

C&NS Source Guide

AN INTRODUCTION TO DATABASES

Databases can best be described as **collections of similar information**, grouped together and placed in a context that makes it easy to find and manipulate that information. At their simplest, databases are like a set of index cards, with each card containing the information on one member of the set.

Name: Martin Frobisher	
Address: Baffin Island	Name: Jacques Cartier
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More items, or index cards, can always be added to the set, and they can easily be re-ordered so that they are arranged by last name, by city of residence, or by any other value, or **field**, that appears on each card.

A database, then, is just like a set of pre-printed index cards, with empty fields waiting to be filled out for each person, item, event, etc., that you wish to catalog and describe. You begin creating your database by deciding the complete set of **fields** you'll use for your items. (If you were building a database from the index cards above, it would have three fields: **Name**, **Address**, and **Phone**.) Once you establish your fields, you are ready to begin creating **records**, or individual items in your database. Creating a new record is exactly the same as taking one of the blank index cards and filling in the information for a new person. It's that easy.

Once you have a set of index cards all filled out, you might want to put them in a card file drawer to keep them in order. Then you can add new index cards (records) later on, or re-order the cards, or delete those cards (records) that at some point cease to be part of your database.

In database terms, this set of cards would represent a **table**; it could have any possible number of records, but each record would have the same set of fields to be filled in. Of course, just as you could put dividers in your file drawer and separate the Personal Information index cards from a second set that describes, for example, items that you sell in your corner drugstore, your database can also contain multiple tables, each of which describes a different type of item being cataloged.



DEFINITIONS

Table: A collection of data applicable to a specific subject, such as contact information or current inventory. A database consists of one or more tables.

Record: The basic unit of every table. Each record stores information for a single entity, such as a person, a recipe, or a book. (Are you old enough to remember the card catalog in the library?)

Field: The building blocks of which database records are composed. Each field is meant to store one particular piece of information, such as a birthdate or zip code.