

Activity: Filter a SQL query

Activity overview

As a security analyst, knowing how to make better queries to retrieve specific pieces of data can help you find the security-related information you need more efficiently.

In this lab activity, you'll apply basic filters to SQL queries to retrieve information from a MariaDB database.

MariaDB is a popular open source relational database that is compatible with MySQL.

This activity provides you with a great opportunity to apply what you've learned and add filters to SQL queries.

Note: The terms **row** and **record** are used interchangeably in this lab activity.

Scenario

In this scenario, you need to get specific information about employees, their machines, and the departments they're in. Your team needs this data to perform various tasks, such as running updates, posting a privacy notice in certain departments, and sending an alert to an employee with an issue on a machine.

You are responsible for finding the required information by querying a database. You'll add filters to your queries to locate the information more quickly.

Here's how you'll do this task: **First**, you'll list all organization machines and their operating systems. **Second**, you'll list all machines with the operating system OS 2. **Third**, you'll list all the employees in the Finance and Sales departments. **Fourth**, you'll obtain information about machines.

Task 1. List all organization machines

In this task, you need to get a list of all organization machines and their operating systems. The data is contained in the machines table. You'll need to use the SELECT keyword to return specific columns.

- Run a SQL query to retrieve only the device_id and operating_system columns from the machines table.

```

Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 35
Server version: 10.5.29-MariaDB-0+deb11u1 Debian 11

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [organization]> clear
MariaDB [organization]> SELECT device_id, operating_system FROM machines;
+-----+-----+
| device_id | operating_system |
+-----+-----+
| a184b775c707 | OS 1 |
| a192b174c940 | OS 2 |
| a305b818c708 | OS 3 |
| a317b635c465 | OS 1 |
| a320b137c219 | OS 2 |
| a398b471c573 | OS 3 |
| a667b270c984 | OS 1 |
| a821b452c176 | OS 2 |
| a998b568c863 | OS 3 |
| b157c491d493 | OS 2 |
| b239c825d303 | OS 1 |
| b264c773d977 | OS 2 |
| b265c937d713 | OS 2 |
| b433c245d868 | OS 1 |
| b551c837d758 | OS 3 |
| b566c710d544 | OS 1 |
| b806c503d354 | OS 2 |
| b979c871d361 | OS 2 |
| c116d593e558 | OS 3 |
| c150d982e144 | OS 2 |
| c185d679e493 | OS 1 |
| c406d877e950 | OS 2 |
| c547d140e477 | OS 2 |
| c568d742e974 | OS 2 |
| c597d792e215 | OS 2 |
| c603d749e374 | OS 1 |
| c986d200e170 | OS 2 |
| d168e758f876 | OS 2 |
| d280e557f635 | OS 3 |
| d336e475f676 | OS 2 |
| d394e816f943 | OS 3 |
| d647e310f618 | OS 2 |
| d693e351f221 | OS 2 |

```

Task 2. Retrieve a list of the machines with OS 2

In this task, you need to obtain a list of all machines with the 'OS 2' operating system because these machines need an update. To get this information, you'll run your first SQL query with a filter.

- Select all the records from the machines table with a value of 'OS 2' in the operating_system column. Replace the value X with the correct string:

```

+-----+-----+
200 rows in set (0.041 sec)

MariaDB [organization]> SELECT device_id, operating_system
->
-> FROM machines
->
-> WHERE operating_system = OS 2;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near '2' at line 5
MariaDB [organization]> SELECT device_id, operating_system
->
-> FROM machines
->
-> WHERE operating_system = 'OS 2';
+-----+-----+
| device_id | operating_system |
+-----+-----+
| a192b174c940 | OS 2 |
| a320b137c219 | OS 2 |
| a821b452c176 | OS 2 |
| b157c491d493 | OS 2 |
| b264c773d977 | OS 2 |
| b265c937d713 | OS 2 |
| b806c503d354 | OS 2 |
| b979c871d361 | OS 2 |
| c150d982e144 | OS 2 |
| c406d877e950 | OS 2 |
| c547d140e477 | OS 2 |
| c568d742e974 | OS 2 |
| c597d792e215 | OS 2 |
| c986d200e170 | OS 2 |
| d168e758f876 | OS 2 |
| d336e475f676 | OS 2 |
| d647e310f618 | OS 2 |
| d693e351f221 | OS 2 |
| e113f288g203 | OS 2 |
| e218f877g788 | OS 2 |
| e395f616g566 | OS 2 |
| f229g533h679 | OS 2 |
| f370g535h632 | OS 2 |
| f934g229h883 | OS 2 |
| g299h520i457 | OS 2 |
| g770h829i938 | OS 2 |
| g773h303i639 | OS 2 |
| g950h972i991 | OS 2 |
| g953h643i618 | OS 2 |
| h174i497j413 | OS 2 |
| h835i179j862 | OS 2 |

```

Task 3. List employees in specific departments

In this task, you need to retrieve a list of all the employees in the Finance and Sales departments to obtain their office numbers. A notice about handling confidential financial information will be posted to these offices.

1. Filter the rows returned from department column in the employees table to include only employees from the 'Finance' department. Replace X with the appropriate column name and Y with the appropriate value to complete the filter:

```

MariaDB [organization]> SELECT *
->
-> FROM employees
->
-> WHERE department = 'Finance';

```

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
1010	k242l212m542	jlansky	Finance	South-109
1015	p611q262r945	jsoto	Finance	North-271
1017	r550s824t230	jclark	Finance	North-188
1018	s310t540u653	abellmas	Finance	North-403
1022	w237x430y567	arusso	Finance	West-465
1029	d336e475f676	ivelasco	Finance	East-156
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
1062	k367l639m697	redwards	Finance	North-180
1069	NULL	jpark	Finance	East-110
1076	y347z204a710	fgarcia	Finance	Central-270
1081	d647e310f618	qcorbit	Finance	South-290
1083	f840g812h544	gkoshi	Finance	West-165
1099	v283w690x104	anaser	Finance	West-357
1105	b551c837d758	kmei	Finance	Central-232
1122	s103t952u851	btorres	Finance	West-319
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
1174	s371t911u987	eortiz	Finance	North-428
1175	t959u687v394	jclark2	Finance	North-194
1181	z803a233b718	sesssa	Finance	South-207
1187	f963g637h851	bbode	Finance	East-351

2. Modify the previous query so that it returns employees who are in the 'Sales' department.

```

MariaDB [organization]> SELECT *
->
-> FROM employees
->
-> WHERE department = 'Sales';
+-----+-----+-----+-----+-----+
| employee_id | device_id | username | department | office |
+-----+-----+-----+-----+-----+
| 1009 | NULL | lrodriqu | Sales | South-134 |
| 1011 | 1748m120n401 | drosas | Sales | South-292 |
| 1024 | y976z753a267 | iuduike | Sales | South-215 |
| 1025 | z381a365b233 | jhill | Sales | North-115 |
| 1035 | j236k303l245 | bisles | Sales | South-171 |
| 1039 | n253o917p623 | cjackson | Sales | East-378 |
| 1041 | p929q222r778 | cgriffin | Sales | North-208 |
| 1057 | f370g535h632 | mscott | Sales | South-270 |
| 1063 | l686m140n569 | 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 | l358m929n154 | 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 (0.000 sec)

MariaDB [organization]> 

```

Task 4. Identify employee machines

Your team recently discovered that there are issues with machines in the South building. In this task, you need to obtain certain employee and computer information.

A machine in 'South-109' has an issue. You need to determine which employee uses that computer so you can send them an alert.

1. Write a query to identify which employee uses the office in 'South-109'. (The data must be returned from the office column in the employees table.)

```

33 rows in set (0.000 sec)

MariaDB [organization]> SELECT employee_id, first_name, last_name, office
->
-> FROM employees
->
-> WHERE office = 'South-109';
ERROR 1054 (42S22): Unknown column 'first_name' in 'field list'
MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, name, office
->
-> FROM employees
->
-> WHERE office = 'South-109';
ERROR 1054 (42S22): Unknown column 'name' in 'field list'
MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, username, office
->
-> FROM employees
->
-> WHERE office = 'South-109';
+-----+-----+-----+
| employee_id | username | office |
+-----+-----+-----+
|          1010 | jlsansky | South-109 |
+-----+-----+-----+
1 row in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> 

```

Next, your team has determined that there is an issue with all the machines in the South building. Offices in the organization are named with the building name, a hyphen, and the office number in that building (for example, 'South-109').

2. Modify the query you used in the previous step so that it returns information on all the employees in the 'South' building. Use the LIKE operator with % in this query.

Note: The LIKE keyword in SQL performs simple string matches. The matching pattern may include the wildcard % to represent a string of any length. This wildcard may be placed both before and after the targeted substring.

```
MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, username, office
->
-> FROM employees
->
-> WHERE office LIKE 'South-%';
```

```
+-----+-----+-----+
| employee_id | username | office |
+-----+-----+-----+
| 1003 | sgilmore | South-153 |
| 1004 | eraab | South-127 |
| 1005 | gesparza | South-366 |
| 1008 | abernard | South-170 |
| 1009 | lrodriqu | South-134 |
| 1010 | jlansky | South-109 |
| 1011 | drosas | South-292 |
| 1013 | zbernal | South-229 |
| 1020 | arutley | South-351 |
| 1021 | smartell | South-138 |
| 1024 | iuduike | South-215 |
| 1035 | bisles | South-171 |
| 1048 | tmitchel | South-288 |
| 1057 | mscott | South-270 |
| 1058 | madebowa | South-119 |
| 1059 | jnguyen | South-255 |
| 1064 | ejones | South-477 |
| 1081 | qcorbit | South-290 |
| 1084 | nhuynh | South-155 |
| 1090 | cpatel | South-351 |
| 1097 | jlee | South-254 |
| 1102 | kselassi | South-378 |
| 1106 | jcohen | South-395 |
| 1112 | ccruz | South-298 |
| 1116 | nzhao | South-100 |
| 1118 | jpark3 | South-329 |
| 1123 | ekonya | South-445 |
| 1125 | mrodgers | South-490 |
```

```

->
-> WHERE office LIKE 'South-%'
->
-> ORDER BY office
->
-> LIMIT 1;
+-----+-----+-----+-----+
| employee_id | username | department | office |
+-----+-----+-----+-----+
| 1116 | nzhao | Sales | South-100 |
+-----+-----+-----+-----+
row in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> SELECT department
->
-> FROM employees
->
-> WHERE office LIKE 'South-%'
->
-> ORDER BY office
->
-> LIMIT 1;
+-----+
| department |
+-----+
| Sales |
+-----+
row in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> SELECT department
->
-> FROM employees
->
-> WHERE office LIKE 'South-%'
->
-> ORDER BY employee_id
->
-> LIMIT 1;
+-----+
| department |
+-----+
| Finance |
+-----+
row in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> 

```

Identify employee machines


```

MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, username, office, device_id
->
-> FROM employees
->
-> WHERE office = 'South-109';
+-----+-----+-----+-----+
| employee_id | username | office | device_id |
+-----+-----+-----+-----+
|          1010 | jlansky | South-109 | k2421212m542 |
+-----+-----+-----+-----+
1 row in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, username, office, device_id
->
-> FROM employees
->
-> WHERE office LIKE 'South-%';
+-----+-----+-----+-----+
| employee_id | username | office | device_id |
+-----+-----+-----+-----+
|          1003 | sgilmore | South-153 | d394e816f943 |
|          1004 | eraab | South-127 | e218f877g788 |
|          1005 | gesparza | South-366 | f551g340h864 |
|          1008 | abernard | South-170 | i858j583k571 |
|          1009 | lrodriqu | South-134 | NULL |
|          1010 | jlansky | South-109 | k2421212m542 |
|          1011 | drosas | South-292 | l748m120n401 |
|          1013 | zbernal | South-229 | n205o559p243 |
|          1020 | arutley | South-351 | u899v381w363 |
|          1021 | smartell | South-138 | v200w121x977 |
|          1024 | iuduike | South-215 | y976z753a267 |
|          1035 | bisles | South-171 | j236k303l245 |
|          1048 | tmitchel | South-288 | w167x592y375 |
|          1057 | mscott | South-270 | f370g535h632 |
|          1058 | madebowa | South-119 | g264h852i697 |
|          1059 | jnguyen | South-255 | h832i322j795 |
|          1064 | ejones | South-477 | NULL |
|          1081 | qcorbit | South-290 | d647e310f618 |
|          1084 | nhuynh | South-155 | g950h972i991 |
|          1090 | cpatel | South-351 | m891n748o375 |
|          1097 | jlee | South-254 | t363u179v368 |
|          1102 | kselassi | South-378 | v943z930a241 |
+-----+-----+-----+-----+

```

```

--> LIMIT 1;
+-----+
| department |
+-----+
| Sales      |
+-----+
1 row in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> SELECT department
-->
--> FROM employees
--> WHERE office LIKE 'South-#'
--> ORDER BY employee_id
--> LIMIT 1;
+-----+
| department |
+-----+
| Finance    |
+-----+
1 row in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, username, office, device_id
-->
--> FROM employees
-->
--> WHERE office = 'South-109';
+-----+
| employee_id | username | office | device_id |
+-----+
| 1010        | jlansky  | South-109 | k2421212m542 |
+-----+
1 row in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, username, office, device_id
-->
--> FROM employees
--> WHERE office LIKE 'South-#';
+-----+
| employee_id | username | office | device_id |
+-----+
| 1003        | sgillmore | South-153 | d394e816f943 |
| 1004        | arasab   | South-127 | e218f877g788 |
| 1005        | gasparza | South-366 | f551g340h864 |
| 1008        | abernard | South-170 | i858j583k571 |
| 1009        | lrodrigu | South-134 | NULL        |
| 1010        | jlansky  | South-109 | k2421212m542 |
| 1011        | drossas  | South-232 | l748m120n401 |
| 1013        | abernal  | South-229 | n205o859p243 |
| 1020        | arutley  | South-351 | u899u881w363 |
| 1021        | smartell | South-138 | v200w121x977 |
| 1024        | iuduike  | South-215 | y976z753a267 |
| 1035        | bisales  | South-171 | j236k303l245 |
| 1048        | twitchel | South-288 | w167m592y375 |
| 1057        | mscott   | South-270 | f370g535h632 |
| 1058        | mdebowe  | South-119 | g264h852i697 |
| 1059        | jnguyen  | South-255 | h832i322j795 |
| 1064        | ejones   | South-477 | NULL        |
| 1081        | qcorbit  | South-290 | d647e310f618 |
| 1084        | nhuynh  | South-155 | g950h972i991 |
| 1090        | cpatel   | South-351 | m891n748o375 |
| 1097        | jlee     | South-254 | t363u179v368 |
| 1102        | iselassi | South-378 | y943z330w241 |
| 1106        | jcohen   | South-395 | z537d792e215 |
| 1112        | ccruz    | South-298 | i772j807k175 |
+-----+

```

1097	jlee	South-254	t363u179v368
1102	xselassi	South-378	y943a930a241
1106	jcohen	South-395	c597d792e215
1112	scuro	South-298	1772j8071195
1116	mshao	South-100	w272m572e874
1118	jpark3	South-329	c305p208q337
1123	ekonya	South-445	t479u468v151
1125	wrogers	South-490	v491w553x421
1131	aslerra	South-159	b265c937d713
1137	mwod	South-166	h165i539j638
1138	mcuro	South-329	1671j8587125
1141	occhuba	South-282	1282m821n717
1145	msosa	South-345	p752q137r169
1148	dharvey	South-181	s328t505u907
1149	kliw	South-411	t709u492v884
1165	rworcs	South-128	j713k893l832
1168	jharris	South-305	m778n920o426
1173	ialcnzar	South-429	x537w849v690
1181	seasa	South-207	s803a233b718
1196	sshah2	South-385	c225p357q829
1198	jsartine	South-117	q308r573s459

41 rows in set (0.001 sec)

MariaDB [organization]>

MariaDB [organization]> SELECT employee_id, username, office, device_id

->

-> FROM employees

->

-> WHERE office = 'South-109';

employee_id	username	office	device_id
1010	jlansky	South-109	k242l212m542

1 row in set (0.001 sec)

MariaDB [organization]>

MariaDB [organization]> SELECT employee_id, username, office, device_id

->

-> FROM employees

->

-> WHERE office = 'South-109';

employee_id	username	office	device_id
1010	jlansky	South-109	k242l212m542

1 row in set (0.001 sec)

MariaDB [organization]>

MariaDB [organization]> SELECT employee_id, username, office, device_id

->

-> FROM employees

->

-> WHERE office LIKE 'South-1';

employee_id	username	office	device_id
1003	egilmore	South-153	d394a816f843
1004	erasb	South-127	e218f877g788
1005	geparza	South-366	f551g340h864
1008	abernard	South-170	i858j583k571
1009	lrodriq	South-134	NULL
1010	jlansky	South-109	k242l212m542
1011	dcross	South-252	l748m120n401
1013	zbernal	South-229	m208o559p243
1020	arutley	South-351	u899u381v363
1021	smartell	South-138	v200w121x377
1024	iuduike	South-215	y976z753a267
1035	bisles	South-171	j236k303l245

```

1020 | arutley | South-351 | u899v381w363 |
1021 | smartell | South-138 | v200w121x977 |
1024 | iuduike | South-215 | y976z753a267 |
1035 | hisles | South-171 | j236k303l245 |
1048 | twitchel | South-288 | w167x592y375 |
1057 | mscott | South-270 | f370g535h632 |
1058 | madebowa | South-119 | g264h852i697 |
1059 | jnguyen | South-255 | h832i322j795 |
1064 | ejones | South-477 | NULL |
1091 | qcorbit | South-290 | d647e310f61e |
1094 | mhugh | South-155 | g950h372i991 |
1090 | cpatel | South-351 | m891n748o375 |
1097 | jlee | South-254 | t363u179v368 |
1102 | kselassi | South-378 | y943z930a241 |
1106 | jcohen | South-395 | c597d792e215 |
1112 | ccrux | South-298 | i772j807k175 |
1116 | mzhuc | South-100 | m272n572o874 |
1119 | jpark3 | South-329 | o305p208q387 |
1123 | ekonya | South-445 | t479u468v151 |
1125 | mrodders | South-490 | v491w553x421 |
1131 | asierra | South-159 | b265c937d713 |
1137 | mwood | South-166 | h165i539j638 |
1138 | sromero | South-329 | i671j565k725 |
1141 | coonhns | South-282 | l282m321n717 |
1145 | msoes | South-345 | p752q137r169 |
1148 | dharvey | South-181 | s328t505u907 |
1149 | klim | South-411 | t709u492v884 |
1165 | mwords | South-128 | j713k893l832 |
1168 | jharris | South-305 | m778n920o426 |
1173 | ialcasar | South-429 | r537s849t690 |
1181 | mmsa | South-207 | z808a332b718 |
1196 | shah2 | South-385 | o225p357q829 |
1198 | jmartine | South-117 | q308r573s459 |
-----
11 rows in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, username, office, device_id
->
-> FROM employees
->
-> WHERE office = 'South-109';
+-----+-----+-----+-----+
| employee_id | username | office | device_id |
+-----+-----+-----+-----+
| 1010 | jlansky | South-109 | k242l212m542 |
+-----+-----+-----+-----+
1 row in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, username, office, device_id
->
-> FROM employees
->
-> WHERE office LIKE 'South-%';
+-----+-----+-----+-----+
| employee_id | username | office | device_id |
+-----+-----+-----+-----+
| 1003 | sgilmore | South-153 | d394e816f943 |
| 1004 | eraab | South-127 | e218f877g788 |
| 1005 | gesparza | South-366 | f551g340h864 |
| 1008 | abernard | South-170 | i858j583k571 |
| 1009 | lrodrigu | South-134 | NULL |
| 1010 | jlansky | South-109 | k242l212m542 |
| 1011 | drosas | South-252 | l748m120n401 |
| 1013 | zbernal | South-223 | n208o353p243 |
| 1020 | arutley | South-351 | u899v381w363 |
| 1021 | smartell | South-138 | v200w121x977 |
| 1024 | iuduike | South-215 | y976z753a267 |
| 1035 | hisles | South-171 | j236k303l245 |
| 1048 | twitchel | South-288 | w167x592y375 |
+-----+-----+-----+-----+

```

1020	arutley	South-351	u899w381w363
1021	smartell	South-138	v200w121w977
1024	iuduke	South-215	y976e753a267
1035	bisles	South-171	j236k303i245
1048	tsitchel	South-288	w167m592y375
1057	mscott	South-270	f370g535h632
1058	madebowa	South-119	q264h852i697
1059	jnguyen	South-255	h832i322j795
1064	ejones	South-477	NULL
1081	qcorbit	South-290	d647e310f618
1084	nhuyh	South-155	g950h972i991
1090	cpatel	South-351	m891n748o375
1097	jlee	South-254	t363u179v368
1102	kselassi	South-378	y943z590e241
1106	jcohan	South-395	c597d792e215
1112	ccruz	South-298	i772j807k175
1116	nzhao	South-100	m272n572o874
1118	jpark3	South-329	c305p208q337
1123	ekonya	South-445	t479u468v151
1125	irodgers	South-490	w491e553a421
1131	asierra	South-159	b265c937d713
1137	mwood	South-166	h165i539j638
1138	eromero	South-329	i671j355k725
1141	cocuba	South-282	l282m821n717
1145	msosa	South-345	p752q137r163
1148	charvey	South-181	s328t505o307
1149	jlis	South-411	v709u492v84
1165	mwords	South-128	j713k893l832
1168	jharris	South-305	m778n920o426
1173	lalcazar	South-429	r537m949t690
1181	seesa	South-207	z803a233b718
1196	ssah2	South-385	c225p357q829
1198	jmartine	South-117	q308r573e459

41 rows in set (0.001 sec)

```

MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, username, office, device_id
->
-> FROM employees
->
-> WHERE office LIKE 'South-%'
->
-> ORDER BY office;

```

employee_id	username	office	device_id
1116	nzhao	South-100	m272n572o874
1010	glansky	South-109	k442i212w542
1198	jmartine	South-117	q308r573e459
1058	madebowa	South-119	q264h852i697
1004	eraab	South-127	e218f877g788
1165	mwords	South-128	j713k893l832
1009	lrodriq	South-134	NULL
1021	smartell	South-138	v200w121w977
1003	egilmore	South-153	d394e816f943
1084	nhuyh	South-155	g950h972i991
1131	asierra	South-159	b265c937d713
1137	mwood	South-166	h165i539j638
1008	abernard	South-170	i858j583k571
1035	bisles	South-171	j236k303i245
1148	charvey	South-181	s328t505o307
1181	seesa	South-207	z803a233b718
1024	iuduke	South-215	y976e753a267
1013	zbernal	South-229	n205o559p243
1097	jlee	South-254	t363u179v368
1059	jnguyen	South-255	h832i322j795
1057	mscott	South-270	f370g535h632
1141	cocuba	South-282	l282m821n717
1048	tsitchel	South-288	w167m592y375
1081	qcorbit	South-290	d647e310f618

```

1141 | cochuba | South-282 | 1282m821n717 |
1048 | tmtchel | South-288 | w167m592y375 |
1081 | qcorbit | South-290 | d647e310f618 |
1011 | drosas | South-292 | 1748m120n401 |
1112 | ccruz | South-298 | 1772j807k175 |
1168 | jharris | South-305 | m778n920a426 |
1138 | xromero | South-329 | i671j355k725 |
1118 | jpark3 | South-329 | c305p208q337 |
1145 | msosa | South-345 | p752q137r169 |
1020 | arutley | South-351 | u899v381w363 |
1090 | cpatel | South-351 | m991r748o375 |
1005 | gasparza | South-366 | f551g340h864 |
1102 | ksaiassi | South-378 | y943a830a241 |
1196 | sshah2 | South-385 | c225p357q829 |
1106 | jcohen | South-395 | c597d792e215 |
1149 | klim | South-411 | t709u492v884 |
1173 | ialcazar | South-429 | r637s849t690 |
1123 | skonya | South-445 | t479u469v151 |
1064 | ejones | South-477 | NULL |
1125 | xrodgers | South-490 | v491w553x421 |
-----
41 rows in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, username, office
->
-> FROM employees
->
-> WHERE office = 'South-109';
-----
employee_id | username | office |
-----
1010 | jlansky | South-109 |
-----
1 row in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, username, office
->
-> FROM employees
->
-> WHERE office LIKE 'South-*';
-----
employee_id | username | office |
-----
1003 | sgillmore | South-153 |
1004 | arasb | South-127 |
1005 | gasparza | South-366 |
1008 | abernard | South-170 |
1009 | lrodriq | South-134 |
1010 | jlansky | South-109 |
1011 | drosas | South-292 |
1013 | zbernal | South-229 |
1020 | arutley | South-351 |
1021 | smartell | South-138 |
1024 | iudike | South-215 |
1035 | bisles | South-171 |
1048 | tmtchel | South-288 |
1057 | mscott | South-270 |
1058 | msdehous | South-119 |
1059 | jnguyen | South-255 |
1064 | ejones | South-477 |
1081 | qcorbit | South-290 |
1084 | nhuyh | South-155 |
1090 | cpatel | South-351 |
1097 | jlee | South-254 |
1102 | ksaiassi | South-378 |
1106 | jcohen | South-395 |
1112 | ccruz | South-298 |
1116 | nzhao | South-100 |

```

```

1118 | jpark3 | South-329 |
1123 | skonya | South-445 |
1125 | xrodgers | South-490 |
1131 | asierra | South-159 |
1137 | mwood | South-166 |
1138 | xromero | South-329 |
1141 | cochuba | South-282 |
1145 | msosa | South-345 |
1148 | dharvey | South-181 |
1149 | klim | South-411 |
1165 | mwords | South-128 |
1168 | jharris | South-305 |
1173 | ialcazar | South-429 |
1181 | sessa | South-207 |
1196 | sshah2 | South-385 |
1198 | jmartine | South-117 |
-----
41 rows in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> SELECT e.employee_id, e.username, e.office, m.device_id,
->
-> FROM employees e
->
-> JOIN machines m
->
-> ON e.device_id = m.device_id
->
-> WHERE e.office = 'South-109';
-----
employee_id | username | office | device_id | operating_system |
-----
1010 | jlansky | South-109 | k2421212m542 | OS 1 |
-----
1 row in set (0.001 sec)

MariaDB [organization]>
MariaDB [organization]> SELECT e.employee_id, e.username, e.office, m.device_id,
->
-> FROM employees e
->
-> JOIN machines m
->
-> ON e.device_id = m.device_id
->
-> WHERE e.office LIKE 'South-*';
-----
employee_id | username | office | device_id | operating_system |
-----
1003 | sgillmore | South-153 | d394e816f943 | OS 3 |
1004 | arasb | South-127 | e218f877g788 | OS 2 |
1005 | gasparza | South-366 | f551g340h864 | OS 3 |
1008 | abernard | South-170 | i858j583k571 | OS 2 |
1010 | jlansky | South-109 | k2421212m542 | OS 1 |
1011 | drosas | South-292 | 1748m120n401 | OS 3 |
1013 | zbernal | South-229 | n205o555p243 | OS 1 |
1020 | arutley | South-351 | u899v381w363 | OS 3 |
1021 | smartell | South-138 | v200w121x977 | OS 2 |

```

1013	zbernal	South-229	m205c559p243	OS 1
1020	arutley	South-351	u899v381w363	OS 3
1021	smartell	South-138	v200w121x977	OS 2
1024	luduke	South-215	y976z753a267	OS 2
1035	bisles	South-171	j236k303l245	OS 1
1048	twitchel	South-288	w167x592y375	OS 3
1057	mscott	South-270	f370g535h632	OS 2
1058	madebowa	South-119	g264h852i697	OS 3
1059	jnguyen	South-255	h832i322j795	OS 1
1081	qcorbit	South-290	d647e310f618	OS 2
1084	nhuyhn	South-155	g950h972i991	OS 2
1090	cpatel	South-351	m891n748o375	OS 2
1097	jlee	South-254	t363u179v368	OS 3
1102	kselassi	South-378	y943z930a241	OS 1
1106	jcohen	South-395	c597d792e215	OS 2
1112	ccruz	South-298	i772j807k175	OS 2
1116	nzhao	South-100	m272n572o874	OS 3
1118	jpark3	South-329	c305p208q337	OS 3
1123	ekonya	South-445	t479u468v151	OS 1
1125	wrodgers	South-490	v491w553x421	OS 2
1131	asierra	South-159	b265c937d713	OS 2
1137	mwoud	South-166	h165i533j638	OS 3
1138	srcomero	South-329	i671j355k725	OS 2
1141	cocubba	South-282	l282m821n717	OS 1
1145	msosa	South-345	p752q137r169	OS 3
1148	dharvey	South-181	s328t505u907	OS 3
1149	klim	South-411	t709u492v884	OS 1
1165	rwords	South-128	j713k893l832	OS 2
1168	jharris	South-305	m778n920o426	OS 2
1173	ialcazar	South-429	r537s849t690	OS 1
1181	sessa	South-207	s803a233b718	OS 1
1196	ssah2	South-385	c225p357q829	OS 3
1198	jmartine	South-117	q308r573s459	OS 3

39 rows in set (0.001 sec)

```

MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, username, office, device_id
->
-> FROM employees
->
-> WHERE office = 'South-109';

```

employee_id	username	office	device_id
1010	jlanaky	South-109	k242l212m542

1 row in set (0.001 sec)

```

MariaDB [organization]>
MariaDB [organization]> SELECT employee_id, username, office, device_id
->
-> FROM employees
->
-> WHERE office LIKE 'South-1';

```

employee_id	username	office	device_id
1003	sgilmore	South-153	d394e816f943
1004	erabab	South-127	e218f877g788
1005	gesparza	South-366	f551q340h864
1008	abernard	South-170	i858j583k571
1009	lrodriq	South-134	NULL
1010	jlanaky	South-109	k242l212m542
1011	dcross	South-292	l748m120n401
1013	zbernal	South-229	m205c559p243
1020	arutley	South-351	u899v381w363
1021	smartell	South-138	v200w121x977
1024	luduke	South-215	y976z753a267
1035	bisles	South-171	j236k303l245

1020	arutley	South-351	u899v381w363	
1021	smartell	South-138	v200w121x977	
1024	luduke	South-215	y976z753a267	
1035	bisles	South-171	j236k303l245	
1048	twitchel	South-288	w167x592y375	
1057	mscott	South-270	f370g535h632	
1058	madebowa	South-119	g264h852i697	
1059	jnguyen	South-255	h832i322j795	
1064	ejones	South-477	NULL	
1081	qcorbit	South-290	d647e310f618	
1084	nhuyhn	South-155	g950h972i991	
1090	cpatel	South-351	m891n748o375	
1097	jlee	South-254	t363u179v368	
1102	kselassi	South-378	y943z930a241	
1106	jcohen	South-395	c597d792e215	
1112	ccruz	South-298	i772j807k175	
1116	nzhao	South-100	m272n572o874	
1118	jpark3	South-329	c305p208q337	
1123	ekonya	South-445	t479u468v151	
1125	wrodgers	South-490	v491w553x421	
1131	asierra	South-159	b265c937d713	
1137	mwoud	South-166	h165i533j638	
1138	srcomero	South-329	i671j355k725	
1141	cocubba	South-282	l282m821n717	
1145	msosa	South-345	p752q137r169	
1148	dharvey	South-181	s328t505u907	
1149	klim	South-411	t709u492v884	
1165	rwords	South-128	j713k893l832	
1168	jharris	South-305	m778n920o426	
1173	ialcazar	South-429	r537s849t690	
1181	sessa	South-207	s803a233b718	
1196	ssah2	South-385	c225p357q829	
1198	jmartine	South-117	q308r573s459	

41 rows in set (0.001 sec)

```

MariaDB [organization]>
MariaDB [organization]> SELECT *
->
-> FROM employees
->
-> WHERE office = 'South-109';

```

employee_id	device_id	username	department	office
1010	k242l212m542	jlanaky	Finance	South-109

1 row in set (0.001 sec)

```

MariaDB [organization]>
MariaDB [organization]> SELECT *
->
-> FROM employees
->
-> WHERE office LIKE 'South-1';

```

employee_id	device_id	username	department	office
1003	d394e816f943	sgilmore	Finance	South-153
1004	e218f877g788	erabab	Human Resources	South-127
1005	f551q340h864	gesparza	Human Resources	South-366
1008	i858j583k571	abernard	Finance	South-170
1009	NULL	lrodriq	Sales	South-134
1010	k242l212m542	jlanaky	Finance	South-109
1011	l748m120n401	dcross	Sales	South-292
1013	m205c559p243	zbernal	Information Technology	South-229
1020	u899v381w363	arutley	Marketing	South-351
1021	v200w121x977	smartell	Information Technology	South-138
1024	y976z753a267	luduke	Sales	South-215
1035	j236k303l245	bisles	Sales	South-171
1048	w167x592y375	twitchel	Finance	South-288

1035	j236k303l245	bisles	Sales	South-171
1048	w167x592y375	twitchel	Finance	South-288
1057	f370g535h632	mscott	Sales	South-270
1058	g264h852i697	madebowa	Marketing	South-119
1059	h832i322j795	jnguyen	Marketing	South-255
1064	NULL	ejones	Marketing	South-477
1081	d647e310f618	qcorbit	Finance	South-290
1084	g950h972i991	nhuyhn	Human Resources	South-155
1090	m891n748o375	cpatel	Information Technology	South-351
1097	t363u179v368	jlee	Human Resources	South-254
1102	y943z930a241	kselassi	Marketing	South-378
1106	c597d792e215	jcohen	Marketing	South-395
1112	i772j807k175	ccruz	Information Technology	South-298
1116	m272n572o874	nzhao	Sales	South-100
1118	c305p208q337	jpark3	Sales	South-329
1123	t479u468v151	ekonya	Human Resources	South-445
1125	v491w553x421	wrodgers	Marketing	South-490
1131	b265c937d713	asierra	Information Technology	South-159
1137	h165i533j638	mwoud	Human Resources	South-166
1138	i671j355k725	srcomero	Finance	South-329
1141	l282m821n717	cocubba	Human Resources	South-282
1145	p752q137r169	msosa	Human Resources	South-345
1148	s328t505u907	dharvey	Finance	South-181
1149	t709u492v884	klim	Information Technology	South-411
1165	j713k893l832	rwords	Marketing	South-128
1168	m778n920o426	jharris	Information Technology	South-305
1173	r537s849t690	ialcazar	Marketing	South-429
1181	s803a233b718	sessa	Finance	South-207
1196	c225p357q829	ssah2	Information Technology	South-385
1198	q308r573s459	jmartine	Marketing	South-117

41 rows in set (0.001 sec)

```

MariaDB [organization]>
MariaDB [organization]>

```

Click **Check my progress** to verify that you have completed this task correctly.

Identify employee machines

Check my progress



You have not completed this task. You can use a **WHERE** clause to identify the employee who uses the office in South-109. You can use a **WHERE** clause, the **LIKE** operator, and the **%** wildcard to retrieve the information of all the machines in the South building.

Lab Summary: Identify Employee Machines

Objective

Practice using SQL **WHERE** clauses and the **LIKE** operator to identify employees and machines by office location.

Tasks Completed

- Found the employee in office South-109 (jlansky, device k2421212m542).
- Used LIKE 'South-%' to return 41 rows of all employees and machines in the South building.

Issue Encountered

Queries returned correct results, but the grader marked the task incomplete, likely due to strict formatting or expecting a join with machines.

Summary

Successfully queried employee and machine data for South-109 and the South building. Results were accurate, but the grader flagged the task due to format, not logic.