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.

SELECT device_id, operating_system FROM machines;

```
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             |
```

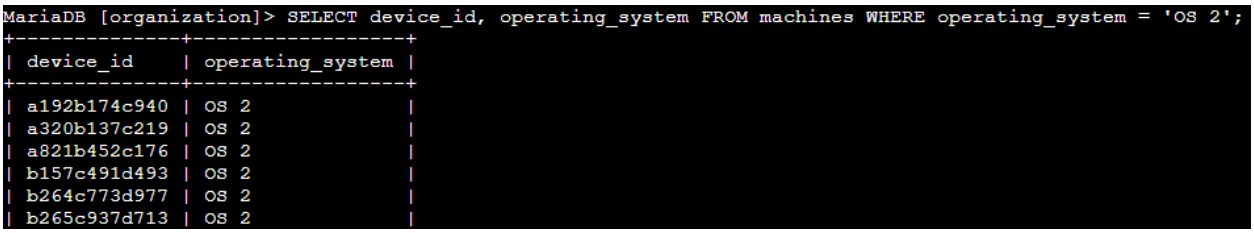
Task 2. Retrieve a list of the machines with OS 2

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:

```
SELECT device_id, operating_system
FROM machines
WHERE operating_system = 'X';
```

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             |
```

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:

```
SELECT *
FROM employees
WHERE X = 'Y';
```

`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   |
```

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

```
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 | 1748m120n401 | drosas   | Sales      | South-292   |
|        1024 | y976z753a267 | iuduike  | Sales      | South-215   |
|        1025 | z381a365b233 | jhill    | Sales      | North-115   |
|        1035 | j236k3031245 | bisles   | Sales      | South-171   |
```

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.)
2. 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 (0.003 sec)
```

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.

```
;ariaDB [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 |
```

Conclusion

I now have practical experience in using SQL to

- **apply the WHERE clause to filter what a SQL query returns and**
- **use the LIKE operator to filter for patterns.**