Databases have structure, and when you have structure, you have the need for diagrams.

But diagrams also need to be mutually understandable, and so we also have diagram standards or conventions. Common standards that apply to databases include entity-relationship (which has lots of variants) and Unified Modeling Language (UML) structural diagrams—but we can get into these later; this document is about getting you started right away.
Super Basic Relational Concepts

- Relational databases are made up of **tables** (mathematically known as relations—thus the name “relational”)

- Tables are defined by their **columns** (or fields, or attributes, or properties)

- One or more of these columns may serve as a table’s **key**—the column(s) that uniquely identify a specific **row** (or record) in the table

- Tables may reference each other via these keys
Super Basic Mapping to a Diagram

- Tables are drawn as rectangles, with their names above the rectangles.
- A table’s columns are listed within the rectangles; optionally, the column’s data type can be given.
- Columns which comprise a table’s key are highlighted in some way—a gray background works nicely.
- Table columns which reference another table’s key are drawn with arrows from the reference to the referent.
The diagram below communicates the structure of a hypothetical database of movies, viewers, and ratings

Note how tables don’t have to have keys (although in practice they almost always will)

That’s it for now—go forth and diagram!