Database Design

Contents

Time required: 90 minutes

Entity Relationship Model Tutorials

- https://www.tutorialspoint.com/dbms/er_model_basic_concepts.htm
- https://www.tutorialspoint.com/dbms/er_diagram_representation.htm
- https://www.lucidchart.com/pages/videos/entity-relationship-diagram-erd-tutorial-part-1

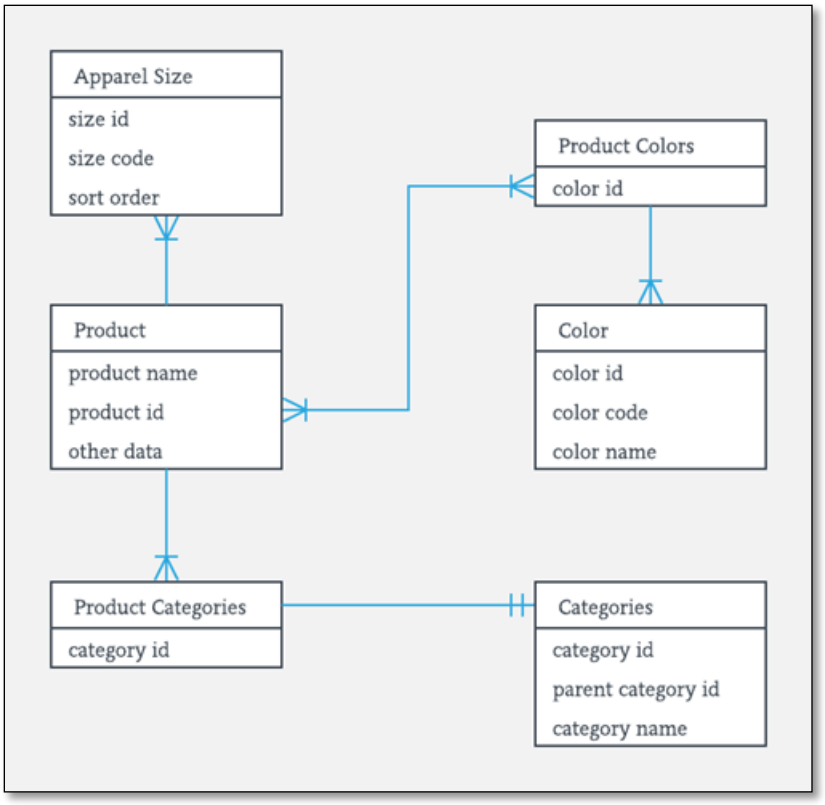
SQLite is a relational database. We create tables related by primary keys. We will design our databases using ERD's (Entity Relationship Diagram). www.lucidchart.com is a free web-based diagram site.

ERD (Entity Relationship Diagram)

ERD: An Entity Relationship Diagram, also known as ERD, is a diagram that displays the relationship of entity sets stored in a database. ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities (tables), attributes (fields), and relationships.

ER Diagrams contain different symbols that use rectangles to represent entities, ovals to define attributes and diamond shapes to represent relationships.

At first look, an ER diagram looks very similar to the flowchart. However, ER Diagram includes many specialized symbols, and its meanings make this model unique. The purpose of ER Diagram is to represent the entity framework infrastructure.



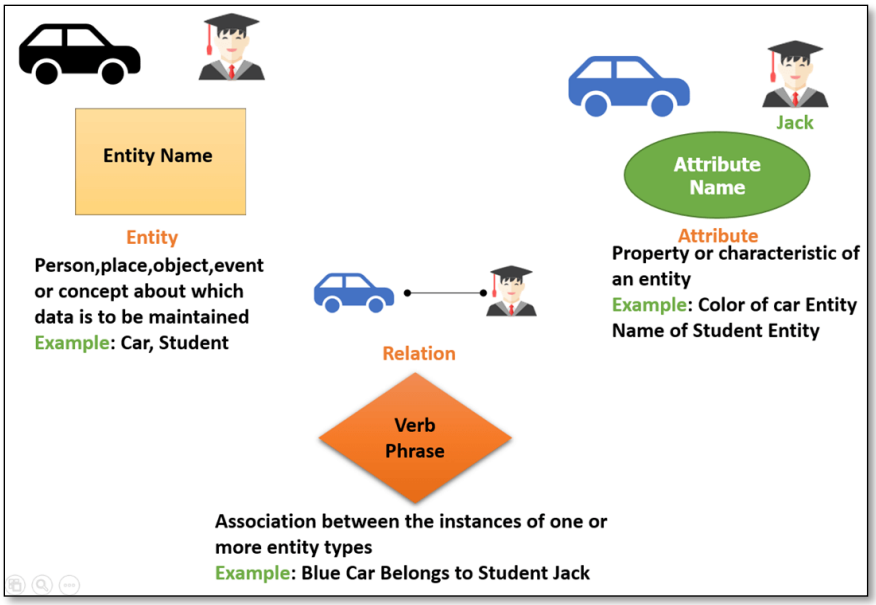
Components of the ER Diagram

This model is based on three basic concepts:

- Entities
- Attributes
- Relationships

ER Diagram Examples

For example, in a University database, we might have entities for Students, Courses, and Professors. The Student entity can have attributes like StudentID, Name, and DeptID. They might have relationships with Courses and Professors.



Assignment Submission

1. Attach the pseudocode.
2. Attach the program files.
3. Attach screenshots showing the successful operation of the program.
4. Submit in Blackboard.