Multi-row and Multi-column Subqueries in SQL: Takeaways

Syntax

- Filtering a column's rows combining the IN operator and a multi-row subquery

```
SELECT column_1, column_2, . . .
   FROM table
  WHERE column IN (multi-row subquery);
```

- Filtering a column's aggregate rows combining IN operator and a multi-row subquery

```
SELECT column_1, AGGREGATE_FUNCTION(column_2), . . .
   FROM table
  GROUP BY column_1
 HAVING AGGREGATE_FUNCTION(column) IN (multi-row subquery);
```

- Using NOT IN operator to filter rows not in a multi-row subquery

```
SELECT column_1, column_2, . . .
   FROM table
  WHERE column NOT IN (multi-row subquery);
```

- Using a subquery as a table in the FROM clause

```
SELECT column_1, column_2, . . .
   FROM (multi-column subquery) AS table;
```

- Using a subquery as a table in joins

```
SELECT t1.column_1, t1.column_2, t2.column_1, . . .
   FROM a_table AS t1
   JOIN (multi-column subquery) AS t2
     ON t1.some_id = t2.some_id;
```

- Joining subqueries

```
SELECT t1.column_1, t1.column_2, t2.column_1, . . .
   FROM (multi-column subquery 1) AS t1
   JOIN (multi-column subquery 2) AS t2
     ON t1.some_id = t2.some_id;
```

Concepts

- A subquery is a query nested inside another query, and we always enclose it in parentheses `()` .
- A multi-row subquery is a query that returns several values (only one column).
- A multi-column subquery is a query that returns a table (several columns).
- `IN` and `NOT IN` are two commonly used operators with multi-rows subqueries.

Resources

- [Subquery syntax](#)