Power Learn Project

ORDER BY Clause: week 10

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Database Design

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THE SQL ORDER BY

The SQL ORDER BY clause is used to sort the result set of a query in ascending (default) or descending order based on one or more columns. It is often used with the SELECT statement to organize the output of a query.

The basic syntax is as follows:

SELECT column1, column2, ...

FROM table_name

ORDER BY column1 [ASC | DESC], column2 [ASC | DESC], ...;

column1, column2, ...: Columns to be retrieved.

table_name: Name of the table from which to retrieve data.

ORDER BY: Specifies the columns and the order (ascending or descending) by which the result set should be sorted.

ORDER BY Clause to Sort Values in One Column

To sort values in one column, use the ORDER BY clause with the desired column:

Retrieve and sort employee names alphabetically

```
SELECT employee_name
FROM employees
ORDER BY employee_name ASC;
```

This query retrieves employee names from the 'employees' table and sorts them in ascending alphabetical order.

ORDER BY Clause to Sort Values in Multiple Columns:

To sort values in multiple columns, list the columns in the ORDER BY clause:

```
-- Retrieve and sort employees by department and then by salary
SELECT employee_name, department, salary
FROM employees
ORDER BY department ASC, salary DESC;
```

This query retrieves employee names, departments, and salaries from the 'employees' table. It sorts the result set first by department in ascending order and then by salary in descending order.

ORDER BY Clause to Sort Values in a Numeric Column Example:

To sort values in a numeric column, you can use the ORDER BY clause with a numeric column:

```
-- Retrieve and sort products by unit price in descending order
SELECT product_name, unit_price
FROM products
ORDER BY unit_price DESC;
```

This query retrieves product names and unit prices from the 'products' table and sorts them in descending order based on the unit price.

Using SQL ORDER BY to Sort by Dates:

To sort values by dates, use the ORDER BY clause with a date column:

```
-- Retrieve and sort orders by order date in ascending order
SELECT order_id, order_date
FROM orders
ORDER BY order_date ASC;
```

This query retrieves order IDs and order dates from the 'orders' table and sorts them in ascending order based on the order date.

The ORDER BY clause is a powerful tool for organizing query results, and it provides flexibility in sorting data based on various criteria. Experiment with different columns and sorting orders to meet your specific requirements.