

Aplicar filtros a consultas SQL

Descripción del proyecto

Detección y análisis de anomalías en accesos corporativos con SQL

Recuperar intentos de inicio de sesión fallidos fuera del horario laboral

Recuperar después de horas de intentos fallidos de inicio de sesión

Con el siguiente comando: `Select * From log_in_attempts where login_time > '18:00:00' and success like '0';`
pude detectar los inicios de sesiones fallidas de la red fuera del horario laboral.

```
MariaDB [organization]> Select * From log_in_attempts where login_time > '18:00:00' and success like '0';
```

event_id	username	login_date	login_time	country	ip_address	success
2	apatel	2022-05-10	20:27:27	CAN	192.168.205.1	0
18	pwashing	2022-05-11	19:28:50	US	192.168.66.14	0
20	tshah	2022-05-12	18:56:36	MEXICO	192.168.109.5	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

52	cjackson	2022-05-10	22:07:07	CAN	192.168.58.57
69	wjaffrey	2022-05-11	19:55:15	USA	192.168.100.1
82	abernard	2022-05-12	23:38:46	MEX	192.168.234.4
87	apatel	2022-05-08	22:38:31	CANADA	192.168.132.1
96	ivelasco	2022-05-09	22:36:36	CAN	192.168.84.19
104	asundara	2022-05-11	18:38:07	US	192.168.96.20
107	bisles	2022-05-12	20:25:57	USA	192.168.116.1
111	aestrada	2022-05-10	22:00:26	MEXICO	192.168.76.27
127	abellmas	2022-05-09	21:20:51	CANADA	192.168.70.12
131	bisles	2022-05-09	20:03:55	US	192.168.113.1
155	cgriffin	2022-05-12	22:18:42	USA	192.168.236.1
160	jclark	2022-05-10	20:49:00	CANADA	192.168.214.4
199	yappiah	2022-05-11	19:34:48	MEXICO	192.168.44.23

19 rows in set (0.001 sec)

Recuperar intentos de inicio de sesión en fechas específicas

Recuperar los intentos de inicio de sesión en fechas concretas

Con este comando puede aplicar el filtro en fechas específicas, las que me interesaba saber era del día actual mas el día exterior, utilizando el comando **between** pude comparar estas dos fechas y así me pudo arrojar lo solicitado

MariaDB [organization]> Select * from log_in_attempts where login_date between '2022-05-08' and '2022-05-09' Order by login_date asc;

event_id	username	login_date	login_time	country	ip_address	success
117	bsand	2022-05-08	00:19:11	USA	192.168.197.187	0
56	acook	2022-05-08	04:56:30	CAN	192.168.209.130	1
169	alevitsk	2022-05-08	08:10:43	CANADA	192.168.210.228	0
168	jlansky	2022-05-08	13:25:42	USA	192.168.210.94	1
66	aestrada	2022-05-08	21:58:32	MEX	192.168.67.223	1
165	jreckley	2022-05-08	15:28:43	MEXICO	192.168.34.193	0
68	mrah	2022-05-08	17:16:13	US	192.168.42.248	1
163	tmitchel	2022-05-08	09:21:16	MEX	192.168.119.29	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
147	yappiah	2022-05-08	06:04:34	MEX	192.168.65.245	0
92	pwashing	2022-05-08	00:36:12	US	192.168.247.219	0
197	jsoto	2022-05-08	09:05:09	US	192.168.36.21	0
150	nmason	2022-05-08	14:40:02	CAN	192.168.204.124	0
101	sbaelish	2022-05-08	12:01:22	US	192.168.145.158	0
148	daquino	2022-05-08	06:15:55	CANADA	192.168.135.6	1
145	ivelasco	2022-05-08	09:06:02	CANADA	192.168.39.196	1
53	nmason	2022-05-08	11:51:38	CAN	192.168.133.188	1
49	asundara	2022-05-08	14:00:01	US	192.168.173.213	0
72	alevitsk	2022-05-08	12:09:10	CANADA	192.168.139.176	1
172	mabadi	2022-05-08	08:06:50	US	192.168.180.41	1
26	apatel	2022-05-08	17:27:00	CANADA	192.168.123.105	1
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

12	dkot	2022-05-08	09:11:34	USA	192.168.100.158	1
8	bisles	2022-05-08	01:30:17	US	192.168.119.173	0
4	dkot	2022-05-08	02:00:39	USA	192.168.178.71	0
47	dkot	2022-05-08	05:06:45	US	192.168.233.24	1
189	nmason	2022-05-08	05:37:24	CANADA	192.168.168.117	1
43	mcouliba	2022-05-08	02:35:34	CANADA	192.168.16.208	0
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
44	daquino	2022-05-08	07:02:35	CANADA	192.168.168.144	0
36	asundara	2022-05-08	09:00:42	US	192.168.78.151	1
151	mabadi	2022-05-09	16:29:46	USA	192.168.30.225	1
144	daquino	2022-05-09	11:09:32	CANADA	192.168.139.9	0
135	bsand	2022-05-09	14:06:33	US	192.168.91.238	0
134	iuduike	2022-05-09	06:46:40	USA	192.168.22.115	1
158	smartell	2022-05-09	19:30:32	MEXICO	192.168.190.178	1
170	sbaelish	2022-05-09	16:43:18	USA	192.168.65.113	0
28	aestrada	2022-05-09	19:28:12	MEXICO	192.168.27.57	0
186	bisles	2022-05-09	04:29:17	USA	192.168.40.72	0
190	jsoto	2022-05-09	05:09:21	USA	192.168.25.60	0
187	aruso	2022-05-09	00:36:26	MEX	192.168.77.137	0
162	yappiah	2022-05-09	04:51:22	MEXICO	192.168.162.100	0
161	abellmas	2022-05-09	13:25:50	CAN	192.168.180.205	0
131	bisles	2022-05-09	20:03:55	US	192.168.113.171	0
128	jclark	2022-05-09	10:45:59	CANADA	192.168.122.169	0
61	dtanaka	2022-05-09	09:45:18	USA	192.168.98.221	1

58	ivelasco	2022-05-09	17:20:54	CAN	192.168.57.162	0
1	jrafael	2022-05-09	04:56:27	CAN	192.168.243.140	1
42	cgriffin	2022-05-09	23:04:05	US	192.168.4.157	0
39	yappiah	2022-05-09	07:56:40	MEXICO	192.168.57.115	1
38	sbaelish	2022-05-09	14:40:01	USA	192.168.60.42	1
32	acook	2022-05-09	02:52:02	CANADA	192.168.142.239	0
30	yappiah	2022-05-09	03:22:22	MEX	192.168.124.48	1
25	sbaelish	2022-05-09	07:04:02	US	192.168.33.137	1
24	arusso	2022-05-09	06:49:39	MEXICO	192.168.171.192	1
15	lyamamot	2022-05-09	17:17:26	USA	192.168.183.51	0
65	aalonso	2022-05-09	23:42:12	MEX	192.168.52.37	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
127	abellmas	2022-05-09	21:20:51	CANADA	192.168.70.122	0
120	tmitchel	2022-05-09	02:58:17	MEXICO	192.168.134.62	0
112	xjensen	2022-05-09	09:22:05	MEX	192.168.69.116	1
110	mabadi	2022-05-09	00:01:54	USA	192.168.90.124	1
108	daquino	2022-05-09	21:30:48	CANADA	192.168.15.110	1
102	jreckley	2022-05-09	16:51:44	MEX	192.168.108.13	1
97	jreckley	2022-05-09	02:49:23	MEXICO	192.168.32.231	1
96	ivelasco	2022-05-09	22:36:36	CAN	192.168.84.194	0
90	gesparza	2022-05-09	00:49:05	CANADA	192.168.87.201	0
79	abernard	2022-05-09	11:41:15	MEX	192.168.158.170	0
71	mcouliba	2022-05-09	06:57:42	CAN	192.168.55.169	0
3	dkot	2022-05-09	06:47:41	USA	192.168.151.162	1

Recuperar intentos de inicio de sesión fuera de México

Recuperar intentos de inicio de sesión fuera de México

El equipo de IT verificó que los intentos de inicio de sesión se realizaron fuera de México lo cual no era necesario cargar el análisis con datos que sería excluidos, en tal proyecto MEX es la representación de México en la DB, y con el comando **where not** exclui el parámetro pasado a like MEX%

```
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
56	acook	2022-05-08	04:56:30	CAN	192.168.209.130	1
57	asundara	2022-05-12	21:13:02	US	192.168.211.201	1
58	ivelasco	2022-05-09	17:20:54	CAN	192.168.57.162	0
60	acook	2022-05-11	21:46:00	CAN	192.168.54.45	1
61	dtanaka	2022-05-09	09:45:18	USA	192.168.98.221	1
64	apatel	2022-05-10	22:00:09	CANADA	192.168.172.71	1
68	mrah	2022-05-08	17:16:13	US	192.168.42.248	1
69	wjaffrey	2022-05-11	19:55:15	USA	192.168.100.17	0
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
73	zbernal	2022-05-10	17:46:45	USA	192.168.80.46	0
74	nmason	2022-05-11	15:55:48	CAN	192.168.162.2	1
75	zbernal	2022-05-12	04:14:35	US	192.168.188.63	1
76	bmoreno	2022-05-10	10:53:55	CAN	192.168.61.200	0
77	wjaffrey	2022-05-12	08:37:59	US	192.168.106.183	1

77	wjaffrey	2022-05-12	08:37:59	US	192.168.106.183	1
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
84	jrafael	2022-05-11	09:26:17	CAN	192.168.243.203	1
86	dtanaka	2022-05-10	10:22:20	USA	192.168.197.135	1
87	apatel	2022-05-08	22:38:31	CANADA	192.168.132.153	0
89	dkot	2022-05-12	10:52:00	USA	192.168.128.75	1
90	gesparza	2022-05-09	00:49:05	CANADA	192.168.87.201	0
91	jhill	2022-05-11	17:46:47	US	192.168.172.74	1
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
98	gesparza	2022-05-11	06:30:14	CANADA	192.168.148.80	0
99	mcouliba	2022-05-12	11:54:14	CANADA	192.168.218.160	1
101	sbaelish	2022-05-08	12:01:22	US	192.168.145.158	0
103	jhill	2022-05-11	09:10:54	US	192.168.60.153	0
104	asundara	2022-05-11	18:38:07	US	192.168.96.200	0
105	cjackson	2022-05-12	19:36:42	CAN	192.168.247.153	1
107	bisles	2022-05-12	20:25:57	USA	192.168.116.187	0
108	daquino	2022-05-09	21:30:48	CANADA	192.168.15.110	1
109	mcouliba	2022-05-10	04:43:15	CANADA	192.168.39.246	1
110	mabadi	2022-05-09	00:01:54	USA	192.168.90.124	1
113	gesparza	2022-05-10	00:40:00	CAN	192.168.64.133	0
115	ivelasco	2022-05-10	23:06:01	CAN	192.168.154.1	1
117	bsand	2022-05-08	00:19:11	USA	192.168.197.187	0
121	btang	2022-05-10	22:00:36	US	192.168.80.143	1
123	bmoreno	2022-05-10	04:43:30	CANADA	192.168.98.2	1
124	asundara	2022-05-12	10:51:21	USA	192.168.136.29	1
125	bisles	2022-05-11	08:36:19	US	192.168.74.9	1
126	jrafael	2022-05-12	18:47:52	CAN	192.168.22.16	1
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

129	drosas	2022-05-12	15:39:40	USA	192.168.152.200	0
130	mrah	2022-05-11	02:54:21	USA	192.168.102.147	0
131	bisles	2022-05-09	20:03:55	US	192.168.113.171	0
133	asundara	2022-05-12	05:57:04	USA	192.168.6.9	1
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
136	mabadi	2022-05-10	06:56:44	US	192.168.214.234	1
137	jrafael	2022-05-12	02:42:37	CAN	192.168.186.176	1
139	apatel	2022-05-11	01:54:36	CAN	192.168.95.222	0
140	btang	2022-05-10	13:17:29	US	192.168.249.111	0
141	btang	2022-05-12	10:12:03	USA	192.168.82.139	0
142	gesparza	2022-05-11	06:31:14	CANADA	192.168.117.56	1
143	jhill	2022-05-11	00:30:22	USA	192.168.189.19	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
146	nmason	2022-05-10	02:25:55	CANADA	192.168.37.147	0
148	daquino	2022-05-08	06:15:55	CANADA	192.168.135.6	1
149	jlansky	2022-05-11	01:07:11	USA	192.168.238.42	0
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
152	mabadi	2022-05-12	10:24:43	USA	192.168.96.244	0
154	jlansky	2022-05-12	10:57:35	US	192.168.23.63	1
155	cgriffin	2022-05-12	22:18:42	USA	192.168.236.176	0
156	btang	2022-05-11	17:08:51	USA	192.168.243.95	0
159	iuduike	2022-05-12	16:59:50	USA	192.168.220.115	0
160	jclark	2022-05-10	20:49:00	CANADA	192.168.214.49	0
161	abellmas	2022-05-09	13:25:50	CAN	192.168.180.205	0
164	jclark	2022-05-12	21:15:52	CAN	192.168.18.34	1
167	jclark	2022-05-12	15:47:45	CAN	192.168.146.51	1
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

171	drosas	2022-05-10	16:32:55	USA	192.168.92.218	0
172	mabadi	2022-05-08	08:06:50	US	192.168.180.41	1
173	asundara	2022-05-12	23:17:52	US	192.168.58.217	1
174	lyamamot	2022-05-10	12:26:27	US	192.168.228.122	0
175	jhill	2022-05-10	00:17:09	USA	192.168.130.218	0
177	wjaffrey	2022-05-11	00:15:55	USA	192.168.144.165	0
178	sgilmore	2022-05-08	12:27:22	CAN	192.168.52.216	0
179	jclark	2022-05-12	04:08:17	CAN	192.168.232.93	0
181	abellmas	2022-05-10	13:37:05	CAN	192.168.60.111	0
182	lyamamot	2022-05-10	06:01:31	USA	192.168.106.52	0
183	nmason	2022-05-11	05:29:36	CANADA	192.168.137.147	0
184	alevitsk	2022-05-08	03:09:48	CAN	192.168.33.70	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 (0.001 sec)

Recuperar empleados en Marketing

Datos sencillos, los cuales el equipo de seguridad de ciberseguridad indica que es necesario aplicar ciertas actualizaciones únicamente a los usuarios de marketing, con esta solicitud

procedí a realizar con el comando where + and, para incluir datos de dos columnas distintas, tanto el departamento solicitado más de la región que en este caso fue del este.

```
MariaDB [organization]> select * from employees where department like 'Marketin%' 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 (0.001 sec)
```

Recuperar empleados en Finanzas o Ventas

Este procedimiento se parece un poco al anterior pero en vez de utilizar el and, or, like, varias veces opte por el código que se adapta a la solicitud que es el in, el cual incluye los datos de la columna solicitada.

```
MariaDB [organization]> select * from employees where department in ('Finance', 'Sales') order by department asc;
```

employee_id	device_id	username	department	office
1195	n516o853p957	orainier	Finance	East-346
1136	g299h520i457	jhawes	Finance	West-416
1122	s103t952u851	btorres	Finance	West-319
1105	b551c837d758	kmei	Finance	Central-232
1099	v283w690x104	anaser	Finance	West-357
1174	s371t911u987	eortiz	Finance	North-428
1083	f840g812h544	gkoshi	Finance	West-165
1081	d647e310f618	qcorbit	Finance	South-290
1076	y347z204a710	fgarcia	Finance	Central-270
1069	NULL	jpark	Finance	East-110
1138	i671j355k725	sromero	Finance	South-329
1142	m674n127o823	lsilva	Finance	East-440
1188	g164h566i795	noshiro	Finance	West-252
1187	f963g637h851	bbode	Finance	East-351
1181	z803a233b718	sessa	Finance	South-207
1175	t959u687v394	jclark2	Finance	North-194
1164	i682j513k442	fsmeltz	Finance	North-163
1159	d881e710f732	jshen	Finance	East-193
1148	s328t505u907	dharvey	Finance	South-181
1147	r454s225t299	tvega	Finance	West-177
1144	NULL	erobinso	Finance	Central-266
1062	k367l639m697	redwards	Finance	North-180
1050	y132z930a114	csimmons	Finance	North-468
1044	s429t157u159	tbarnes	Finance	West-415
1022	w237x430y567	arusso	Finance	West-465
1018	s310t540u653	abellmas	Finance	North-403
1017	r550s824t230	jclark	Finance	North-188
1015	p611q262r945	jsoto	Finance	North-271

1015	p611q262r945	jsoto	Finance	North-271	
1029	d336e475f676	ivelasco	Finance	East-156	
1010	k242l212m542	jlansky	Finance	South-109	
1045	t567u844v434	pwashing	Finance	East-115	
1046	u429v921w138	daquino	Finance	West-280	
1008	i858j583k571	abernard	Finance	South-170	
1007	h174i497j413	wjaffrey	Finance	North-406	
1049	NULL	jreckley	Finance	Central-295	
1003	d394e816f943	sgilmore	Finance	South-153	
1047	v109w587x644	cward	Finance	West-373	
1048	w167x592y375	tmitchel	Finance	South-288	
1025	z381a365b233	jhill	Sales	North-115	
1039	n253o917p623	cjackson	Sales	East-378	
1024	y976z753a267	iuduike	Sales	South-215	
1130	a317b635c465	tsnow	Sales	Central-451	
1176	u849v569w521	nliu	Sales	West-220	
1186	e281f433g404	sacosta	Sales	North-460	
1011	l748m120n401	drosas	Sales	South-292	
1169	NULL	mmitchel	Sales	Central-250	
1086	i281j129k749	lmajumda	Sales	West-499	
1072	u905v920w694	esmith	Sales	East-421	
1009	NULL	lrodriqu	Sales	South-134	
1185	d790e839f461	revens	Sales	North-330	
1035	j236k303l245	bisles	Sales	South-171	
1121	r628s557t397	mrojas	Sales	East-288	
1092	o391p779q935	lpark	Sales	West-227	
1091	n378o313p469	rtran	Sales	Central-230	
1089	l358m929n154	jpark2	Sales	West-251	
1057	f370g535h632	mscott	Sales	South-270	
1085	h339i498j269	cperez	Sales	East-325	
1078	a667b270c984	sharley	Sales	North-418	
1071	t244u829v723	zdutchma	Sales	West-348	
1066	o678p794q957	ttyrell	Sales	Central-444	
1098	u671v146w618	tarchamb	Sales	North-423	
1041	p929q222r778	cgriffin	Sales	North-208	
1119	p164q780r999	omubarak	Sales	West-409	
1118	o305p208q337	jpark3	Sales	South-329	
1117	n683o758p820	dahmad	Sales	West-405	
1116	m272n572o874	nzhao	Sales	South-100	
1111	h835i179j862	jlee	Sales	West-309	
1110	g567h376i314	pchaudhu	Sales	Central-428	
1109	f229g533h679	nlocklea	Sales	East-196	
1107	d168e758f876	akajwara	Sales	North-471	
1063	l686m140n569	lpope	Sales	East-226	
71 rows in set (0.001 sec)					

Recuperar todos los empleados que no están en TI

Por último se solicitó que muestre los datos de todos los usuarios para aplicar parche exceptuando al departamento de TI, en esta ocasión utilice el comando where not, el cual luego se le indica en donde buscará y con el like o, pasar el parámetro a excluir.

```
MariaDB [organization]> select * from employees where not department = 'Information Technology' order by department asc;
```

employee_id	device_id	username	department	office
1083	F840g812h544	gkoshi	Finance	West-165
1048	w167x592y375	tmitchel	Finance	South-288
1047	v109w587x644	cward	Finance	West-373
1046	u429v921w138	daquino	Finance	West-280
1045	t567u844v434	pwashing	Finance	East-115
1044	s429t157u159	tbarnes	Finance	West-415
1147	r454s225t299	tvega	Finance	West-177
1148	s328t505u907	dharvey	Finance	South-181
1174	s371t911u987	eortiz	Finance	North-428
1142	m674n127o823	lsilva	Finance	East-440
1049	NULL	jreckley	Finance	Central-295
1050	y132z930a114	csimmons	Finance	North-468
1144	NULL	erobinso	Finance	Central-266
1076	y347z204a710	fgarcia	Finance	Central-270
1099	v283w690x104	anaser	Finance	West-357
1105	b551c837d758	kmei	Finance	Central-232
1069	NULL	jpark	Finance	East-110
1122	s103t952u851	btorres	Finance	West-319
1081	d647e310f618	qcorbit	Finance	South-290
1062	k367l639m697	redwards	Finance	North-180
1136	g299h520i457	jhawes	Finance	West-416
1138	i671j355k725	sromero	Finance	South-329
1159	d881e710f732	jshen	Finance	East-193
1029	d336e475f676	ivelasco	Finance	East-156

1017	r550s824t230	jclark	Finance	North-188
1181	z803a233b718	sesssa	Finance	South-207
1015	p611q262r945	jsoto	Finance	North-271
1007	h174i497j413	wjaffrey	Finance	North-406
1003	d394e816f943	sgilmore	Finance	South-153
1188	g164h566i795	noshiro	Finance	West-252
1187	f963g637h851	bbode	Finance	East-351
1022	w237x430y567	arusso	Finance	West-465
1018	s310t540u653	abellmas	Finance	North-403
1008	i858j583k571	abernard	Finance	South-170
1164	i682j513k442	fsmeltz	Finance	North-163
1175	t959u687v394	jclark2	Finance	North-194
1010	k242l212m542	jlansky	Finance	South-109
1195	n516o853p957	orainier	Finance	East-346
1128	y103z561a649	mpirato	Human Resources	West-205
1132	c150d982e144	creddy	Human Resources	Central-210
1123	t479u468v151	ekonya	Human Resources	South-445
1113	j781k420l510	pjaimes	Human Resources	East-366
1108	e113f288g203	jwashing	Human Resources	North-226
1084	g950h972i991	nhuynh	Human Resources	South-155
1093	p765q957r699	etargary	Human Resources	Central-247
1097	t363u179v368	jlee	Human Resources	South-254
1194	m340n287o441	zwarren	Human Resources	West-212
1101	x701y250z303	ichowdhu	Human Resources	East-233
1100	w326x611y598	mjin	Human Resources	Central-371
1189	h784i1120j837	slefkowi	Human Resources	West-342
1183	b566c710d544	lquraish	Human Resources	East-400
1134	e395f616g566	akhatri	Human Resources	West-159
1155	z942a966b589	zjones	Human Resources	East-122
1151	v852w513x954	sshah	Human Resources	North-272
1177	v691w183x928	aezra	Human Resources	East-190
1146	q228r135s755	ulemere	Human Resources	Central-171
1145	p752q137r169	msosa	Human Resources	South-345
1179	x174y934z376	asalas	Human Resources	North-445
1184	c986d200e170	ptsosie	Human Resources	Central-247

1180	y131z211a578	medwards	Human Resources	Central-340
1157	b264c773d977	lstein	Human Resources	Central-343
1141	l282m821n717	cochuba	Human Resources	South-282
1140	k982l199m839	apatel2	Human Resources	East-385
1139	j637k986l199	emorton	Human Resources	North-300
1170	o156p302q359	lalvarez	Human Resources	North-278
1137	h165i539j638	mwood	Human Resources	South-166
1158	c406d877e950	bnaser	Human Resources	Central-243
1124	u340v931w764	claw	Human Resources	Central-172
1042	q175r338s833	acook	Human Resources	West-381
1040	o783p832q294	dtarly	Human Resources	East-237
1026	a998b568c863	apatel	Human Resources	West-320
1038	m873n636o225	btang	Human Resources	Central-260
1199	r520s571t459	areyes	Human Resources	East-100
1070	s772t175u409	tbailey	Human Resources	North-204
1065	n428o322p522	imoore	Human Resources	West-490
1028	c603d749e374	astrada	Human Resources	West-121
1034	i679j565k940	bsand	Human Resources	East-484
1016	q793r736s288	sbaelish	Human Resources	North-229
1061	j255k281l925	nhersh	Human Resources	East-163
1053	b979c871d361	nemmanue	Human Resources	Central-259
1002	c116d593e558	tshah	Human Resources	North-434
1004	e218f877g788	eraab	Human Resources	South-127
1005	f551g340h864	gesparza	Human Resources	South-366
1077	z654a154b259	ldavis	Human Resources	East-241
1156	a184b775c707	dellery	Marketing	East-417
1055	d831e972f553	awilliam	Marketing	Central-256
1154	y765z123a548	obryand	Marketing	North-182
1056	e782f537g683	ankala	Marketing	North-139
1153	x677y330z296	ncardena	Marketing	Central-363
1051	z451a308b518	itraora	Marketing	Central-134
1052	a192b174c940	jdarosa	Marketing	East-195
1152	NULL	nwilliam	Marketing	Central-170
1036	k550l533m205	rjensen	Marketing	Central-239
1031	f419g188h578	dkot	Marketing	West-408

1030	e391f189g913	mabadi	Marketing	West-375
1000	a320b137c219	elarson	Marketing	East-170
1001	b239c825d303	bmoreno	Marketing	Central-276
1191	NULL	shakimi	Marketing	Central-366
1190	NULL	kcarter	Marketing	Central-270
1150	u554v512w139	lmarin	Marketing	Central-364
1020	u899v381w363	arutley	Marketing	South-351
1178	w986x187y885	nlannist	Marketing	North-196
1027	b806c503d354	mrah	Marketing	West-246
1173	r537s849t690	ialcazar	Marketing	South-429
1172	q372r826s628	akhan	Marketing	Central-360
1167	l738m922n515	tblackwe	Marketing	North-443
1166	k495l234m708	nyoung	Marketing	Central-397
1165	j713k893l832	nwords	Marketing	South-128
1163	h679i515j339	cwilliam	Marketing	East-216
1160	e127f591g924	spham	Marketing	West-353
1198	q308r573s459	jmartine	Marketing	South-117
1102	y943z930a241	kselassi	Marketing	South-378
1075	x573y883z772	fbautist	Marketing	East-267
1120	q912r119s313	rbradsha	Marketing	Central-200
1114	NULL	xgreene	Marketing	North-335
1067	p288q432r721	lwhite	Marketing	North-277
1080	c568d742e974	gmoon	Marketing	North-156
1073	v135w241x773	srobinso	Marketing	Central-494
1106	c597d792e215	jcohen	Marketing	South-395
1103	NULL	randerss	Marketing	East-460
1125	v491w553x421	mrodgers	Marketing	South-490
1064	NULL	ejones	Marketing	South-477
1079	b433c245d868	gmedina	Marketing	North-456
1133	d693e351f221	pfrey	Marketing	Central-164

información, facilitar la identificación de usuarios y sistemas que requieren mantenimiento, y apoyar en la implementación de actualizaciones, parches rutinarios y mejoras de seguridad.