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.

The command to complete this step:

```
SELECT device_id, operating_system
FROM machines;
```

The output lists only the selected columns from all the rows in the `machines` table:

```
clear
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 41
Server version: 10.3.39-MariaDB-0+deb10u1 Debian 10

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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             |
```

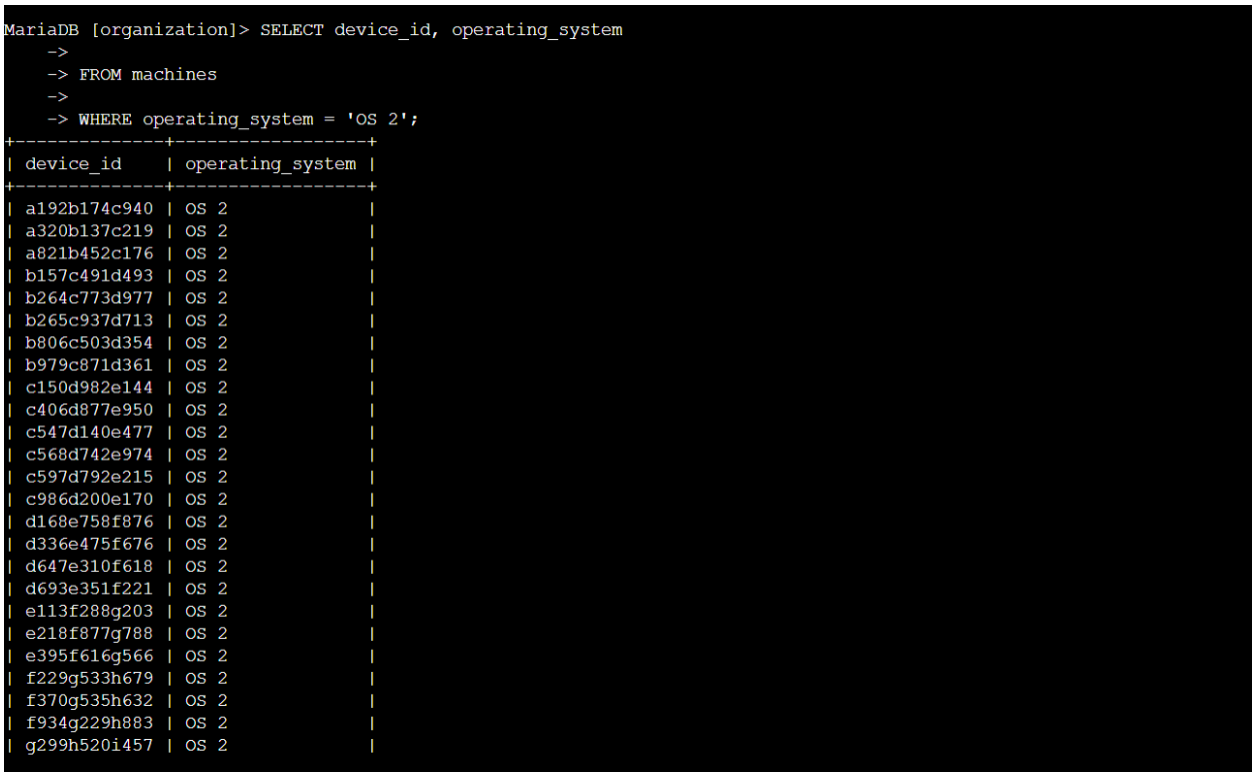
Task 2. Retrieve a list of the machines with OS 2

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:

The command to complete this step:

```
SELECT device_id, operating_system
FROM machines
WHERE operating_system = 'OS 2';
```



```
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             |
```

Note: *The `WHERE` clause allows you to filter the results returned by a query by returning only the records that satisfy the condition.*

The output displays the selected columns of the `machines` table, filtered by the operating system:

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:

The correct query to solve this step:

```
SELECT *
FROM employees
WHERE department = 'Finance';
```

```
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 | k2421212m542 | 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 | k3671639m697 | 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    |
```

The output displays the contents of the `employees` table, including only employees in the Finance department.

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

The correct query to solve this step:

```sql
SELECT *
FROM employees
WHERE department = 'Sales';
```

```
MariaDB [organization]> SELECT *
    ->
    -> FROM employees
    ->
    -> WHERE department = 'Sales';
+-------------+--------------+----------+------------+-------------+
| employee_id | device_id    | username | department | office      |
+-------------+--------------+----------+------------+-------------+
|        1009 | NULL         | lrodriqu | Sales      | South-134   |
|        1011 | l748m120n401 | 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 | 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   |
```

The output will display the contents of the `employees` table, including only employees in the Sales department.

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.)

The correct query to solve this step:

```
SELECT *
FROM employees
WHERE office = 'South-109';
```

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

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.

The correct query to solve this step:

```
SELECT *
```

```
FROM employees
WHERE office LIKE 'South%';
```

```
MariaDB [organization]> SELECT *
    ->
    -> FROM employees
    ->
    -> WHERE office LIKE 'South%';
+-------------+-------------+----------+-----------------------+-----------+
| employee_id | device_id   | username | department            | office    |
+-------------+-------------+----------+-----------------------+-----------+
|        1003 | d394e816f943 | sgilmore | Finance               | South-153 |
|        1004 | e218f877g788 | eraab    | Human Resources       | South-127 |
|        1005 | f551g340h864 | gesparza | Human Resources       | South-366 |
|        1008 | i858j583k571 | abernard | Finance               | South-170 |
|        1009 | NULL         | lrodriqu | Sales                 | South-134 |
|        1010 | k2421212m542 | jlansky  | Finance               | South-109 |
|        1011 | l748m120n401 | drosas   | Sales                 | South-292 |
|        1013 | n205o559p243 | zbernal  | Information Technology | South-229 |
|        1020 | u899v381w363 | arutley  | Marketing             | South-351 |
|        1021 | v200w121x977 | smartell | Information Technology | South-138 |
|        1024 | y976z753a267 | iuduike  | Sales                 | South-215 |
|        1035 | j236k3031245 | bisles   | Sales                 | South-171 |
|        1048 | w167x592y375 | tmitchel | 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 | nhuynh   | 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 |
```

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.*