Day 23
Derived table in MySQL

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MySQL derived table

- A **derived table** is a virtual table returned from a SELECT statement.
- When a stand-alone subquery is used in the FROM clause of a SELECT statement, it is called a derived table.
- A **derived table** must have an alias so that you can reference its name later in the query.

General Syntax :

```
SELECT
    column_list
FROM
    (SELECT
        column_list
    FROM
        table_1) derived_table_name
WHERE derived_table_name.c1 > 0;
```

The following illustrates a query that uses a derived table:

```sql
SELECT column_list
FROM
    ( SELECT column_list
    FROM table_1
    ) derived_table_name
WHERE derived_table_name.c1 > 0;
```

Derived table

Must have an alias

Use Case Example :

Query :

```sql
SELECT
    productName, sales
FROM
    (SELECT
        productCode,
        ROUND(SUM(quantityOrdered * priceEach)) sales
    FROM
        orderdetails
    INNER JOIN orders USING (orderNumber)
    WHERE
        YEAR(shippedDate) = 2003
    GROUP BY productCode
    ORDER BY sales DESC
    LIMIT 5) top5products2003
INNER JOIN
    products USING (productCode);
```

Output :

productName	sales
1992 Ferrari 360 Spider red	103480
1952 Alpine Renault 1300	67985
2001 Ferrari Enzo	59852
1969 Ford Falcon	57403
1968 Ford Mustang	56462