**What are database diagrams?**

Database diagrams are a visual representation of the database structure, schema or table (Database diagrams, n.d.). A diagram can be used to make decisions and document the structure of a database (Mortier, 2022). I suppose it could be looked at as a technical drawing containing the details of how to build the database.

**Why are database diagrams used?**

There’s a saying I always remember from my first designer job, “It costs a dollar to fix a problem in design, ten dollars to fix a problem in the shop and one hundred dollars to fix a problem in the field.” I view database diagrams the same way. Creating the diagram is the design portion and much cheaper to find and fix problems that may occur before the actual database is created.

**What is an Entity Relationship Diagram?**

Merriam-Webster (n.d.) defines entity as “something that has separate and distinct existence.” This is important because an Entity Relationship Diagram (ERD) visually describes the entity and its relationships (A guide to, 2019). Without the entity, the data describing the entity cannot exist. An ERD maps out descriptive data about the entity.

**What tools can be used to create an ERD?**

ERDs can be created using a handful of different tools:

* Data modeling tools are specifically for creating data models
* Database IDEs provide ERD modeling along with other tools for creating the whole structure
* Diagramming tools can create ERDs as well as other types of diagrams (79 data modeling, 2018).

**What are the symbols used in an ERD?**

Rectangles represent entities such as people, places or things, diamonds speak to the relationship between entities, ovals describe the characteristics, while the connecting lines can provide helpful notation for the model (Entity-relationship diagram, n.d.). There are other styles that can be used, with most of them using the symbols mentioned above and differences in the notation in between.

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