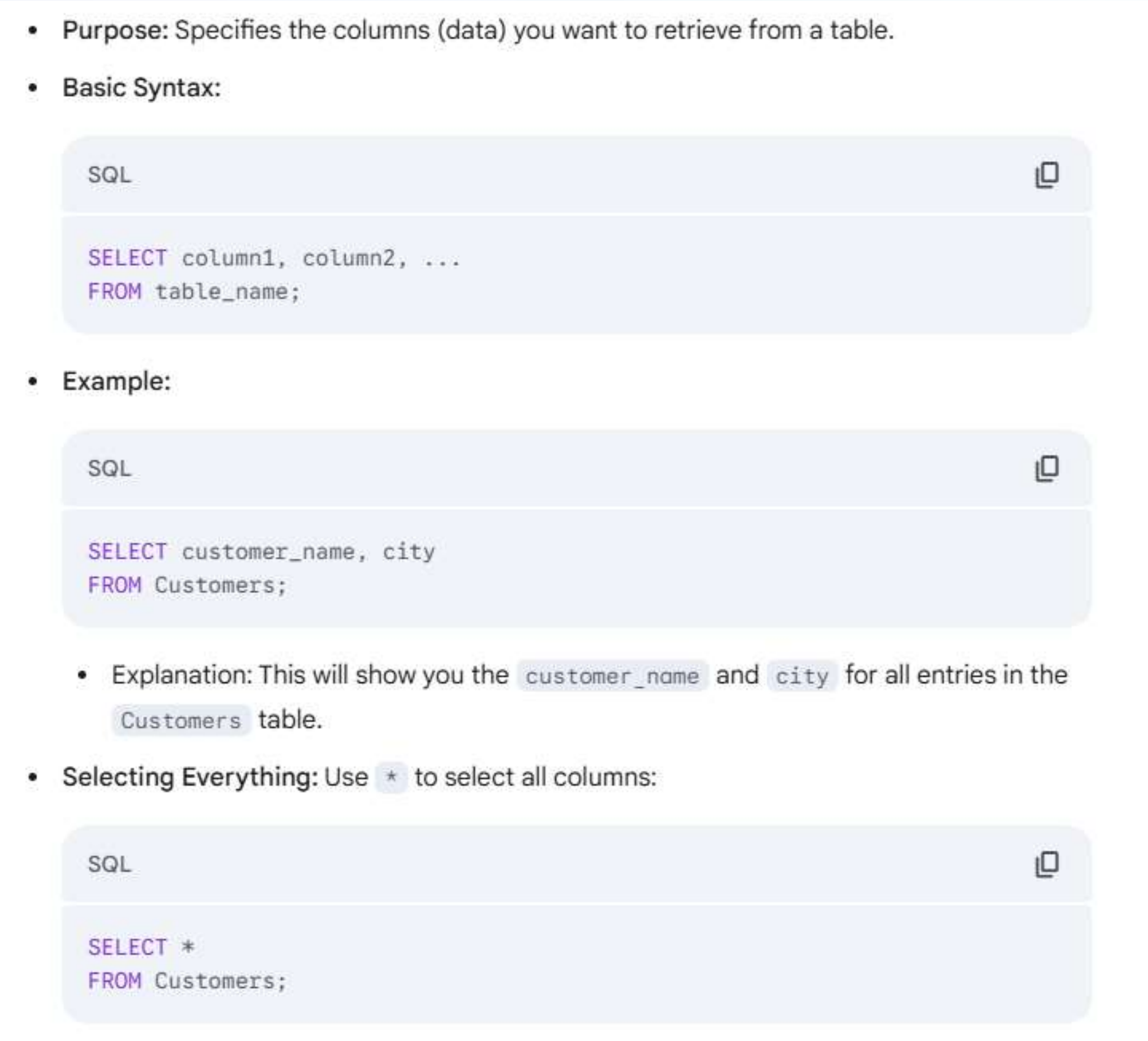
SQL Basics & Querying Data

CODEUS_

SELECT



- **Purpose:** Specifies the columns (data) you want to retrieve from a table.
- **Basic Syntax:**

SQL

```sql
SELECT column1, column2, ...
FROM table_name;
```

- **Example:**

SQL

```sql
SELECT customer_name, city
FROM Customers;
```

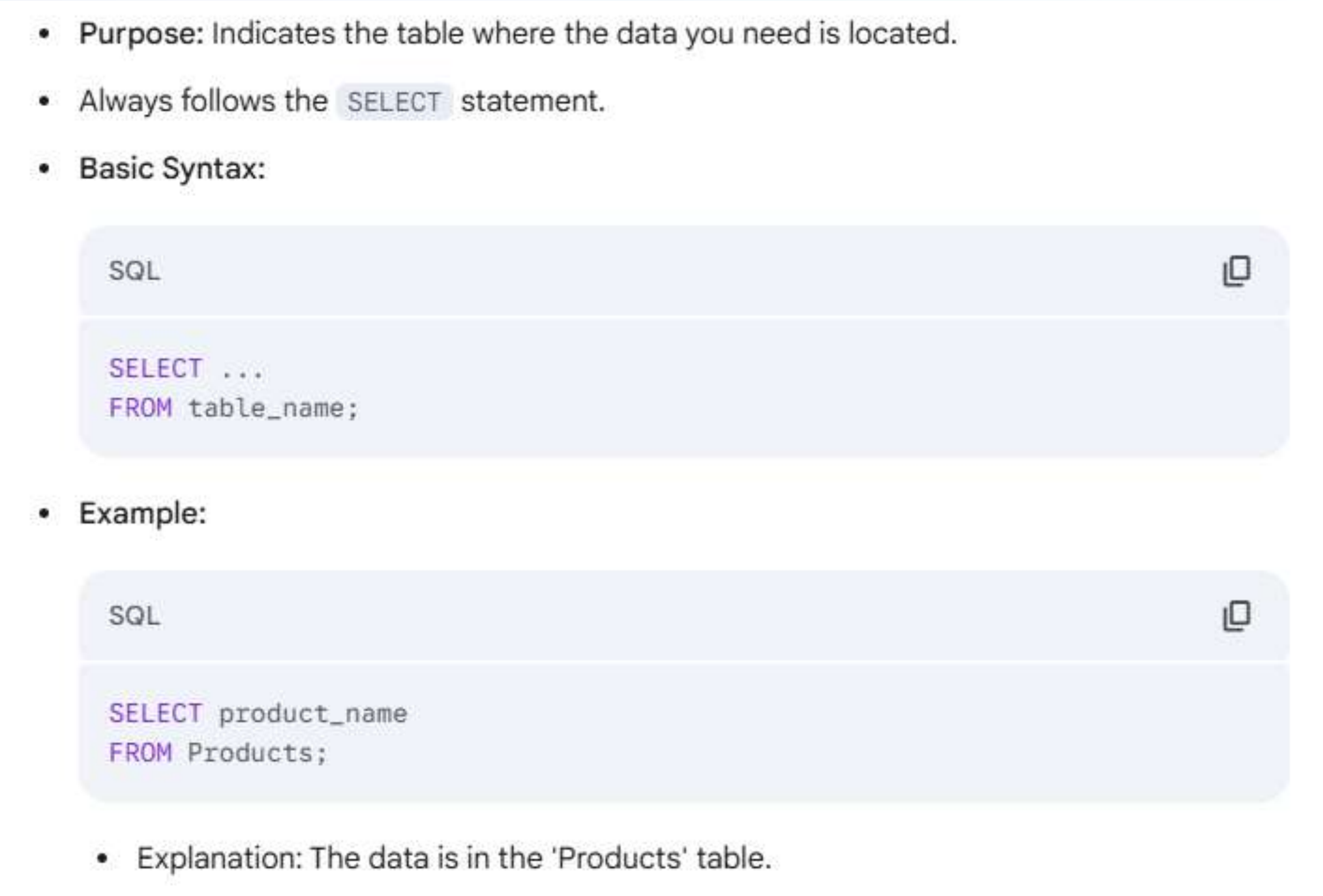
  - Explanation: This will show you the `customer_name` and `city` for all entries in the `Customers` table.

- **Selecting Everything:** Use `*` to select all columns:

SQL

```sql
SELECT *
FROM Customers;
```

FROM



- **Purpose:** Indicates the table where the data you need is located.
- Always follows the `SELECT` statement.
- **Basic Syntax:**

  SQL

  ```sql
  SELECT ...
  FROM table_name;
  ```

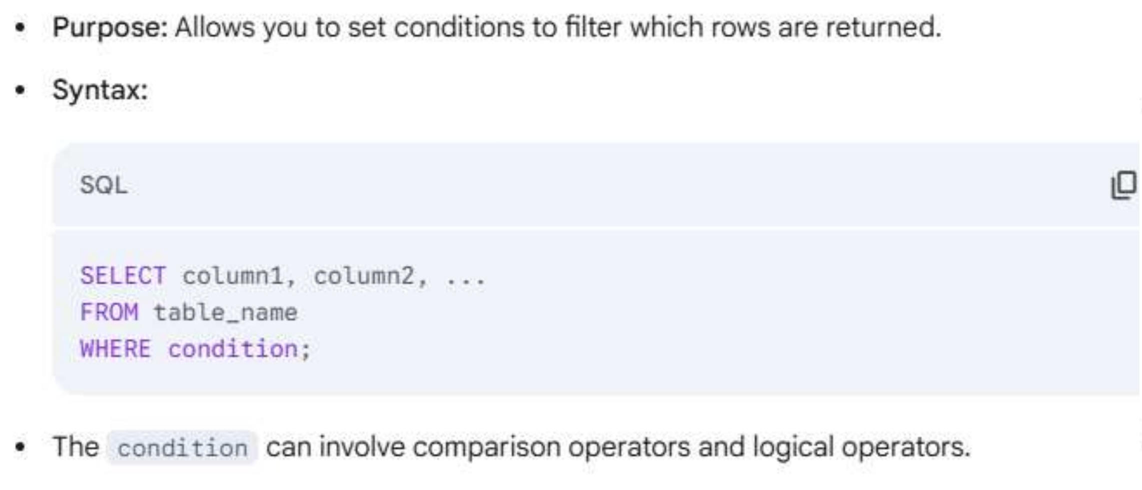
- **Example:**

  SQL

  ```sql
  SELECT product_name
  FROM Products;
  ```

  - Explanation: The data is in the 'Products' table.

WHERE

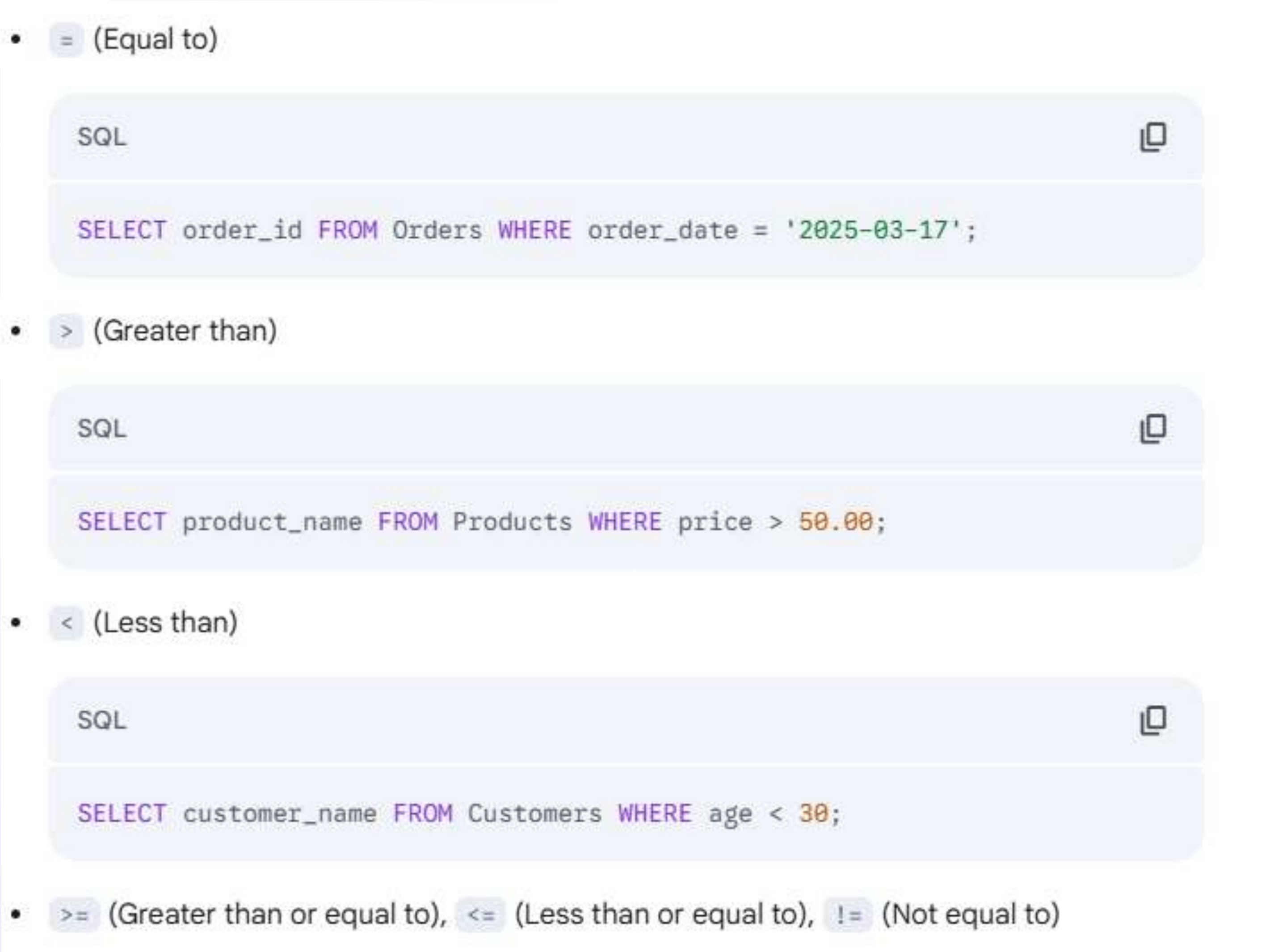


- **Purpose:** Allows you to set conditions to filter which rows are returned.
- **Syntax:**

SQL

```sql
SELECT column1, column2, ...
FROM table_name
WHERE condition;
```

- The `condition` can involve comparison operators and logical operators.



- `=` (Equal to)

SQL

```sql
SELECT order_id FROM Orders WHERE order_date = '2025-03-17';
```

- `>` (Greater than)

SQL

```sql
SELECT product_name FROM Products WHERE price > 50.00;
```

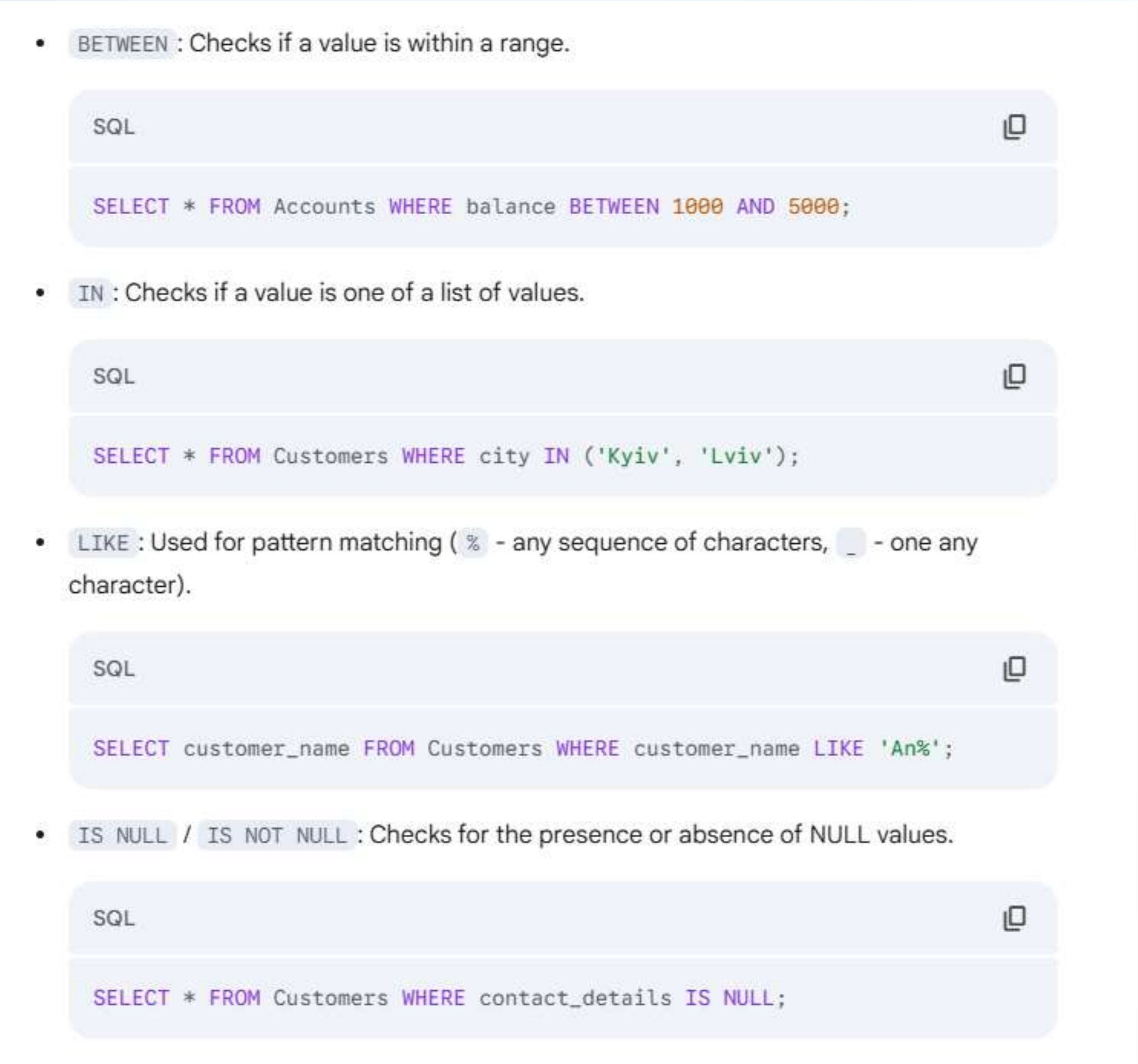
- `<` (Less than)

SQL

```sql
SELECT customer_name FROM Customers WHERE age < 30;
```

- `>=` (Greater than or equal to), `<=` (Less than or equal to), `!=` (Not equal to)

WHERE



- `BETWEEN`: Checks if a value is within a range.

SQL

```sql
SELECT * FROM Accounts WHERE balance BETWEEN 1000 AND 5000;
```

- `IN`: Checks if a value is one of a list of values.

SQL

```sql
SELECT * FROM Customers WHERE city IN ('Kyiv', 'Lviv');
```

- `LIKE`: Used for pattern matching (`%` - any sequence of characters, `_` - one any character).

SQL

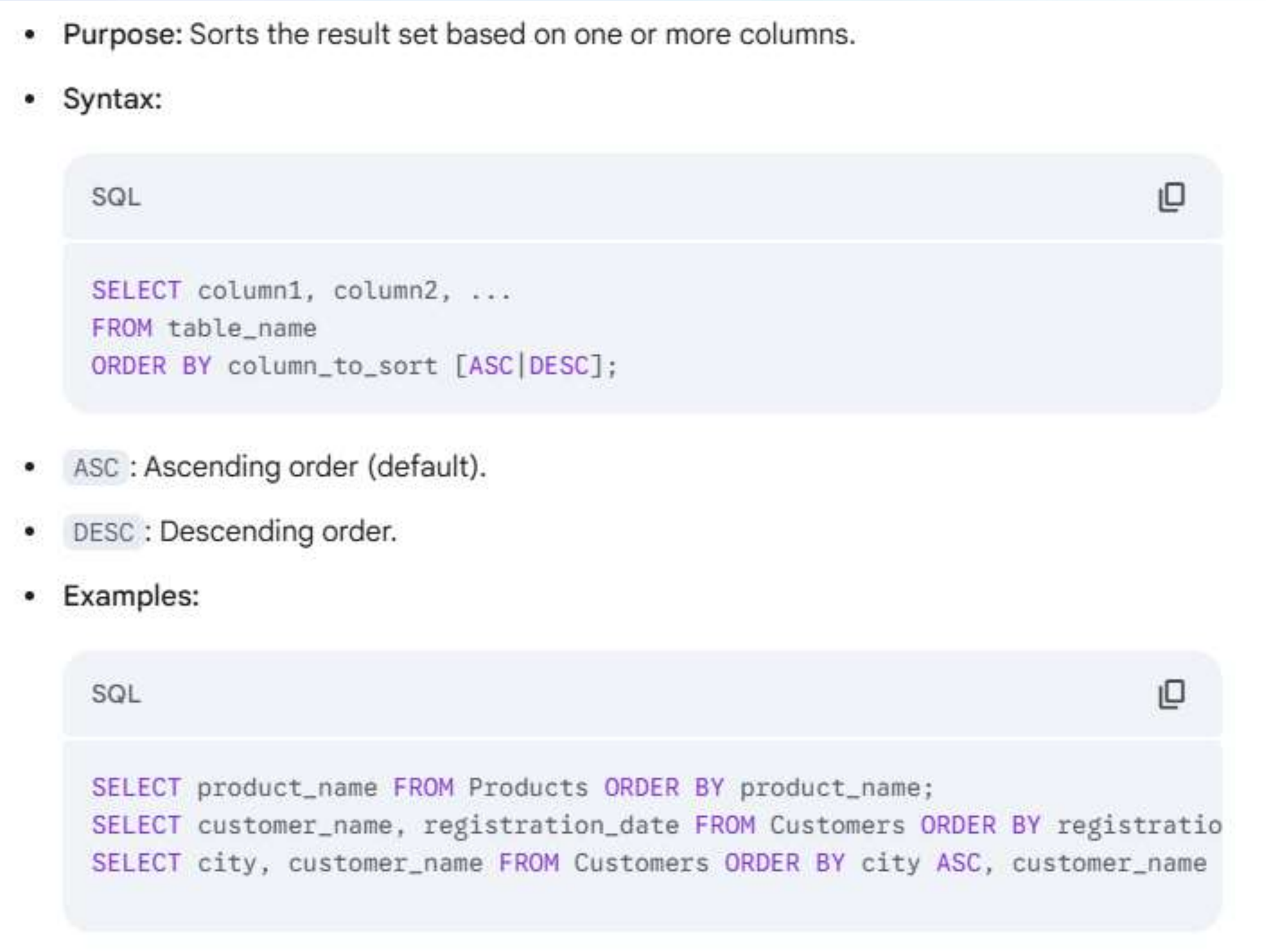
```sql
SELECT customer_name FROM Customers WHERE customer_name LIKE 'An%';
```

- `IS NULL` / `IS NOT NULL`: Checks for the presence or absence of NULL values.

SQL

```sql
SELECT * FROM Customers WHERE contact_details IS NULL;
```

ORDER BY



- **Purpose:** Sorts the result set based on one or more columns.
- Syntax:

SQL

```sql
SELECT column1, column2, ...
FROM table_name
ORDER BY column_to_sort [ASC|DESC];
```

- `ASC` : Ascending order (default).
- `DESC` : Descending order.
- Examples:

SQL

```sql
SELECT product_name FROM Products ORDER BY product_name;
SELECT customer_name, registration_date FROM Customers ORDER BY registratio
SELECT city, customer_name FROM Customers ORDER BY city ASC, customer_name
```

Thank you

- Author: Denys Kuchmei
- My LinkedIn: Link to your LI
- Date: March 2025
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