

INFO 610 Fall 2020

Week 2.5

(more) Terminology - Chapter 3

Relationship Terms

- Relationships exist between two tables when you can, in some way, associate the records from the first table with those of the second.
- Relationships are established via Primary and Foreign keys
- Alternatively, relationships can be built using a 'linking' or 'associative' table
- Relationships allow you to:
 - Enable multitable views
 - Enforce data integrity
 - Eliminate duplicate data

Attempt to draw this out

LIVE!

- One-to-one relationship
 - Two ways!
 - Primary table 'knows' about related table
 - Primary table DOESNT know about related table
- One-to-many
- Many-to-many

Types of Participation

TABLE_A , TABLE_B

Mandatory or Optional

- Mandatory - If data must be in A before B, A is mandatory
- Optional - If data does NOT have to be in A before B, A is optional

Integrity - Fields

- Fields are defined by three things:
 - General - name, description and which table it belongs to
 - Physical - Data type, length and display format
 - Logical - required range, range values, default value

Data Integrity

Validity, Consistency, Accuracy

- Table level integrity - ensures no duplicate records in a table and all required fields are present
- Field level integrity - Ensures that the structure of every field is sound
- Relationship level integrity - Ensures data in related tables is sound and the data is synchronized after a transaction.
 - (Referential integrity)
- Business Rules - Restrictions or limitations on certain aspects of a database based on your domain/business/requirements
 - Value ranges
 - Date ranges
 - 'length of password'
 - User can only own 'three' cars
 - etc

