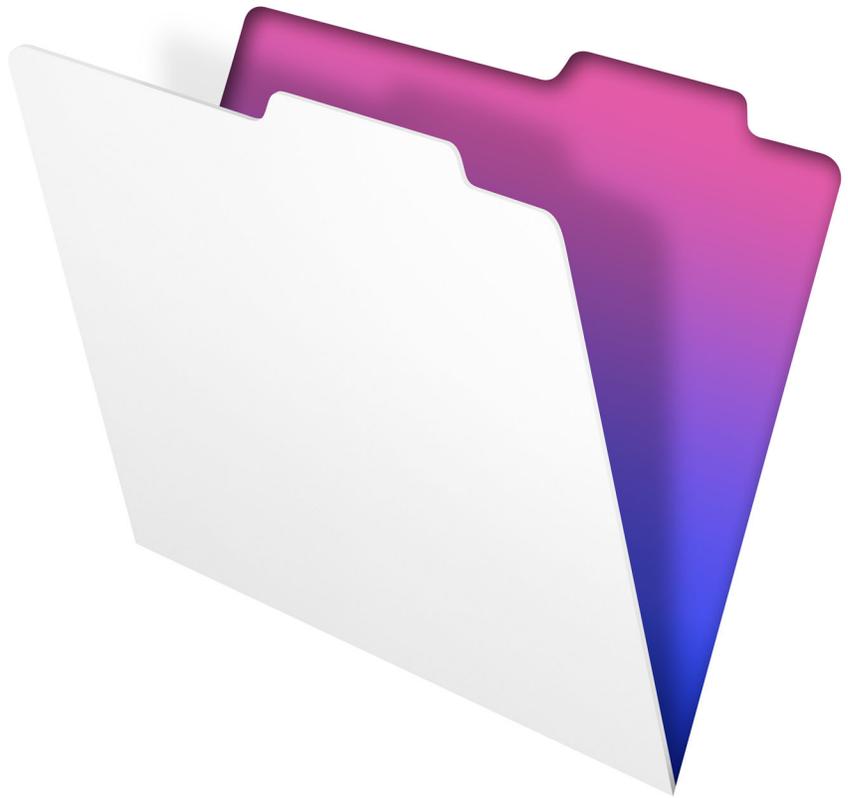


# FileMaker® Go 12

## Development Guide



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# Chapter 1

## Setting up databases for FileMaker Go

FileMaker® Go lets you work with FileMaker Pro databases on your iPhone, iPod touch, or iPad. You work with data interactively: when you change data on the device, the data is updated on the host computer, and vice versa. You can also transfer a database to the device and work "offline." You create, design, and manage databases in FileMaker Pro on the desktop. On the device, you can add, find, and sort records, as well as perform scripts and other tasks.

This guide provides information about setting up databases for FileMaker Go. See FileMaker Go Help on your device for information on usage. See FileMaker Pro documentation if you are new to FileMaker Pro.

### Sharing FileMaker Pro files with FileMaker Go clients

FileMaker Go works with files and runtime solutions hosted by FileMaker Server or FileMaker Pro.

#### Hosting databases in FileMaker Server

Before you share FileMaker Pro database files, prepare the files for hosting. The steps below provide an overview of the process.

To enable file access for FileMaker Go:

1. Edit the accounts and privileges sets that clients will use for shared access (for example, **Access via FileMaker Network**).
2. Upload the database files to FileMaker Server. Use the Upload Database assistant to transfer database files from your computer to FileMaker Server. Or, you can manually copy FileMaker Pro database files to FileMaker Server instead of using the Upload Database assistant.
3. Verify the status of your files in the Admin Console Databases pane, and verify that the files are available to FileMaker clients.

When FileMaker Server starts, it automatically opens and hosts all FileMaker Pro databases located in the default database folder and in an additional database folder, if specified. See FileMaker Server documentation for more information on server administration.

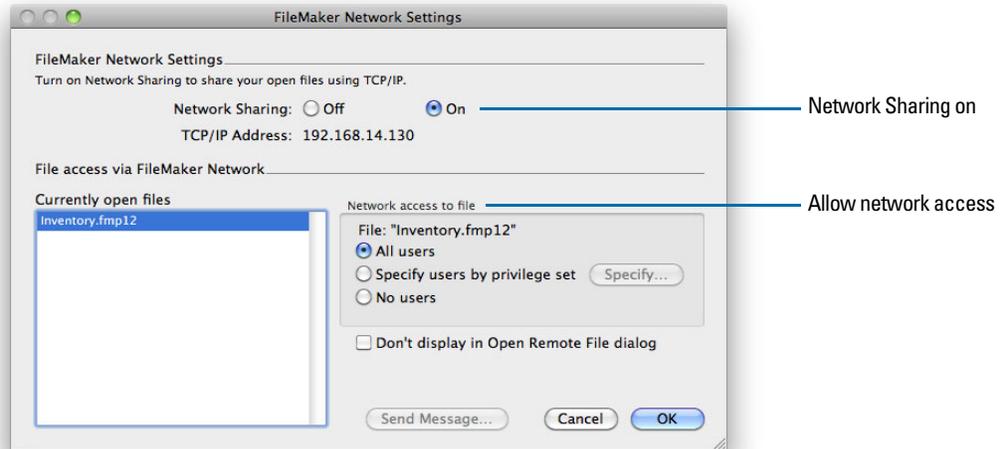
#### Hosting databases in FileMaker Pro

The following steps describe peer-to-peer sharing in FileMaker Pro.

To enable file access for FileMaker Go:

1. In FileMaker Pro, open the file.
2. Choose **File** menu > **Sharing** > **FileMaker Network**.
3. In the FileMaker Network Settings dialog box, set **Network Sharing** to **On**.
4. Select the file(s) to be hosted from the list of **Currently open files**.

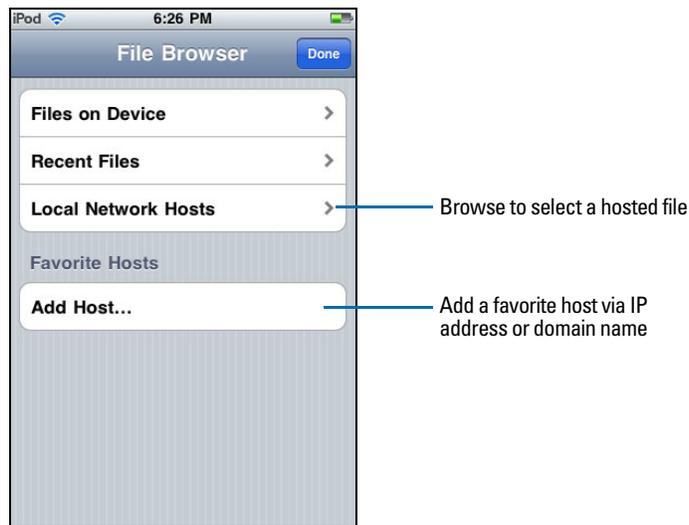
5. For **Network access to file**, choose **All users** or **Specify users by privilege set**.
6. Click **OK**.



Settings to enable network sharing for FileMaker Go clients

## Connecting to databases

After you share and host a file, you connect to it as a client in FileMaker Go.



Connecting to a hosted database in FileMaker Go

Devices connect to hosted databases like any other client, using the `fmapp` extended privilege.

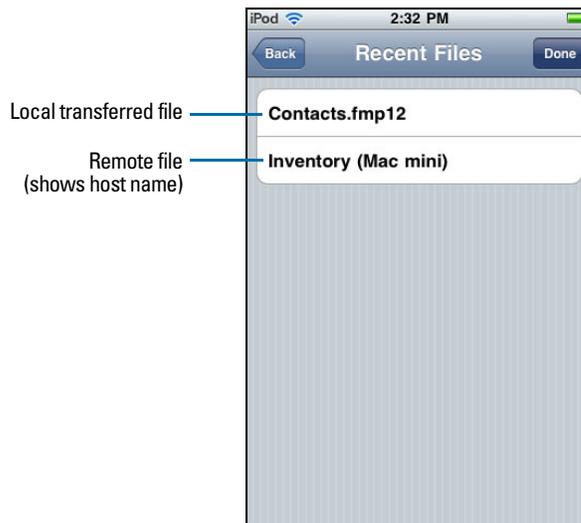
**Note** FileMaker Go cannot access FileMaker Server hosts available through LDAP, or view and use SSL certificates from LDAP hosts.

## About file transfers

For information on transferring files to or from a device, see FileMaker Go Help.

Keep the following points in mind:

- When you transfer a file to your device, you are creating a copy of the remote file. Data changes made on your device are not synchronized to the remote file, and vice versa. You can set up the file to import and update data from the local file to the hosted file using FileMaker Pro; see “Importing to and from a transferred file.”
- Routine backups are strongly recommended for any document stored on a computer or iOS device. For more information about backing up FileMaker Pro databases, see FileMaker Pro Help.



### Transferring a file with container fields that store data externally

To transfer a file with container fields that store data externally, you must first embed the container field data. To do this, in FileMaker Pro, use the **Save a Copy As** command and choose **self-contained copy (single file)**. Then transfer the copy.

### Importing to and from a transferred file

You can use the Import Records script step to merge data from a FileMaker Pro file on a device (a local file) to another FileMaker Pro file. FileMaker Go must have network access to FileMaker Server or FileMaker Pro.

Set up field mapping and import order before you import. You can't create a new table when you import.

You can:

- import from a remote source into a local database
- import from a local source into a remote database
- import from a remote source into a remote database
- import from a local source into a local database

**Example 1: Importing from a remote source (Source.fmp12) into a local database (Target.fmp12)**

1. Open Source.fmp12 and Target.fmp12 in FileMaker Pro.
2. Create an “Import from Remote” script in Target.fmp12.  
 For example: `Import Records [No dialog; “Source.fmp12”; Update existing; Mac Roman]` and set up a path to the source file using your machine IP address.  
 For example: `fmnet:/192.168.10.10/Source.fmp12`
3. Specify the import order.
4. Close Target.fmp12.
5. Transfer Target.fmp12 to FileMaker Go.
6. Open Target.fmp12 in FileMaker Go and run the script “Import from Remote.”  
 The local database is updated with data from the remote database.

**Example 2: Importing from a local source (Source.fmp12) into a remote database (Target.fmp12)**

1. Transfer Source.fmp12 to FileMaker Go.
2. Open Target.fmp12 in FileMaker Pro.
3. Create an “Import to Remote” script in Target.fmp12. For example:  
`Set Variable[$FilePath; Value: Get (DocumentsPath) & “Source.fmp12”]`  
`Import Records [No dialog; “$FilePath”; Add; Mac Roman]` where the path to the source file on the device is `file:$FilePath`
4. In the Edit Script dialog box, select the Import Records script step and select **Specify import order**.  
 If the source fields do not appear in the Import Field Mapping dialog, select **Specify data source**, and add another path to Source.fmp12 to the path list. For example:  
`file:$FilePath`  
`file:Source.fmp12`
5. Open Target.fmp12 remotely in FileMaker Go.
6. Run the script “Import to Remote.”  
 Using Target.fmp12 in FileMaker Go, you have added data from Source.fmp12 on the device to Target.fmp12 on the host computer.

**Tip** After you complete one import, the field mapping is retained if you selected **Arrange by: last order** in the Import Field Mapping dialog. There is no longer a need for the `file:Source.fmp12` reference.

# Chapter 2

## Differences between FileMaker Go and FileMaker Pro

This chapter explains some differences between FileMaker Go and FileMaker Pro, as well as some differences between FileMaker Go for iPhone and FileMaker Go for iPad.

### Unsupported features

FileMaker Go does not support the following FileMaker Pro features:

- creating databases on the device
- modifying database schema such as tables, fields, relationships, data sources, and privileges
- modifying database structure such as layouts, scripts, value lists, and custom menus
- importing\*
- exporting to .fmp12, XML, or Excel .xls formats
- spell checking
- external functions
- plug-ins
- hosting files
- Instant Web Publishing

\*Importing from one FileMaker Pro file into another FileMaker Pro file is supported in FileMaker Go version 1.1.1 and later.

### Behavior differences

#### Modes

Layout and Preview modes aren't supported in FileMaker Go.

#### Sorting

When you tap a field column header to sort records in Table View, three sort orders are available: Ascending, Descending, and unsorted. The sort order By Value List is also available for a field column header if you sorted the field by a value list using the Edit Sort Order screen. By default, By Value List sorts records in ascending order. After you sort By Value List the first time, tap the column header again to sort records in descending order. If this field has been used in a previous sort of multiple fields, the sort order for the field will change but retain the previous sort order for the other fields. You might need to tap the column header more than once to clear the previous sort criteria.

## Date and time pickers

Differences in behavior between FileMaker Go and the desktop include:

- Seconds or fractions of seconds aren't available on the time/timestamp picker in FileMaker Go. You can type seconds into the field. Scripted or calculated times will display seconds on the device.
- On the iPad, the keyboard remains active while the date picker is active.
- Data in FileMaker Go date fields might change if the device calendar changes.

## Custom menus (FileMaker Pro Advanced)

FileMaker Go doesn't support:

- removal of menu items that were removed on the desktop. The menu items are still displayed in FileMaker Go, but they are disabled.
- additional menu items that do not map to existing FileMaker Go menu items.
- override of the Quick Find menu item by custom menus, though you can override the quick find behavior.
- override of Save Record and Exit Record by custom menus.
- display of an ampersand (&) in custom menu titles.

## Printing

- The print options that you set for a file in FileMaker Pro have no effect on the print options for the same file in FileMaker Go, and vice versa.
- If you don't specify page margins for a layout in FileMaker Pro, FileMaker Go uses the printer's default margin, which might vary with different printers or different print drivers. You should specify page margins if you're printing a layout where exact spacing is important, like labels or a preprinted form.

## Saving records as a PDF file

When you save records as a PDF file, FileMaker Go uses the name of the window for the PDF filename.

## Exporting

By default, all manual export operations use UTF-8, except .xlsx, which uses UTF-16. You must use the Export Records script step to select fields whose values you want to summarize or fields that are not on the current layout, and you must use the Export Records script step to configure the output file character set.

## Container fields

FileMaker Go doesn't support:

- the Inspector Data Formatting options **Images** or **Interactive content**. (Content in container fields is displayed by the iOS like other iOS audio, video, and PDF files.)
- setting up container fields to store data externally.

## Display state of objects

FileMaker Go doesn't display the Hover state for objects.

## Snapshot link files

When a snapshot link file that was created in Preview mode is opened in FileMaker Go, the file is displayed in Browse mode.

## Scroll bars in portals

When the **Show vertical scroll bar** option in the FileMaker Pro Portal Setup dialog box is enabled, FileMaker Go users can scroll within a portal using an iOS scroll bar.

# Scripting and calculations

**Important** Test your solution to ensure your script steps are supported.

## Scripts and functions behavior

- To abort a currently running script, touch and hold onscreen, and confirm that you want to abort the script. If you do not make a choice, the confirmation will dismiss itself after a few seconds, and the script will continue running.
- `Get(SystemPlatform)` returns 3 when performed on the device.
- Send Mail doesn't support **Perform without dialog**. The email displays on the device, and you can send it manually. This does not apply to mail sent through SMTP.
- The Select All and Set Selection script steps don't highlight text if the keyboard is hidden on the device.
- The Open URL script step using a Google Maps URL will open a browser, and then choosing **Open in Safari** will open the Maps app.
- If a script contains a hide window command, FileMaker Go does not hide the window but changes the order of the open windows that are displayed.
- When you switch to another app, FileMaker Go enters a suspended state, and scripts are also suspended. When you return to FileMaker Go, the app and scripts resume from where they left off. If you switch away from FileMaker Go for an extended period, and iOS forces the app to quit, FileMaker Go attempts to generate a hibernation file. When you restart FileMaker Go, it uses the hibernation file to re-open files. A hibernation file is not generated when a script with Allow User Abort set to **Off** was running when you switched away from FileMaker Go.
- The `GetLayoutObjectAttribute` function returns only PNG and JPEG images for the `content` attribute for charts.
- The New Window script step doesn't support the **Specify Advanced Style** options.
- Although you set up the Location and LocationValues functions in FileMaker Pro, they are designed for use on devices.
- The Insert File script step doesn't support the dialog box options **Storage options** or **Display**.
- The Exit Application script step closes all files but does not quit FileMaker Go.

## `Get(ApplicationVersion)` function

`Get(ApplicationVersion)` returns **Go x.x.x** for the iPhone or iPod touch. `Get(ApplicationVersion)` returns **Go\_iPad x.x.x** for the iPad. In FileMaker Server, **Go x.x.x** or **Go\_iPad x.x.x** appears in the Admin Console.

### Replace Field Contents script step

A script using Replace Field Contents can't prompt users in FileMaker Go to specify the field and data to be replaced. A Replace Field Contents script step with **Perform without dialog** deselected will not be performed.

### Save a Copy As script step

The options **compacted copy**, **clone**, and **self-contained copy (single file)** are supported when you perform a Save a Copy As script in FileMaker Go, but not when you manually tap **Save/Send > Database** in FileMaker Go. For the script step, the **self-contained copy (single file)** option is equivalent to the **compacted copy** option.

### Save Records as PDF script step

If you don't specify the output file path for the Save Records as PDF script step, FileMaker Go uses the name of the window to save the PDF file.

Some Save Records as PDF script step options aren't supported:

- appending records to an existing PDF
- selecting the Acrobat version
- selecting Printing and Editing options on the Security tab
- deselecting the option that allows screen reading software
- options on the Initial View tab

### Save Records as Snapshot Link script step

The snapshot link includes the current found set of record IDs, including the layout, view, sort order, mode, and toolbar visibility.

If you don't specify the output file path for the Save Records as Snapshot Link script step, FileMaker Go uses the name of the file to save the snapshot link file.

You can open a snapshot link file on multiple devices if:

- the FileMaker Pro file is stored on each device.
- the snapshot link file was created in FileMaker Go.
- the original FileMaker Pro file and the local copy of the file have matching filenames and are at the same relative location.

### Print Setup script step

Performing a Print Setup script step in FileMaker Go sets the paper size, orientation, and scale options for the FileMaker Go Print Setup dialog without displaying the dialog.

The **Perform without dialog** option has no effect on the Print Setup script step in FileMaker Go.

### Print script step

If the **Perform without dialog** option is not selected, when you perform a Print script step, FileMaker Go displays the Print Setup dialog. You can choose the settings in the dialog, then tap Print to print the file.

The Print script settings for number of copies and double-sided options have no effect on the print settings in FileMaker Go.

## Export Field Contents script step

FileMaker Pro exports text as UTF-16, but FileMaker Go exports text as UTF-8.

### Notes

- By default, the files created by script steps appear in the Files on Device list and are saved in the Documents folder. To save the files in a temporary folder, use the Set Variable script step to create a variable to specify the output file path and filename for the script step. The files will be saved in the temporary folder and will be deleted when you close FileMaker Go or if FileMaker Go hibernates.

You can use the following example to create an email with the file as an attachment.

```
Set Variable [$Output; Value: Get( TemporaryPath ) & "sample.pdf"]
Save Records as PDF [No dialog; "$Output"; Records being browsed]
Send Mail [Send via E-mail Client; To: "linda@glolda.com"; Subject:
"Invoice" ; Message: "Test"; "$Output"]
```

- By default, when you run script steps, FileMaker Go creates a new output file. If you continue running the script, a number is added to the end of each filename. For example, the first time you run the Save Records as PDF script step for a sample file, the output filename is sample.pdf. The second time you run the script, the filename will be sample 1.pdf.

To replace the output file with the new one instead of keeping multiple copies, add the file path (`file:fileName` or `filemac:fileName`) to the script. For example, if you type `file:sample.pdf` or `filemac:sample.pdf` in the Specify Output File dialog each time you run the script, the sample.pdf file in the Documents folder will be replaced with the new one.

The following example saves records as a PDF file named sample.pdf and will either create a new file or overwrite the existing file.

```
Save Records as PDF [No dialog; "sample.pdf"; Records being browsed]
```

## Unsupported script steps

FileMaker Go does not support some script steps.

**Important** Running scripts without handling unsupported script steps appropriately may lead to unintended behavior or data corruption.

### Returns error code 4

The following script steps return error code 4: Command is unknown. Use `Get(LastError)` to check for this error code.

If Allow User Abort is on, FileMaker Go displays an alert informing you which script step is unsupported and gives you the choice to continue or to abort the script.

If Allow User Abort is off, FileMaker Go displays an alert informing you which script step is unsupported. You cannot abort scripts if Allow User Abort is off.

Alerts for unsupported script steps will not be displayed if Set Error Capture is on.

Category	Script step
Editing script steps	Perform Find/Replace
Fields script steps	Insert from Index
Files script steps	New File
Miscellaneous script steps	<ul style="list-style-type: none"> <li>▪ Execute SQL</li> <li>▪ Install Plug-In File</li> </ul>
Navigation script steps	Enter Preview Mode
Records script steps	<ul style="list-style-type: none"> <li>▪ Import Records (import between FileMaker files is supported)</li> <li>▪ Export Records (.csv, .dbf, .xlsx, .htm, .mer, .tab file formats are supported)</li> <li>▪ Save Records as Excel</li> </ul>

### Returns error code 3

The following script steps return error code 3: Command is unavailable. Use Get(LastError) to check for this error code.

FileMaker Go does not display an alert for these script steps.

Category	Script step
Fields script steps	<ul style="list-style-type: none"> <li>▪ Insert Object (Windows)</li> <li>▪ Update Link (Windows)</li> </ul>
Files script steps	<ul style="list-style-type: none"> <li>▪ Set Multi-User</li> <li>▪ Recover File</li> <li>▪ Convert File</li> </ul>
Miscellaneous script steps	<ul style="list-style-type: none"> <li>▪ Allow Formatting Bar</li> <li>▪ Speak (Mac)</li> <li>▪ Send Event (Mac)</li> <li>▪ Send Event (Windows)</li> <li>▪ Perform AppleScript (Mac)</li> <li>▪ Send DDE Execute (Windows)</li> </ul>
Open Menu Item script steps	<ul style="list-style-type: none"> <li>▪ Open Edit Saved Finds</li> <li>▪ Open File Options</li> <li>▪ Open Manage Containers</li> <li>▪ Open Manage Database</li> <li>▪ Open Manage Data Sources</li> <li>▪ Open Manage Layouts</li> <li>▪ Open Manage Scripts</li> <li>▪ Open Manage Value Lists</li> <li>▪ Open Find/Replace</li> <li>▪ Open Sharing</li> </ul>
Spelling script steps	<ul style="list-style-type: none"> <li>▪ Check Selection</li> <li>▪ Check Record</li> <li>▪ Check Found Set</li> <li>▪ Correct Word</li> <li>▪ Spelling Options</li> <li>▪ Select Dictionaries</li> <li>▪ Edit User Dictionary</li> </ul>
Windows script steps	<ul style="list-style-type: none"> <li>▪ Show/Hide Text Ruler</li> <li>▪ Move/Resize Window</li> <li>▪ Arrange All Windows</li> </ul>

# Chapter 3

## Designing databases for FileMaker Go

This chapter explains what to consider when designing a database that will be used on a device.

### Designing layouts

When you design a layout, keep in mind that on the device, you can't:

- remove views or layouts
- add or remove fields
- switch to layouts that aren't set to show in the Layouts menu, unless you provide a navigation button
- use the menu to insert the current date, time, or timestamp, unless you provide a button or use a script
- define and assign value lists (drop-down lists and pop-up menus that **Allow editing of value list** are supported)
- display tooltips
- display leader characters such as "..." in tab control names

For general design considerations for devices, see the Apple developer website.

### Tips for designing layouts and fields

- Leave enough inactive space on the form so that users can tap outside a field to commit their data.
- Reduce the size of images as much as possible.
- Use the PNG file format for images.
- Use the screen stencils to help you work within the viewing area of a device.
- Some FileMaker Pro themes use the Tahoma font. This font is not supported in iOS and will be converted to Helvetica in FileMaker Go.
- Choose one of the device themes in the New Layout/Report assistant or Change Theme dialog box. These themes use the Helvetica Neue font.
- In the Starter Solutions, adapt layouts that are designed for devices.
- Distribute the fields on a form vertically.
- If you don't leave enough space between fields, tapping a field will cover the field next to it. Leave at least 20 points vertical space between fields, or enable the vertical scroll bar for the field.
- FileMaker Go supports accessibility using VoiceOver. For information about creating accessible solutions, see FileMaker Pro Help.
- If you apply FileMaker Pro themes to files that you plan to use on a device, check the appearance of field label spacing, field heights, portals, and tabs on the device.
- To create iOS-style grouped fields, in the Appearance tab of the Inspector, specify a Corner radius value for each corner to make it round or square.

## Screen dimensions

To optimize your design for both portrait and landscape orientation, limit the width of the layout to the screen width for the portrait orientation. This way, users don't have to scroll right or left to see the data.

Try to keep the information that needs to be most visible within the screen dimensions that are shared between portrait and landscape orientations.

Use auto-resizing settings in FileMaker Pro to optimize the layout for portrait and landscape rotations.

## Choosing fonts

When choosing fonts, consider which platform you are designing for. Some fonts have different behavior for different platforms.

The following fonts are suggestions, not recommendations. Not all fonts are supported on the desktop or on devices, and the fonts that are supported on iOS are likely to change over time. Be sure to test your databases on all platforms you plan to use.

<b>iPhone and iPod touch</b>	<b>iPad</b>
Arial	Arial
Arial Rounded MT Bold	Arial Rounded MT Bold
Courier	Courier
Courier New	Courier New
Georgia	Georgia
Helvetica	Helvetica
Helvetica Neue	Helvetica Neue
Times New Roman	Times New Roman
Trebuchet MS	Trebuchet MS
Verdana	Verdana
Cochin	Academy Engraved LET
American Typewriter	Baskerville
Apple Gothic	Chalkduster
Marker Felt	Optima
Thonburi	Palatino
Zapfino	Gill Sans
	Futura
	Cochin
	Snell RoundHand
	Didot
	American Typewriter
	Apple Gothic
	Copperplate
	Hoefler Text
	Marker Felt
	Papyrus
	Party LET
	Thonburi
	Zapfino

## Text styles

The following text styles are supported in iOS: bold, italic, underline, title case, uppercase, lowercase, word underline (appears as underline), double underline.

iOS doesn't support: highlight, strike through, condense, extend, small caps, superscript, subscript.

## Considerations for data entry on a device

- Only fields are supported in the tab order. You can set up Tab and Return, but not Enter, to go to the next field.
- You can't insert values into a field from an index on the device, and you can't **Auto-complete using existing values**.
- Paragraph alignment, line spacing, and indentation might not display correctly in container fields. To prevent these appearance issues, use center alignment in container fields.
- **Auto-Correction** will not work in text fields that have script triggers set up to catch keystrokes.
- Editing a text field in FileMaker Go reverts all styles in that field to plain text.
- You can edit about 64K of text at a time.
- Asian languages: sideways text and Furigana aren't supported. Input method editors (IMEs) will not work in text fields that have script triggers set up to catch keystrokes.

## Considerations for performance on a device

### Container fields

For container fields with images in remote files, the server scales the images before sending them to the device. For container fields with images in local files, the device handles the images; for improved performance use smaller images.

### Layouts

Make several layouts with a minimum of objects instead of one layout with many objects.

For information about designing layouts, see "Tips for designing layouts and fields" on page 16.

### Script triggers

To improve performance, use uncomplicated scripts in script triggers.

## External keyboards

Some keystrokes behave differently on external keyboards.

<b>Functionality</b>	<b>Behavior in FileMaker Go</b>
Tab key	Supported for field types that display the on-screen keyboard. Shift-Tab isn't supported.
Undo, Redo, Cut, Copy, Paste, Select All keys	Supported
Keystrokes to move between records (for example, Control-Down Arrow)	Not supported
Modifier keys (for example, Option or Alt)	Not supported
Eject key	Hides or shows the on-screen keyboard
Arrow keys	Not supported for value lists, date/time/timestamp pickers

# Chapter 4

## Protecting databases in FileMaker Go

This chapter explains the behavior for opening protected files and logging in after multitasking. It also provides information for keeping your databases secure.

### Opening files protected with passwords

When users try to open a protected file, a dialog prompts them to specify an account and password. FileMaker Go checks the following settings in the specified order to determine how to open a protected file. If none of these settings are used, the user needs to enter the login information to open the file.

#### 1. URL protocols

In FileMaker Pro, you can use the `FMP` protocol in a URL in order to open a shared, remote FileMaker Pro file. See “Opening files and running scripts using the FMP protocol” on page 21.

#### 2. File Options setting to log in automatically

In FileMaker Pro, you can use the File Options setting to automatically log in using a specific account and password when you open the database.

#### 3. User manual override

In FileMaker Go, users can temporarily bypass the default login information when they open a file by touching and holding a filename in the file list. Releasing the filename displays a dialog where users can enter a different account and password.

### Logging in after multitasking

When you press the Home button on your device, FileMaker Go moves to the background and saves the state of the file. FileMaker Go also saves the state of the file when you answer a phone call. When you switch back to FileMaker Go, you return to where you left off.

Files can be configured to require reauthentication after being in the background for a specified period of time. See “Using the `fmreauthenticate` extended privilege” on page 21.

After FileMaker Go moves to the background, you must re-enter your account and password to return to the file, unless:

- you are using the Guest account.
- your account name and password match the account name and password set in the File Options dialog in FileMaker Pro.
- you have returned to the file before the time limit specified in the `fmreauthenticate` extended privilege.
- you are using an account that does not have the `fmreauthenticate` extended privilege.

**Note** These conditions also apply to files converted from an earlier version of FileMaker Pro.

## Using the `fmreauthenticate` extended privilege

Use the `fmreauthenticate` extended privilege to control when users will be required to reauthenticate after not using FileMaker Go for a specified period of time.

With this privilege, when FileMaker Go switches to the foreground users must re-enter the account name and password if the specified time limit has elapsed. Users can attempt to enter their account name and password five times before FileMaker Go closes the files.

New privilege sets created in FileMaker Pro include the keyword `fmreauthenticate10` by default. The `fmreauthenticate` extended privilege activates any time a user leaves the context of the app, including iOS alerts, and sleep.

If a file converted from an earlier version of FileMaker Pro:

- does not have the `fmrestorelogin` extended privilege, FileMaker Pro adds the keyword `fmreauthenticate0`.
- does have the `fmrestorelogin` extended privilege, FileMaker Pro removes it.

## Opening files and running scripts using the FMP protocol

In FileMaker Pro, you can use the `FMP` protocol in a URL to open a shared, remote FileMaker Pro file. For example:

```
[<] [URL:]FMP://[[account:password@]netaddress]/databasename[>]
```

You can also use the `FMP` protocol to open and run a specified script in remote FileMaker Pro files, hibernated files, local database files on a device, or to communicate with other apps.

### Example 1: Opening remote files

Open a file named `Clients.fmp12` on the host machine with an IP address of `192.168.10.0` with a script named `ListClients`.

```
FMP://192.168.10.0/Clients.fmp12?script=ListClients
```

### Example 2: Opening hibernated files

Reopen a file named `Clients.fmp12` that was hibernated in FileMaker Go with a script named `ListClients`.

```
fmp://$/Clients.fmp12?script=ListClients
```

**Note** When using `FMP`, FileMaker Go restores all hibernated files first and then processes `FMP`.

### Example 3: Opening local files

Open a local file named `Clients.fmp12` on the device with a script named `ListClients`.

```
fmp://~/Clients.fmp12?script=ListClients
```

### Example 4: Passing parameters to a script and defining local variables

Open a file named `Clients.fmp12` on the host machine with an IP address of `192.168.10.0` with a script named `ListClients`. Specify a parameter of `TopClients` and a local variable `$NumberToList` with a value of `10`.

```
FMP://192.168.10.0/Clients.fmp12?script=ListClients&param=TopClients&$NumberTo  
List=10
```

### Notes

- Filenames are case-sensitive. Script names are not case-sensitive.
- The filename extension .fmp12 is not required.
- You can define multiple variables in the same FMP protocol.
- If spaces are needed in a link, replace every space with %20.

You can specify the account and password in the address (except when you're opening hibernated files).

## Suggestions for protecting remote and local files

### If your files need less security

- Set a long server idle time for files served by FileMaker Server.
- Increase the number of minutes before requiring re-login using the fmreauthenticate extended privilege.
- Don't use the fmreauthenticate extended privilege.

### If your files need more security – one user per device

#### Remote files

Try to balance security needs and user convenience when specifying the amount of time:

- before the passcode is required
- for server idle time
- before requiring re-login using the fmreauthenticate extended privilege

#### Local files

- Take additional precautions to prevent someone from accessing files on lost or stolen devices.
- Use the fmreauthenticate extended privilege to minimize unauthorized access.

### If your files need more security – multiple users per device

- Set the passcode to be required immediately.
- Set the fmreauthenticate extended privilege to fmreauthenticate0.
- Users should be required to enter the passcode, then log in to files using their own accounts.

## Security tips

To limit unauthorized access:

- Set a passcode on your device.
- Use the free Find My iPad or Find My iPhone app. Enable the Remote Passcode Lock and Remote Wipe features for your device.
- Use the Get(PersistentID) function to help identify devices that access your solutions.

### Notes

- FileMaker Go doesn't work with IPv6 file references or addresses.
- If a host asks a client to close and there is no response after 30 seconds, FileMaker Go will attempt to close databases and the alert message will close.
- File recovery isn't supported on devices.

## SSL certificates

FileMaker Go can connect to the following FileMaker Server root certificate configurations:

- FileMaker root certificate (SSL-enabled Server)
- VeriSign
- GeoTrust
- GoDaddy
- Thawte
- Comodo