

# Introduction to SQL and duckDB

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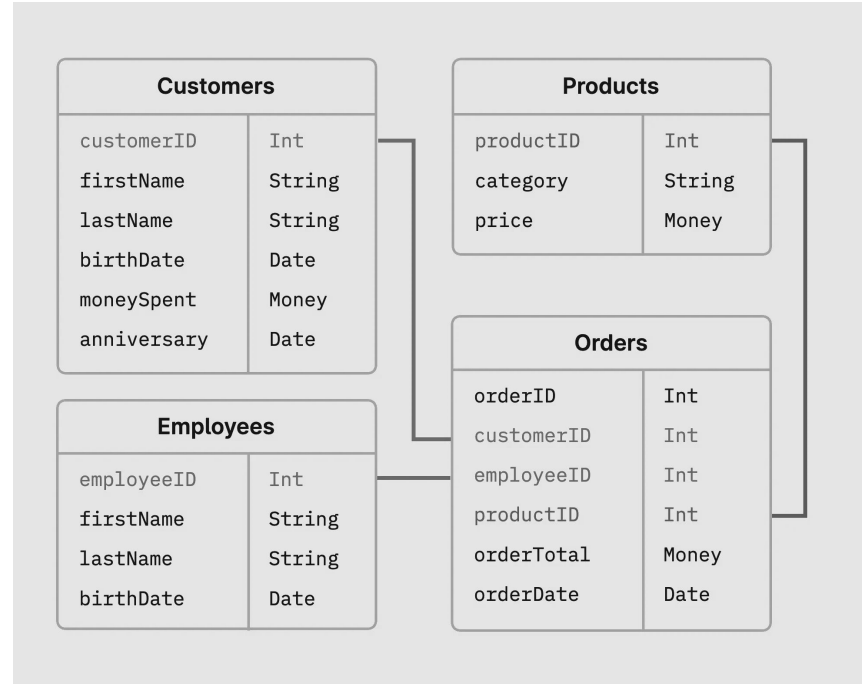
**Shashank**



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# Database

- A database is a structured collection of data.
- It allows for the storage, retrieval, modification, and deletion of data in an organized manner.
- Databases come in various types, including relational, NoSQL. Relational databases organize data into tables, which are interconnected.
- Each table represents a collection of related data and is organized into rows and columns.



**SQL** stands for Structured Query Language.

It's a programming language that's used to store and process information in relational databases.

### Types of SQL Statements

DDL (Data Definition Language): DDL statements are used to define, modify, and remove database structures, but not the data within them. Common DDL statements include CREATE, ALTER, and DROP.

DML (Data Manipulation Language): DML statements are used for managing data within schema objects. They include **SELECT**, INSERT, UPDATE, and DELETE.



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- An in-memory, columnar database management system optimized for analytical queries."
- Open-source and designed for simplicity, speed, and efficiency in processing analytical workloads."
- Supports SQL standards for easy integration with existing tools and workflows.