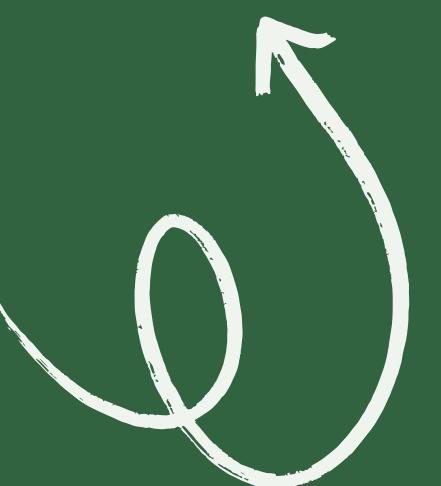


Learning SQL with Matcha

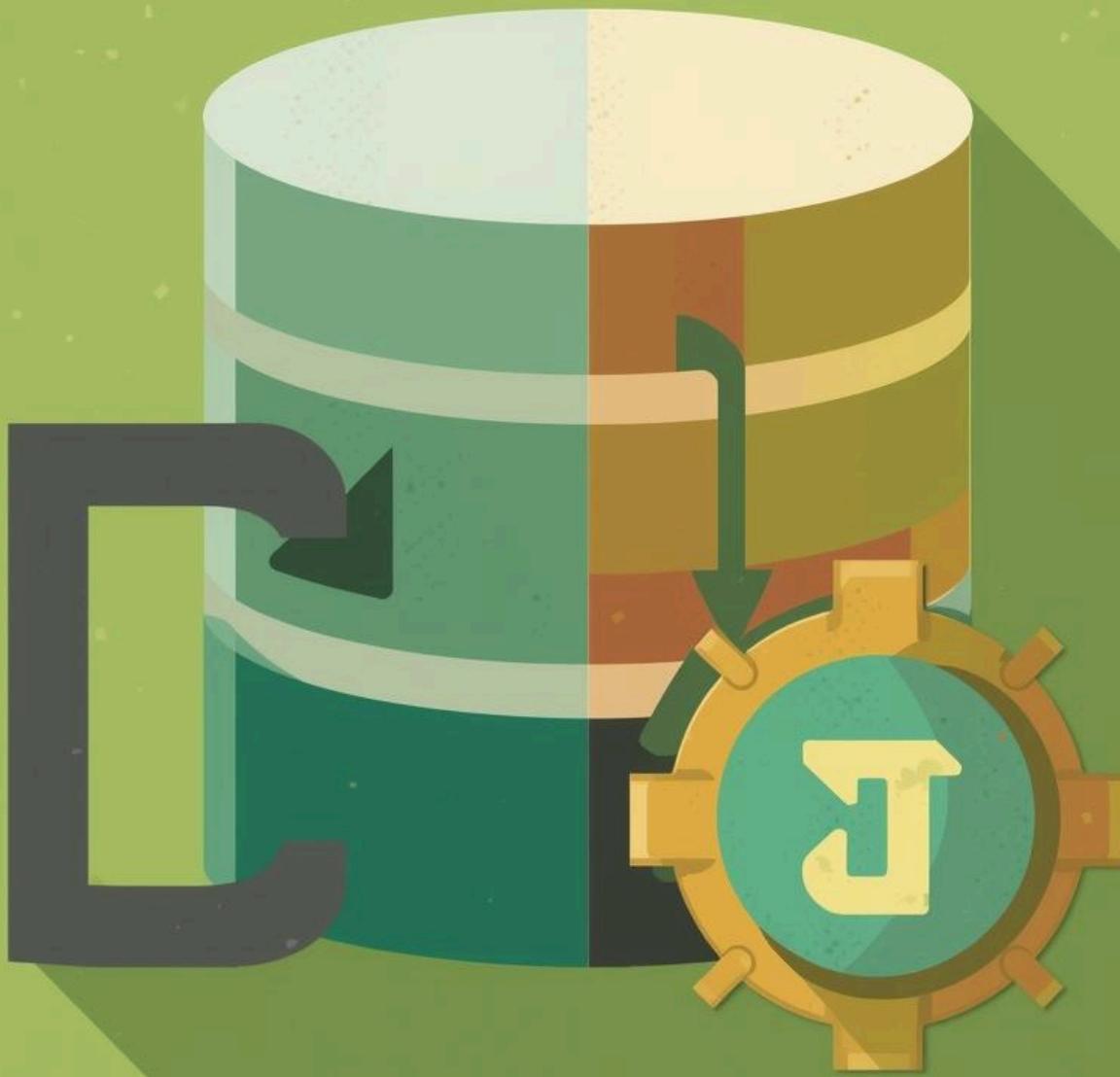
Jayden Cruz



Understanding SQL: Definition and Importance

SQL, or Structured Query Language, is a powerful tool that allows you to manage and query databases effectively, making it essential for extracting valuable insights crucial for business decisions.

- Interviewers will ask you



Meet the Matcha Business Database

Table 1: customers

- one row per customer
- basic customer info for grouping & joins

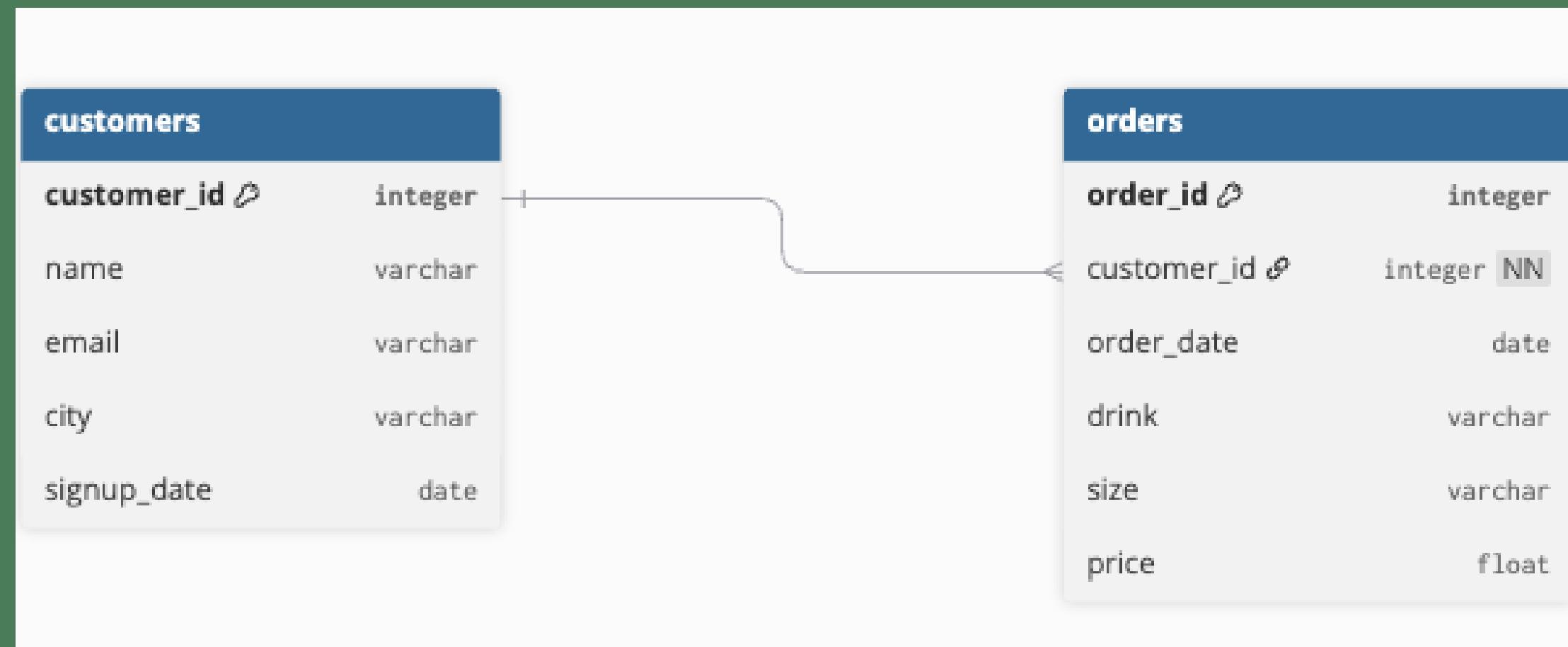


Table 2: orders

- one row per order
- multiple orders per customer
- dates included for time-based analysis

- Navigate to GitHub

Basic Query:

SELECT

Statement

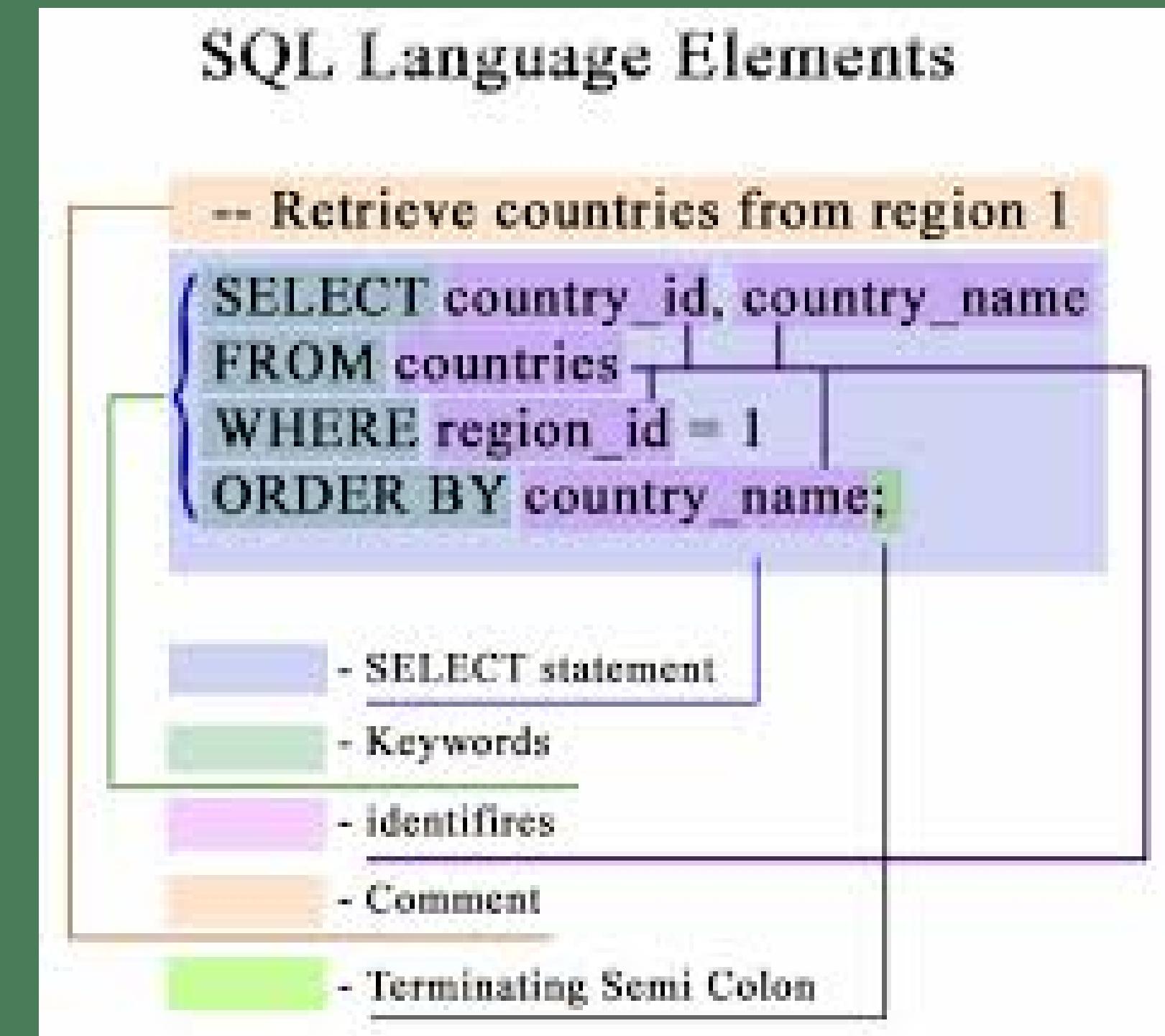
select *
from table

- Retrieve specific columns from a database table.
- Example syntax for querying product names effectively.
- Matcha example filters to enhance query results.

what does this do?

Filtering Data with WHERE & ORDER BY clause

The **WHERE clause** is essential for filtering rows based on specific conditions. For example, you can select orders placed after Feb 1, 2026, to focus on recent transactions in the matcha business.



The ORDER BY allows you to organize query results in a specific order

Example: Sort products by price from highest to lowest

Matcha example: List matcha products by their selling price

SQL Essentials: COUNT, SUM, and LIKE

COUNT - How many?

use when you want totals

SUM - how much?

use when you want revenue, totals, or accumulated values

LIKE - matches text patterns

‘Jayden%’ → starts with Jayden

%Cruz → ends with Cruz

‘%ayde%’ → contains “ayde

can combine with underscores each underscore represents a character.

Combining Tables

Understanding JOINs in SQL Queries

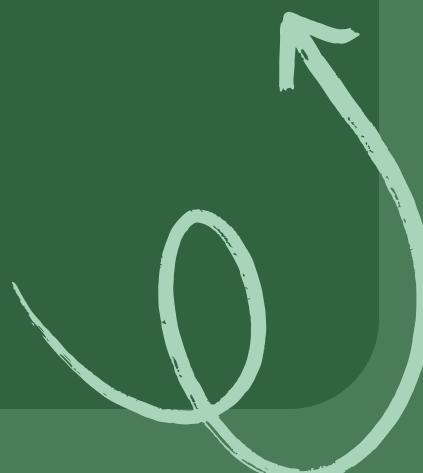
Explanation

JOINs allow you to **combine** related data from multiple tables in a database, providing a comprehensive view of data relationships and enhancing data analysis capabilities.

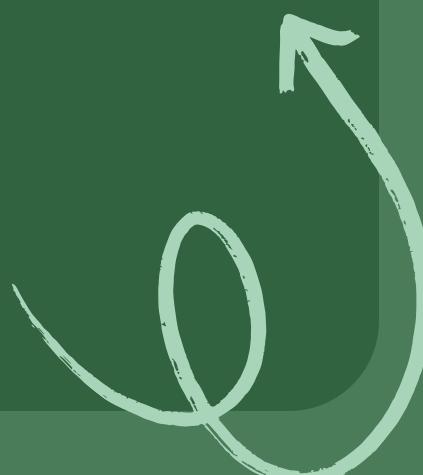
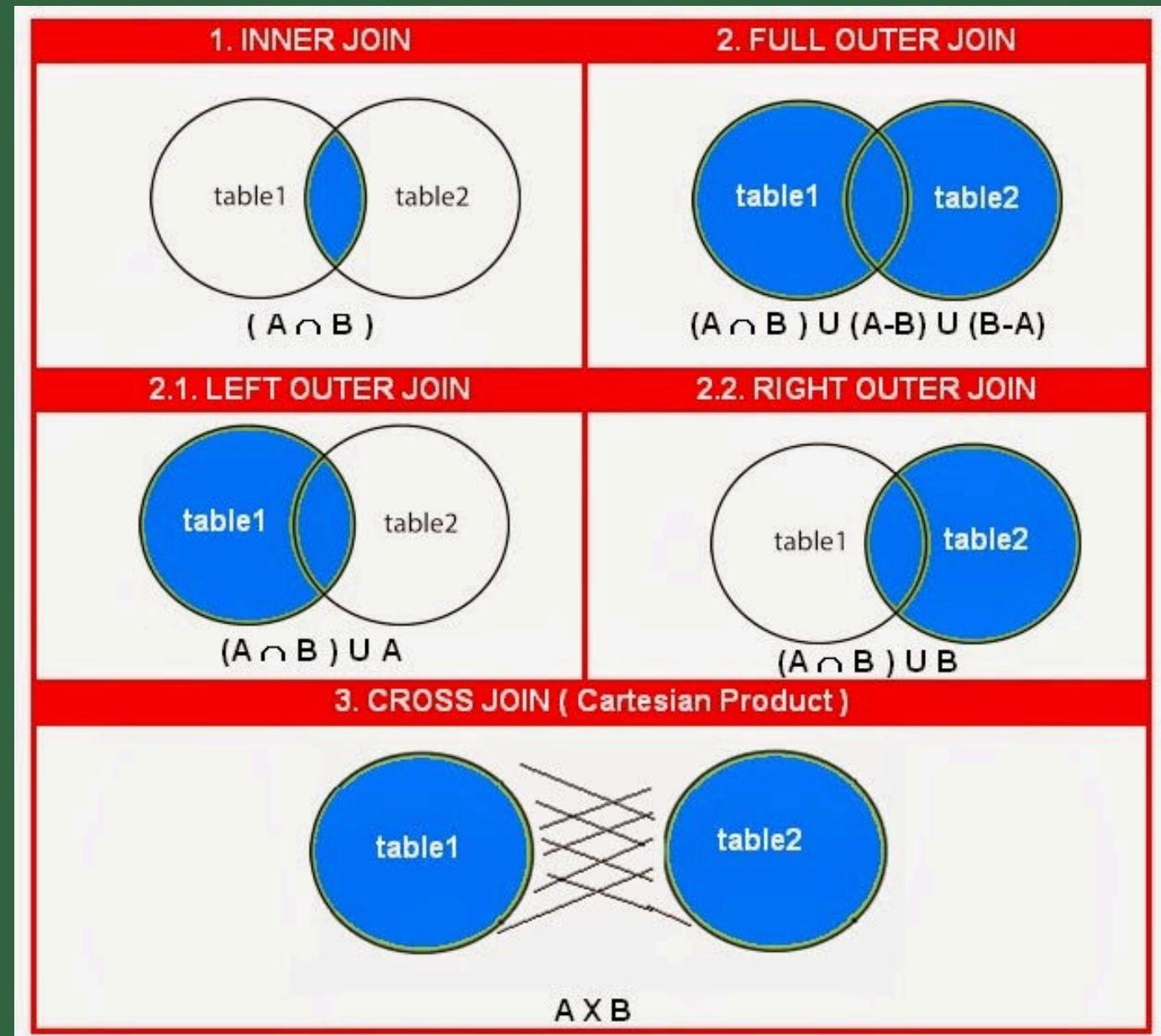
Types of JOINs

The most common types of JOINs are **INNER JOIN** and **LEFT JOIN**, each serving different purposes in how data from separate tables is matched and returned in query results.

We will look at INNER JOIN
In SQL, JOIN = INNER JOIN



JOINS



Aggregations with GROUP BY

- Summarize data, providing insights into total sales.
- Useful for analyzing performance across different products.
- Supports decision-making through aggregated business metrics.

: name	total_spent
Alex Kim	12
Chris Martinez	5.25
Dhara Osman	5.5
Jason Morgan	11
Jayden Cruz	12.25
Jordan Lee	17.25
Leah Abraham	11.5
Peter Hoang	12.25
Sam Patel	11
Taylor Nguyen	12.25
Yariel Bustillo	6

Key SQL Concepts

Essential skills for data querying

SELECT & WHERE

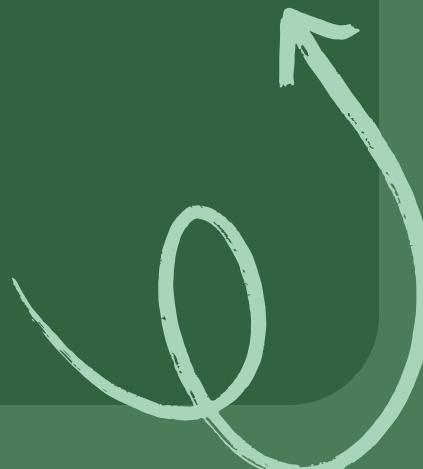
The **SELECT** statement retrieves specific data columns, while the **WHERE** clause filters records based on defined conditions, enabling targeted analysis of relevant data.

JOINS Explained

JOINS allow combining data from multiple tables, linking related information. This process enhances data analysis by providing a comprehensive view of interconnected datasets.

GROUP BY

The **GROUP BY** clause summarizes data by specific categories, facilitating aggregation. This is crucial for generating insights, such as total sales per product category, enhancing decision-making.





Thank You

for Exploring SQL with Matcha