

HOW TO BUILD CUSTOM BUSINESS SOLUTIONS

for iPhone and iPad

Desk-bound databases are a thing of the past. With FileMaker Pro and FileMaker Go, you can create custom-tailored business solutions that run not only on desktops and laptops but also Apple's iPhone and iPad, with all the elegance of a full-featured app.

Mobile devices are revolutionizing the business world, unlocking immense value through ubiquitous, real-time communications. Taking full advantage of devices like the iPhone and iPad — the new standard in mobile computing — can make your company more efficient, productive, and nimble. But how to get the solutions you need? Some methods of developing solutions for iOS, Apple's mobile operating system, can require weeks or even months of development effort.

Fortunately, there's a simple, cost-effective option: the FileMaker line of software, including the FileMaker Pro desktop development environment, the FileMaker Go iOS app, and FileMaker Server for hosting shared databases. FileMaker lets you develop business solutions within hours or days, and they run automatically on iOS devices as well as Windows and Mac computers, so you can develop once and run anywhere (see Fig. 1).

There are two basic ways to build a FileMaker Pro database. You can import existing data into a ready-made starter solution, or you can create a database from scratch. Let's take a look at how to build a custom solution using either approach, and then how to deploy it on iOS devices using FileMaker Go.

USING A STARTER SOLUTION

FileMaker Pro comes with a library of professionally designed starter solutions for a variety of tasks, including inventory, contacts, billing, and event management (see Fig. 2). The advantage of using a starter solution is that you get an attractive database for a minimum of effort. Most include basic reports and scripts, and some automatically relate different types of data.



Figure 1: The FileMaker product line: FileMaker Pro is an intuitive development environment for relational databases. The FileMaker Go app runs FileMaker databases on iPhone, iPad, and iPod touch. And FileMaker Server distributes databases for live, secure deployment on desktops and mobile devices.

Starter solutions are designed to be generic and you will want to modify their forms (known in FileMaker Pro parlance as layouts) to suit your needs. To edit layouts, go to View > Layout Mode. You can move, add, and delete fields and other layout objects. The layout wizard will guide you through the process of adding a new layout for, say, a custom report (see Fig. 3).

FileMaker Pro allows you to automate many processes using scripts (see Fig. 4). To create or edit a script, go to Scripts > Manage Scripts. Use the "new" button to make a new script, or select an existing one and click the "edit" button. Working in the script editor is easy: Point and click to move commands from the library on the left, and add parameters as required.

Finally, import your data into the starter solution. You can import from spreadsheets, text files, and many other sources. If you've been using a paper-based system, you won't have digital data files to import. Instead, simply open the database's form and start creating records and typing in data.

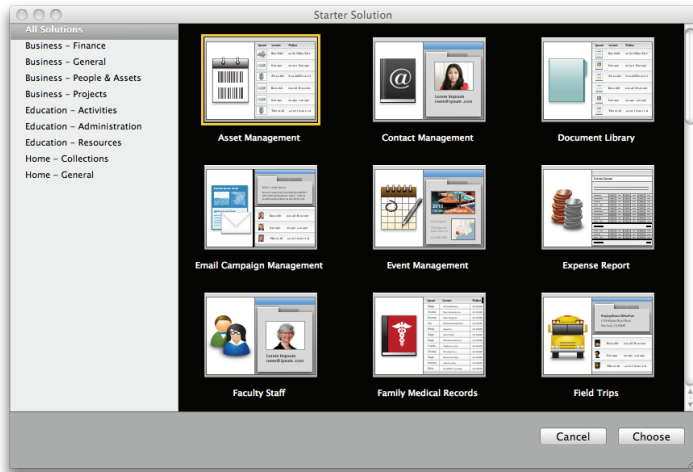


Figure 2: FileMaker Pro simplifies development by offering a library of starter solutions designed around common business tasks, including inventory, contacts and billing.

CREATING A DATABASE FROM SCRATCH

If none of the starter solutions is quite right for your business, you can roll your own. Creating a solution from scratch could take a little more work, but it gives you more options — plus the assurance you'll get exactly what you want.

The process can be as simple as dragging a spreadsheet or appropriately formatted text file onto the FileMaker Pro application icon on your desktop. FileMaker Pro will import the data and create the table and fields required to store it. The program will also create a default layout and a default user interface, so you can interact with the data immediately.

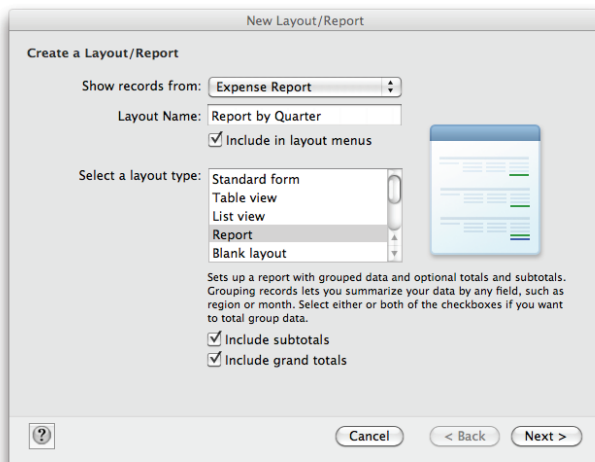


Figure 3. If you use a starter solution, you may want to adjust the layout to your specific needs. The layout wizard guides you through the process.

While drag-and-drop is the easy route to building a fully customized solution, you can also create a database solution directly, defining tables, fields, relationships, forms, and reports as you like. If you're migrating from a paper-based system, this is the only option, since you don't have a digital data file to import.

If your data is in a corporate SQL solution such as MySQL, Microsoft SQL Server, or Oracle, FileMaker Pro can integrate it. You'll need a little help from your database admin, but you don't need to know SQL to link your FileMaker solution to these data sources.

No matter how you get your data into FileMaker Pro, once your data is in a database, users can start finding, sorting, editing, printing, exporting, graphing, and sharing with multiple users on Windows and Mac computers.

And don't neglect security. It's a good idea at this point to create a couple of basic account and password sets — for example, one that provides master access and another for ordinary users (see Fig. 5). If you want the database to open directly every time without asking users for an account name and password, you can enter default info by going to File > File Options.

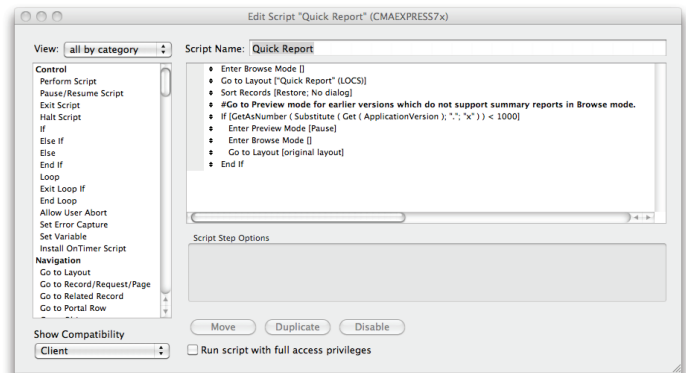


Figure 4. FileMaker Pro's script editor makes it easy to create and edit scripts by pointing and clicking. Select commands from the library on the left to add them to the right-hand script. Then add parameters as required.

DISTRIBUTING AND SHARING ON IPHONE AND IPAD

FileMaker Pro databases you create on your Mac or Windows machine will automatically run in FileMaker Go on iOS devices, as well as on your desktop, so you can develop once and run anywhere. You may want to tweak the size of your layouts for mobile use, but it's not required (see Fig. 6).

With your data properly imported and secured, you're ready to deploy the database to iOS devices. There are two primary ways to go about it. If users simply need to view a local copy of data such as a product catalog, you can distribute an individual database file as an email attachment, post it for

download from a web page, or have users drag and drop files using iTunes File Sharing (found in iTunes under the Apps tab). Either way, each user has their own copy stored locally on their device. For example, a user with an iPod touch can carry the database around and use it without requiring mobile phone service.

CUSTOM SOLUTIONS MADE SIMPLE

Following the steps above, someone with no prior FileMaker development experience could complete a simple solution in a single day. No other comparably powerful database management tool can make a similar claim. Your project might be a little more complex and the process could take longer, but the time and expense are bound to compare very favorably with those required by competing methods. Moreover, once your database is up and running, you can continue to tweak and improve it as the need arises.

As easy as FileMaker Pro can be, it's also an amazingly rich and powerful development tool. Companies that want outside help developing apps can leverage the FileMaker Business Alliance of over 1,000 FileMaker development companies focused on rapid database development projects.

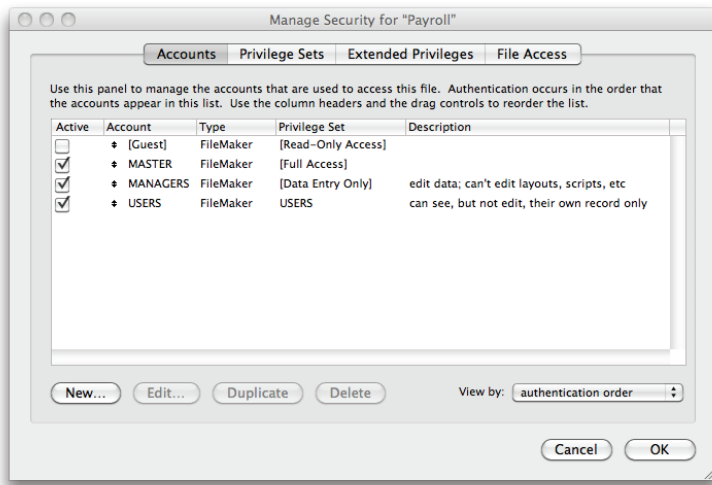


Figure 5. To keep your databases secure, FileMaker Pro lets you define privileges and passwords for different classes of user.

There's even an elegant way to overcome the hurdle of intermittent connectivity: Email a distributed database from an iOS device. Reps can take orders in the field without live cell service or Wi-Fi. Later, when connected, the reps can email their database directly from FileMaker Go to be merged with the master database.

To give multiple users the ability to view and update live data, you'll want to share the database using FileMaker Server. The advantages of sharing with FileMaker Server are considerable: Changes made to the data are automatically – and instantly – available to all users. Likewise changes made to a solution, such as adding a new form, field, script, or business rules are also distributed automatically. iOS users in, say, the warehouse can access a database using FileMaker Go, while desktop users are reading and writing to the database using FileMaker Pro. Users can access the database via a wireless network or connect to your server via the Internet or VPN.

Database solutions delivered by FileMaker Server are especially secure because communications are encrypted and all data remains on the server—it is never stored on a remote device.



Figure 6: Databases created in FileMaker Pro will run automatically on the iPhone, iPad, and iPod touch. You can tweak the layouts to accommodate the smaller screen sizes, but it's not required.

For more information about developing custom solutions for the iPad and iPhone, visit: <http://www.filemakertrial.com/ioskit/>