



FileMaker Pro 7.0: Basics

Learning Guide

Database Basics

A database, at its very core, is simply a structured collection of data. Access sees your data in the form of a **table** that is composed of rows and columns. Each of these rows is a **record** in your database, containing all data about a single object, person, or concept.

The sample table below captures information about CDs in an individual's music collection. The record displayed in the second row contains information about *Blue Moon Swamp*, a CD released in 1997 by John Fogerty.

Tracking	Artist	Album Name	Released	Location
1	Farm Dogs	Immigrant Sons	1998	Home
2	John Fogerty	Blue Moon Swamp	1997	Car
3	Barenaked Ladies	Stunt	1998	Office
4	CPR	CPR	1998	Home
5	Elton John	Tumbleweed Connection	1971	Home
6	Sting	Bring on the Night	1985	Car
7	Fleetwood Mac	Rumours	1977	Home

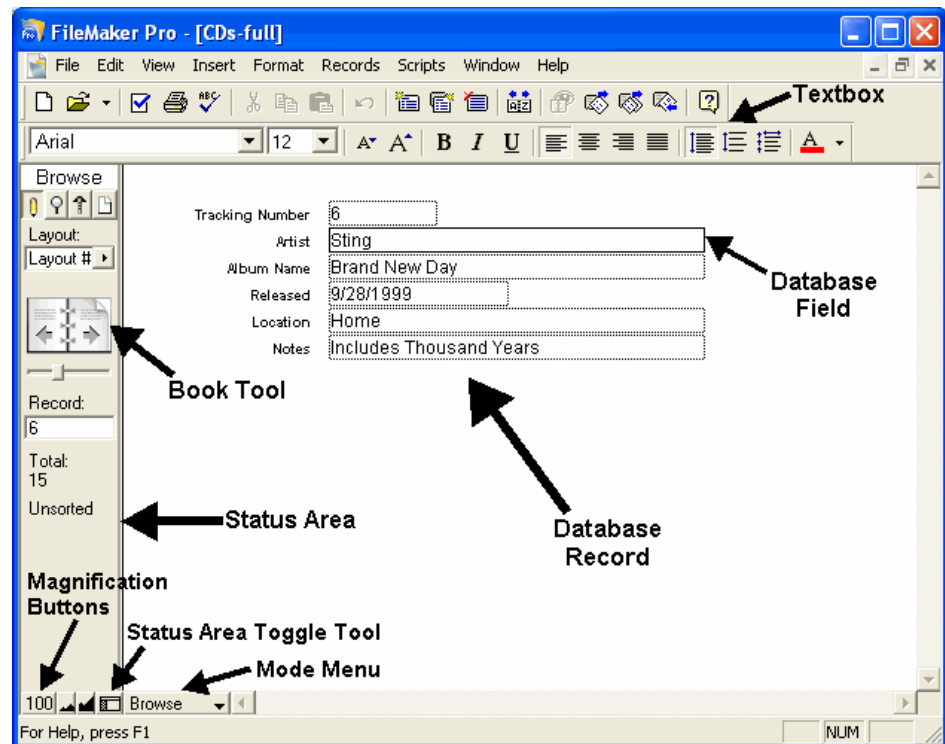
Every record is composed of **fields**, each contains a specific type of data (numbers, text, currency, dates, etc.). Each field is represented as a column in a data table, because the field is present in each record in the database. In this case, the **Album Name** field (shaded below) is a text field.

Tracking	Artist	Album Name	Released	Location
1	Farm Dogs	Immigrant Sons	1998	Home
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Once this structure is in place, you can access your data using different layouts to provide a greater level of flexibility in the display and organization of your data. For example, you can enter data using forms, or create reports to present your data.

Exploring the FileMaker interface

The image below identifies the basic elements of FileMaker's interface. Each will be described in detail on the pages to follow.

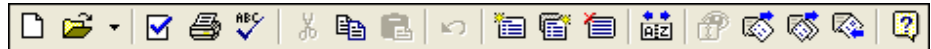


Elements of the FileMaker window

In addition to the standard elements in Windows XP, FileMaker uses several graphic elements to provide its users with access to the data in a database as well as some basic commands.

The FileMaker Toolbar

The FileMaker toolbar allows you to access many of the basic commands for working data in your databases.



To ...	Click on the button...	That looks like...
Create a new database	New	
Open an existing database	Open	
Print records	Print	
Add a record	New Record	
Create a copy of a record	Duplicate Record	
Delete a record	Delete Record	
Sort records	Sort	

Status Area

The status area, located at the left edge of the FileMaker window, allows you to browse database records and select layouts with which to display data.



The Book Tool

The Book tool, located in the middle of the status area, provides browsing access to the records within a database. To display the next record in the database, click on the right page on the Book icon.

- To display the **previous record**, click on the left page.
- To jump between records, use the switch directly below the book.



Tip: Using the Book tool in other modes

The Book tool can be used to move between various items, depending upon what mode you are in. It is a control for moving from one record to another in Browse mode, from one layout to another in Layout mode, from one find request to another in Find mode, and from one page to another in Preview mode.

The Layout Drop Menu

The Layout drop menu, located above the Book icon, allows you to access any of the **layouts** you created. To switch between layouts:

- Click on the right facing arrow of the **Layout Drop Menu**.
- Click on the name of the layout you wish to view.

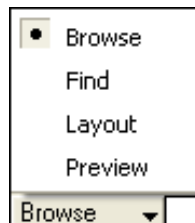


The Mode Pop-up Menu

The Mode pop-up menu, located at the bottom left of the FileMaker window, allows you to switch between modes:

The mode ...	Allows you to ...
Browse	Enter and retrieve data
Find	Search the database
Layout	Create custom layouts
Preview	Preview a layout

- To switch modes, click on the down facing arrow of the **Mode Pop-up Menu**.
- From the list that appears, select the mode you wish to view.



Magnification buttons

These Magnification buttons, located in the bottom left corner of the FileMaker window, allow you to view your database at greater or lesser magnification.

- To zoom in on your data layout, click on the right-hand button.
- To zoom out, click on the middle button.
- Clicking on the button labeled 100 will return the layout to normal magnification.



Status Area Toggle Button

The Status Area toggle button, located in the bottom left corner of the FileMaker window, allows you to hide and restore the Status Area.

- To hide the Status Area, clicking on the **Status Area** toggle button.



- To restore the status area, click a second time on the Status Area toggle button.

FileMaker Views

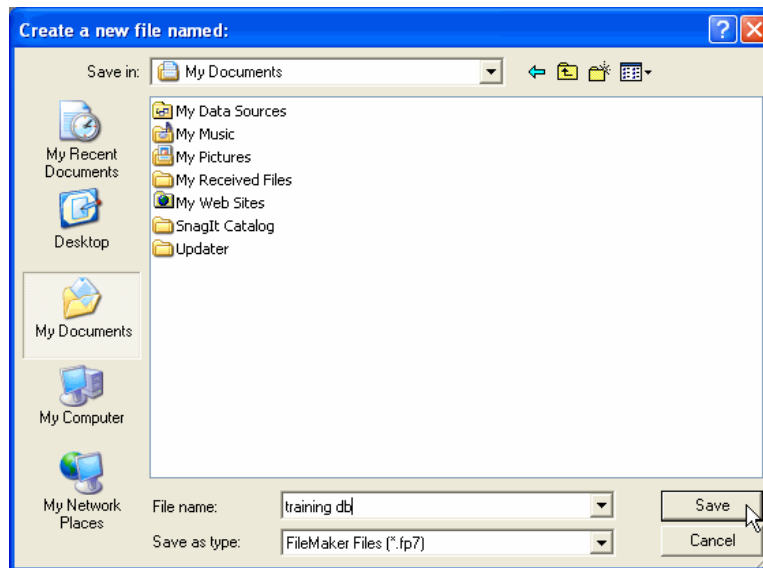
FileMaker Pro offers 3 different ways to view the data in your database. You can swap between views at will by selecting your desired view from the **View** menu. Bear in mind that these views are merely different ways of displaying data – the data in your database will not be changed when it is displayed in a different view.

View	Description
Form	Displays a single record on the screen at a time, using the selected layout.
List	Displays multiple records on the screen at a time, using the selected layout.
Table	Displays your data in a table format, using one row to represent one record. Each field is represented as a column in the table

Tip: Note that in the **List** view the length of your layout will determine how many records may be displayed on the screen at one time; shorter layouts will permit the display of more records.

Creating a new database

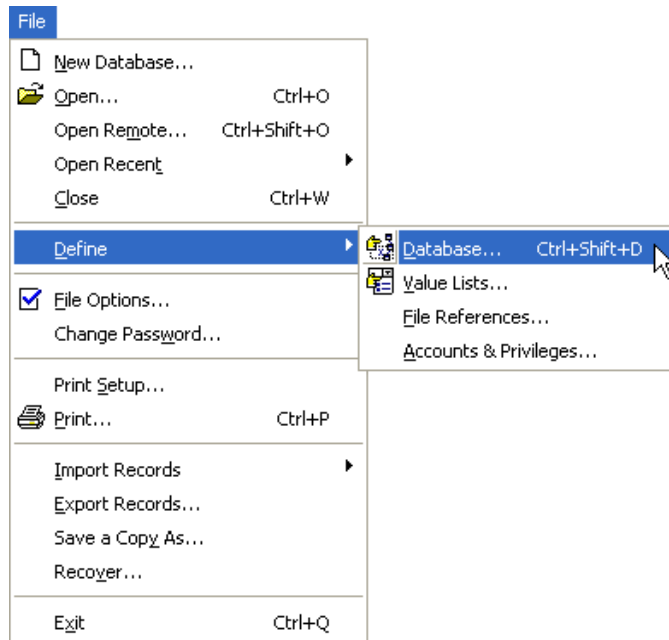
- From the **File** menu, select **New Database**.
- The **Create New File** window will appear.
- Navigate to the folder where you wish to save your new database.
- In the **File name** box, type a name for the database.
- Click on the button labeled **Save**.



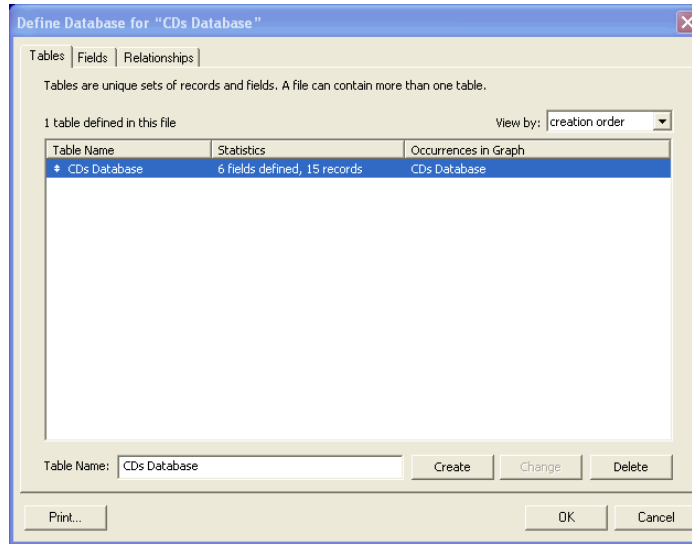
Adding tables

Use database tables to organize and group your data by a common or characteristic principle. Your data base can contain as many tables as you need to organize your data. By default, a new file contains a table with the same name as the file. To define a table:

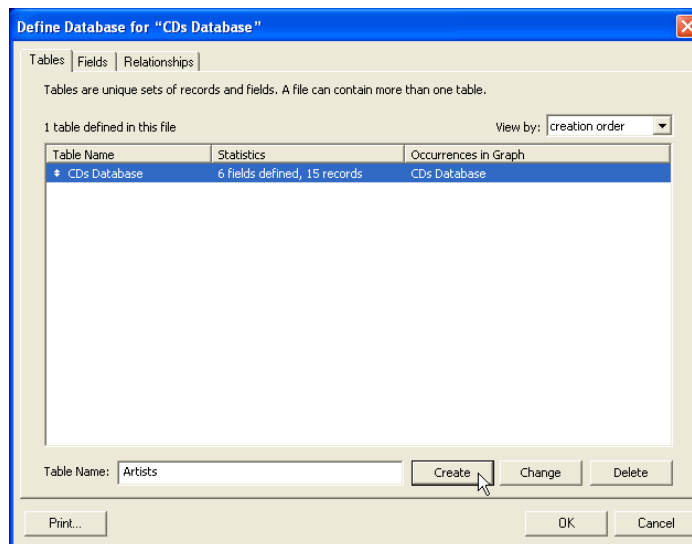
- Open the database to which you wish to add tables.
- From the **File** menu, select **Define**.
- From the menu that appears, select **Database**.



- The **Define Database** window will appear.



- Click on the tab labeled **Tables**.
- In the box labeled **Table Name**, type a name for your new table.
- Click on the button labeled **Create**.

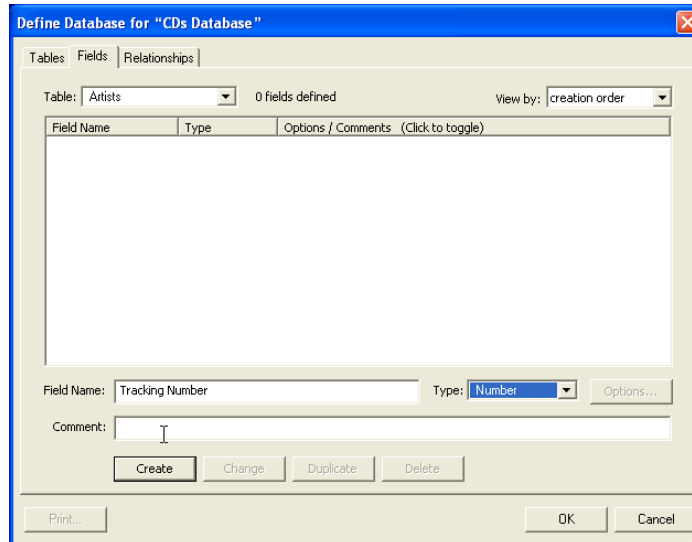


- Continue to define tables as described above.
- Once all the desired tables have been defined you may:
 - Click the button labeled **OK** to return to the Filemaker window, or
 - Click on the tab labeled **Fields** to define the fields in your new tables.

Defining fields for your database

After creating a database or adding new tables, define the fields that will capture your data.

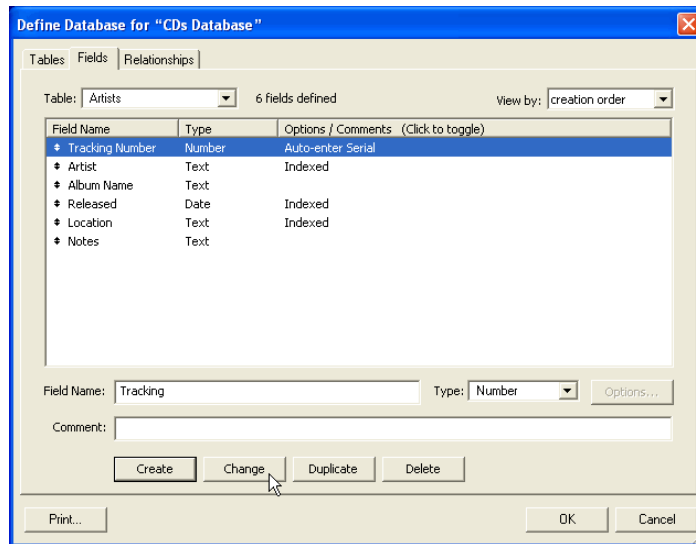
- In the **Define Database** window, select the **Fields** tab.
- In the box labeled **Field Name** type the name of the new field.
- From the pull-down menu next to the box labeled **Field Name**, select the type of data you wish to store.
- Click on the button labeled **Create** to add the new field to the database.



To define a second field:

- Type the name of the new field.
- Select its type.
- Click on the button labeled **Create** or type **Enter** on your keyboard.
- Define additional fields using these steps.

- To change the name or data type of an existing field before entering data:
 - Click on the field's name in the **field list**.
 - Once the field name is highlighted in blue, make changes to the type and field name.
 - Click on the button labeled **Change** to finalize the changes to the field.



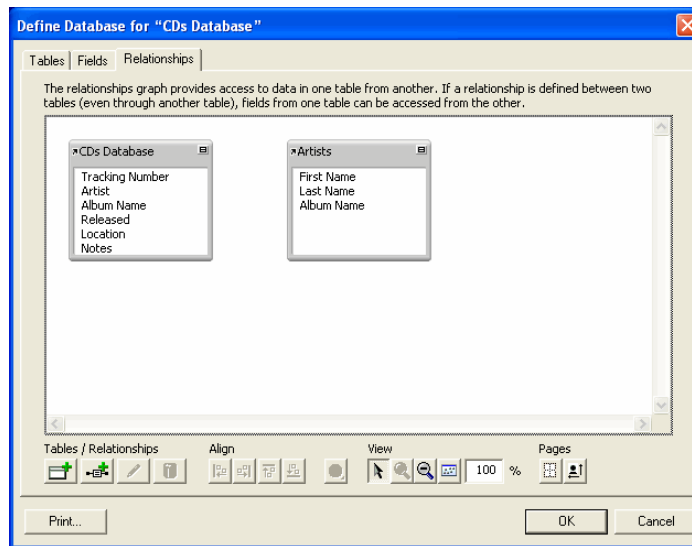
- When you have finished defining your fields, click on the button labeled **OK**.
- FileMaker will automatically create an initial blank record in your database and make the first field in the record active for data entry.
- The following table displays descriptions of various field types:

Field Type	Field Content	Restrictions
Text	Text of any kind	Limited to 64,000 characters
Number	Numeric content	Limited to 255 characters; must be on one line
Date	Full date in various formats	Single date between year 1 and year 5000; limited to 8 characters (month, day, year, separators)
Time	Clock time	One time; limited to 8 characters
Container	Image, movie, sound, or linked object	Limited to one item per container field
Calculation	Result of a formula-based calculation	Limited to one formula with a text, numeric, date, time, or container result
Summary	Summation of fields in several records	Result of a single summary function

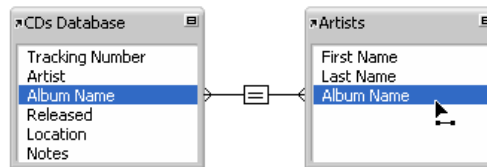
Creating relationships

A relationship is a powerful method for organizing your data. Using a relationship, you can join data in one or more tables based on common field values, different field values, or a comparison of values in two or more fields. To create a relationship between tables:

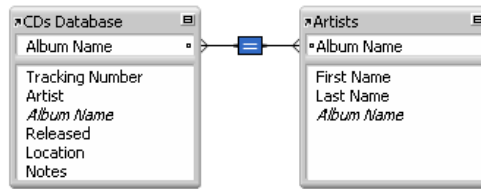
- From the **File** menu, select **Define**.
- From the menu that appears, select **Database**.
- The **Define Database** window will appear.
- Click on the tab labeled **Relationships**.



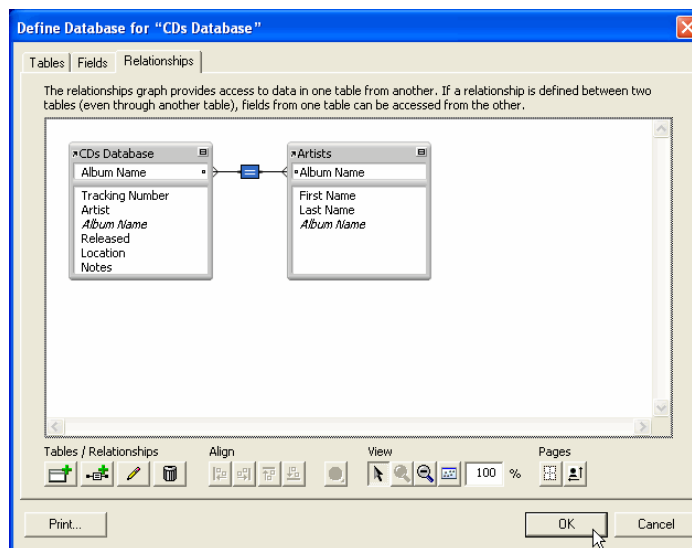
- The **Relationships Graph** will be displayed in the **Define Database** window.
- To create a relationship:
 - Locate the two tables you will be using for the relationship.
 - Click on a match field in one of the tables and drag to the corresponding match field in the other table.



- A relationship will be created between the two tables.



- Repeat the previous steps until all the desired relationships have been created.
- Click on the button labeled **OK**.



Tip: When creating a relationship between two tables in the **Define Database** window, you can also click the **Add Relationship** button located at the bottom left of the window.



Managing an existing database

Adding new records

To add a new record to the database:

- Click on the **New Record** button on the toolbar or choose **New Record** from the **Records** menu.



- A new record will be added directly after the current record.

Entering data in a new record

- Enter data in the record's first field.
- Type the **Tab** key to move the flashing insertion point to the next field.

First Name	Josh
Last Name	
Zip code	

- Type the **Tab** key to move from one field to the next until you have entered data in all of the appropriate fields in the record.

Editing an existing record

To edit a record that already exists in your database:

- Using the Book tool, display the record you wish to edit.
- Click on the field you wish to select it. *Once the field is selected, it can be edited like text in a Word document.*

Artist	Elton John
Album Name	The Muse Soundtrack
Tracking Number	13

- Repeat the previous steps to edit other records in your database.

Duplicating records

To create an exact copy of a record:

- Make sure that the record you wish to duplicate is being displayed in the FileMaker window.
- Click on the **Duplicate records** button on the toolbar or choose **Duplicate records** from the **Records** menu.



- The duplicate record will be added to the database and displayed in the FileMaker window.

Deleting individual records

To delete a single record from your database:

- Display the record to be deleted in the FileMaker window.
- Click on the **Delete records** button on the toolbar or choose **Delete records** from the **Records** menu.



Deleting every record in your database

To delete all the records in the database:

- From the **Records** menu, select **Delete all records**.

Tip:** when a record is deleted from your database, it cannot be retrieved except from a backup copy of your database. **The delete command cannot be undone, so use it with caution.

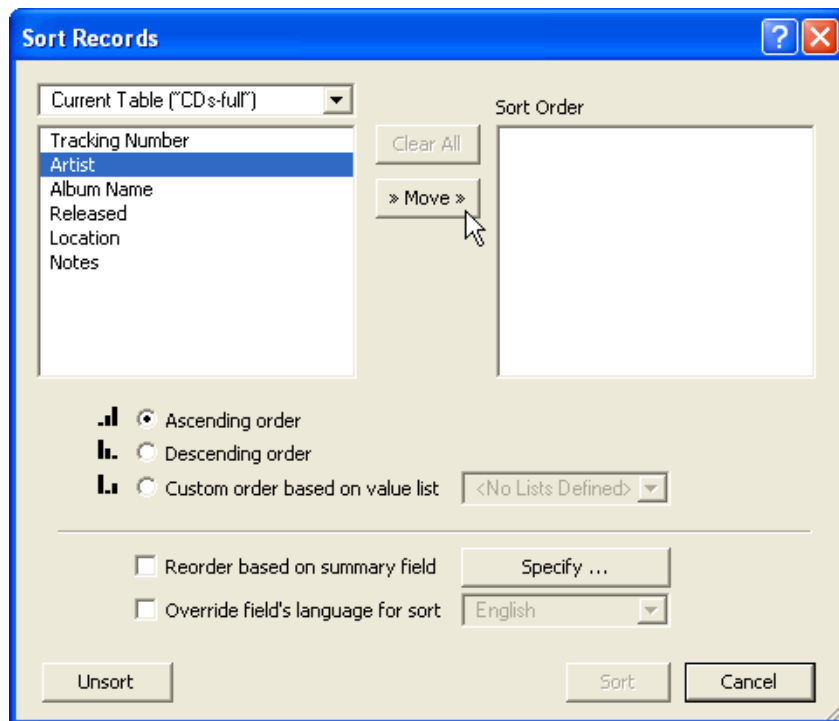
Sorting records

When retrieving data from your database, it is often useful to sort the data. For example, a personnel database might be most useful when all of the records are sorted by employee last name. Without such a sort order, FileMaker would display personnel records in the order in which they were created. To sort the records in your database:

- Click on the **Sort** button located on the toolbar.

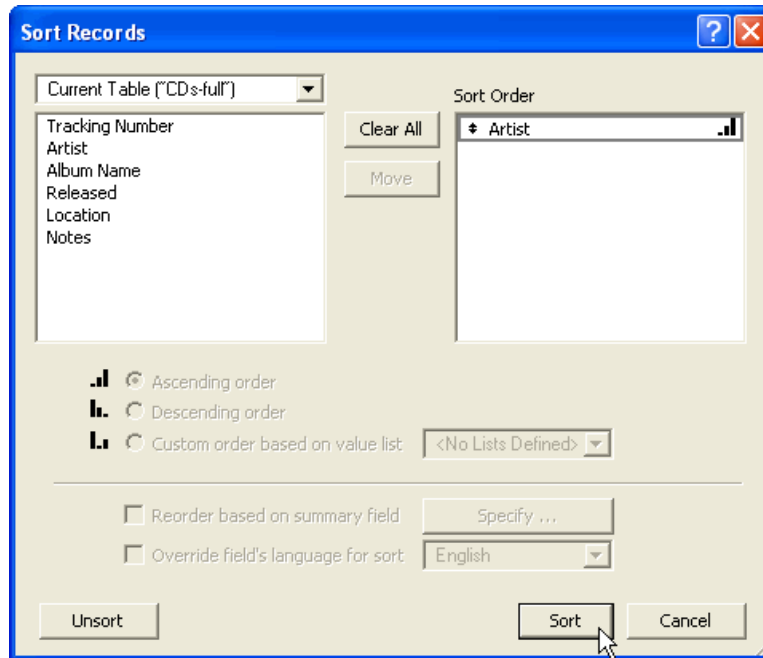


- The **Sort Records** window will appear.
- Click on the name of the field you wish sort your records with.
- Click on the button labeled **>Move>**.



- Select the way you wish to sort your data:
 - To sort your data in ascending order, click on the radio button labeled **Ascending order**.
 - To sort your data in descending order, click on the radio button labeled **Descending order**.

- The name of your field will appear in the box labeled **Sort Order**



- Click on the button labeled **Sort**.

Finding Records

FileMaker's Find mode makes it easy to search for records in your database. There are three ways to switch to the Find mode:

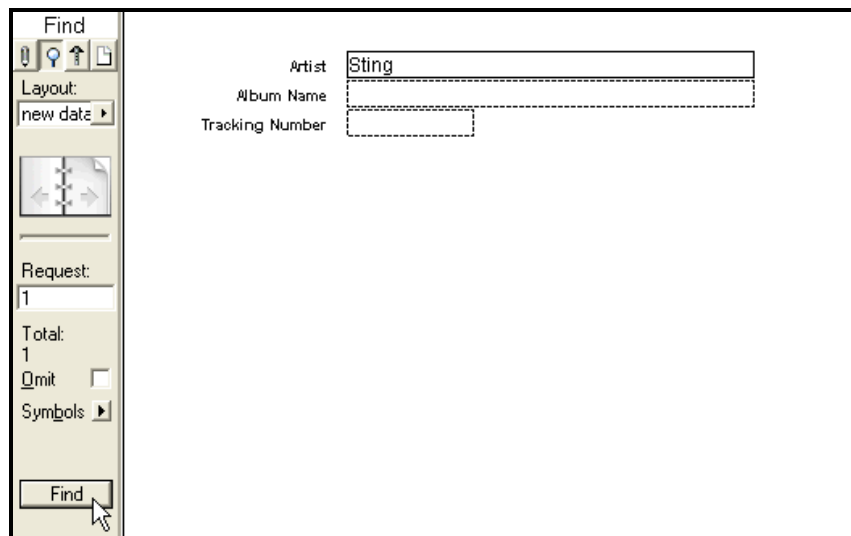
- Click on the **Find** button located at the top of the **Status Area**.



Simple Search

To find records that match a single criterion (data found in a single field, for example):

- Type your criterion in the appropriate field.
- Click on the button labeled **Find**.



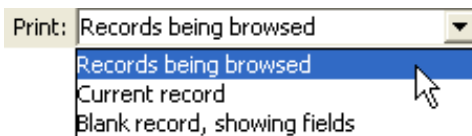
Printing Records

FileMaker permits you to print a single record or multiple records, using any layout. To print a single record:

- Use the **Book** tool to display that record on the screen.
- Click on the **Print** button located on the toolbar or select **Print** from the **File menu**.
- In the Print dialog box, click on the button labeled **Print**.

To print multiple records:

- Search for the records that you wish to print, and display one of those records on the screen.
- Click on the **Print** button on the toolbar or select **Print** from the **File menu**.
- From the drop-down menu at the top of the Print dialog box, select **Records Being Browsed**.
- Click on the button labeled **Print**.



Planning a database

A little planning goes a long way in creating a database that will be a useful and powerful tool for accomplishing your professional and organizational goals. Be certain to take plenty of time to plan and test your database before you implement it and put it to work.

Below are some ideas to consider in your planning process:

- What is the goal of your project?
- What is the goal of your database? (Is it the same as the goal of your project?)
- Who will use the database?
- What kinds of information must be captured and made accessible?
- What specific data do you want to track and manage?
- How will you need to retrieve and output your data?
- What fields will be necessary to capture the data?

Tip: Consider creating a prototype of your database to be tested with a subset of your data. This prototype will allow you to work with your database and your data so you can make necessary revisions.