | Central-366 |
|  1194 | m340n287o441 | zwarren   | Human Resources | West-212    |
|  1195 | n516o853p957 | orainier  | Finance         | East-346    |
|  1198 | q308r573s459 | jmartine  | Marketing       | South-117   |
|  1199 | r520s571t459 | areyes    | Human Resources | East-100    |
+-------+--------------+-----------+-----------------+-------------+
161 rows in set (0.001 sec)
```

Summary

This project involved investigating potential security issues related to login attempts and employee machines using **SQL** queries by analyzing data from the **employees** and

log_in_attempts tables. Tasks included retrieving failed login attempts after hours, identifying login attempts on specific dates, filtering out logins originating from Mexico, and gathering information about employees in specific departments. These queries aimed to enhance the organization's understanding of security vulnerabilities and improve overall data security.