



# **FM Registrations**

## **License codes for your FileMaker Apps**

Karsten Risseuw, Kursiv Software

# Copyright

## FM Registrations 1.7o

Manual Version 1.7o

Manual to FM Registrations, by Karsten Risseeuw

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[fmstarter.com/en/](https://fmstarter.com/en/)

# FM Registrations

The manual.

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# Introduction

Basic information about the product FM registrations. If the product is new to you, read this chapter. It is like the manual in a nutshell. You can use the other chapters as reference if you need them.

## **Video**

Introductory videos are available on [fmstarter.com](https://fmstarter.com).

# About FM Registrations

FM Registrations is a commercial product and was developed by Karsten Risseuw of Kursiv Software in Switzerland. FM Registrations is distributed via the website [fmstarter.com](http://fmstarter.com). There you can also find the documentation and further help.

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FM Registrations with concepts, manuals and other materials:

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# Short introduction

## The manual in a nutshell

### What is the role of FM Registrations?

FM Registrations is a FileMaker solution that lets you create license codes for your FileMaker applications. With this tool you'll be able to sell the same application multiple times and to different customers, with each customer getting access with its own license code. FM Registrations is designed to help you protect, market and sell standard software products.

### What you get

FM Registrations comes with several files. The application "FM Registrations" is the code generator. With it you create and encrypt license codes. The license codes must be decrypted again for validation in your software. This task is done by the module "FM Unlock", which is included in the sample file and also as an add-on.

### Requirements

Both files are FileMaker Pro files and require a regular version of FileMaker Pro 17 or later to run and function properly. To use the FM Unlock Add-on, you must have FileMaker Pro 19.1 or newer.

### Encryption and decryption

The solution is all about encrypting and decrypting information. The license code carries the information in an encrypted "license key" with an optional "username". When the user enters their registration information into your solution (use the sample file to test this), you get back exactly the same information.

### Implementation

The implementation is quite simple. Decryption is configured like a FileMaker module ([modularfilemaker.org](http://modularfilemaker.org)), and this module is part of the sample file. It can be integrated into your solution by following a few well-described steps. Once you have implemented the workflow of the sample file into your application, you can decrypt any license code. As a result, you will get the original information. Apart from the module, you also need to look at the workflow at startup and the security of your file, just like any other FileMaker project.

## **Anpassung an Ihren Vorstellungen**

In einem nächsten Schritt müssen Sie die erforderlichen Prüfungen und Logik definieren, die Sie für Ihre Datei haben möchten. Wenn Ihr Code beispielsweise eine Anzahl von Benutzern einbettet, können Sie eine Prüfung in einem Startskript implementieren, um die aktuelle Anzahl aktiver Benutzer auszuwerten und zu entscheiden, was zu tun ist, wenn diese Anzahl überschritten wird. Wenn Sie mit einem Ablaufdatum arbeiten, müssen Sie eine Prüfung erstellen, um das Ablaufdatum mit dem aktuellen Datum zu vergleichen.

## **Security**

FM Registrations requires the user to open the file to get to the registration process and register the application. At this moment, you grant users a certain type of access, which is a potential security problem. To overcome this problem, you need to implement a security strategy that restricts access until the registration process is complete. If the registration is successful, create a re-login script to grant access to the file and get to the correct landing page. These are all basic FileMaker security considerations that are not specific to FM Registrations, but are relevant to any application. The sample file shows you how to implement this. Also read the [Security](#) chapter.

## **Data belongs to the user**

You use FM Registrations to restrict access to a file and grant usage rights. In this situation, you should be aware that the user has the right to his own data. Imagine a scenario where a user does not want to renew a license after the expiration date. He still needs to have full access to his data. For this reason, it is suggested to implement a workflow for this scenario where the user can at least export his data or alternatively enter a new license code to update his license.

## **There is no magic involved**

Be aware that FM Registrations does not solve your complete workflow, but only a part of it. You get a tool that lets you register new users, assign license codes to meet specific requirements, and use those codes in your FileMaker application. How you verify the codes is up to you. This requires FileMaker development.

# Licensing and marketing

FM Registrations allows you to sell the same software multiple times to different customers by providing different personalized unlock codes.

FM Registrations is a tool for issuing and managing licenses. However, due to the various functions included, FM Registrations can do more than just "unlock" a solution.

Because of the properties that can be included in the unlock code, you can also use the code to configure your solution. This requires programming, but after implementation you can create different versions of the same solution, block or unlock certain features, allow a certain number of users to access the solution simultaneously, or restrict certain tables to create more than the allowed number of records.

Some examples

Suppose you have a software that you offer in two versions: a free trial and a full version. The free trial version has some limitations. FM Registrations allows you to use the same file, but create different versions. You can configure your solution based on the information from the decrypted license code. Here are some suggestions that you can implement with FM registrations:

- 1 user maximum
- Maximum 5 records in the Addresses table
- Access that expires after 30 days (or any other number of days).
- An expiration date set for December 31 of that year (select the date).
- Hide some advanced functions
- the free version uses an account where the export of data is not possible
- etc.

Now let's assume that the customer using this trial version wants to unlock the full version. You then generate a new code that is picked up by your configuration script after the customer enters it. Based on the information in the code, you can create any updates for the customer, such as:

- Activation of the full version, with all functions and using an account that enables data export
- Upgrade a full version to 5 users, or 20, or 100, or...
- Set an expiration date for 1 month, 1 year or something else
- Triggering an advertisement about another product
- etc.

Because of the configuration options, you can leverage your product strategy and marketing to reflect different needs. You can create a cheaper entry version, charge customers for extra users or additional functionality. This will give you the option to tailor the software to the need of the customer and as a result you have the option to define the value and price of the change to accommodate as many customers as possible.



# Discover how it works

This chapter will help you understand the different parts of FM Registrations.

FM Registrations is a code generator that is able to generate unlock codes and link them to customer addresses. The sample file shows you how to decrypt unlock codes. This is the module what should be integrated into your solution later.

Let's proceed step by step.

## Step by step

FM Registrations is easy to implement, but requires some development on your end. We recommend the following steps:

1. get familiar with the process (start with the Example File).
2. check your unlock codes in the sample file ([License Codes](#))
3. implement the FM Unlock module in your application.

# The Example file

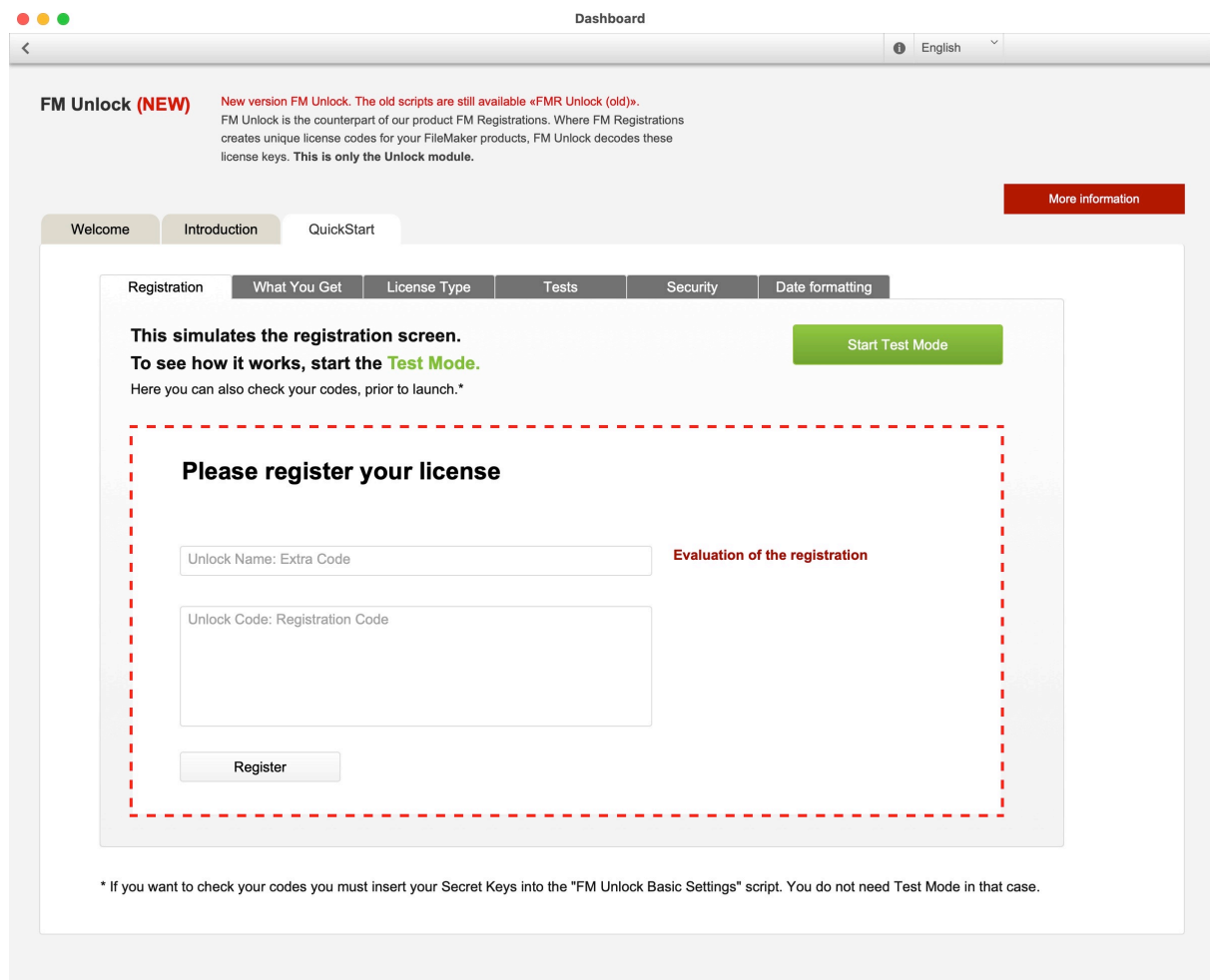
To get a first understanding of how FM Registrations works, use the sample file. It already has a test workflow built in to quickly show you how an implementation should work.

## Tip

First, make a backup copy of your sample file.

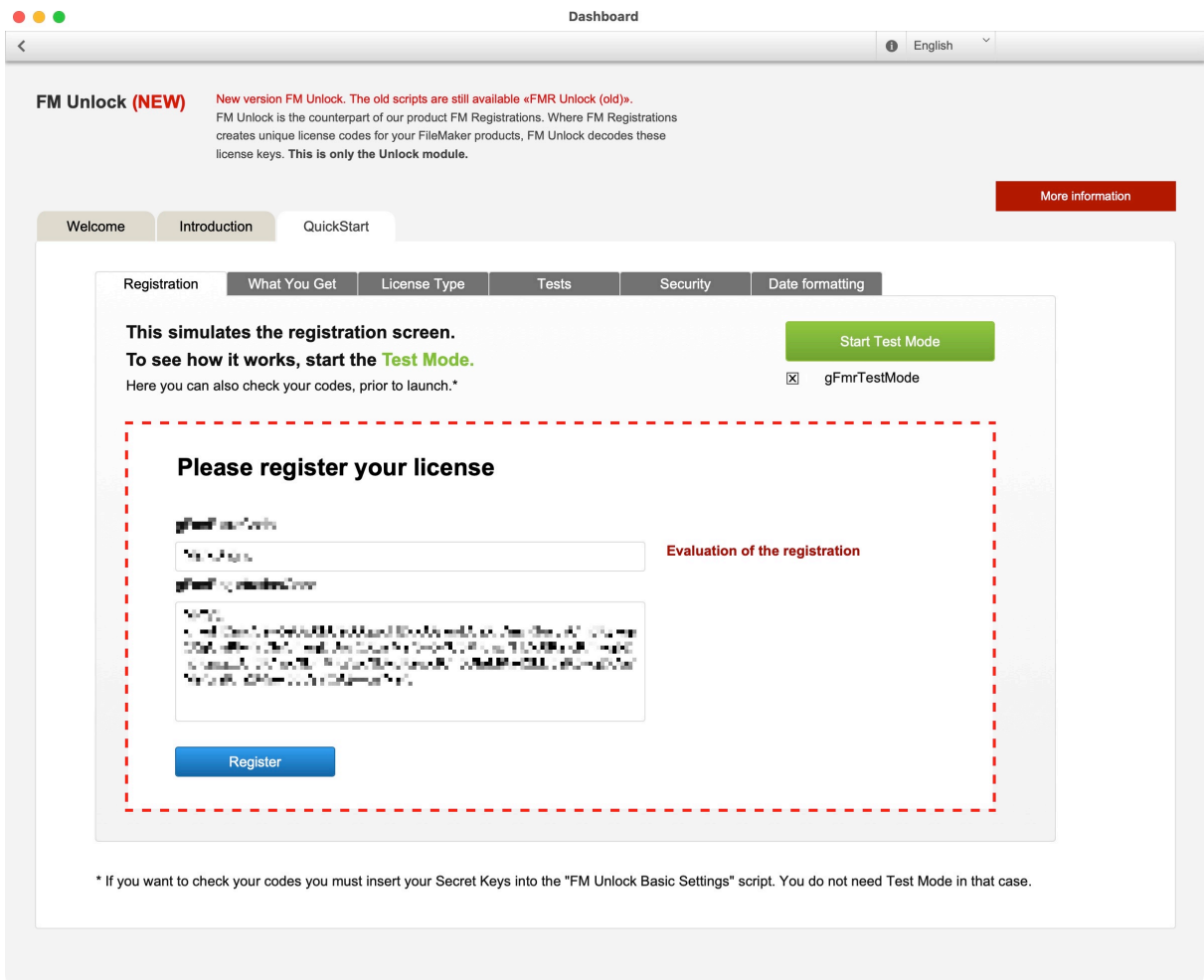
## The test mode shows the procedure

Open the sample file and you will land on the page named FM Unlock > Registration. On this page you will see a green button with the text "Start Test Mode". Click this button to fill in the registration fields with a test code:



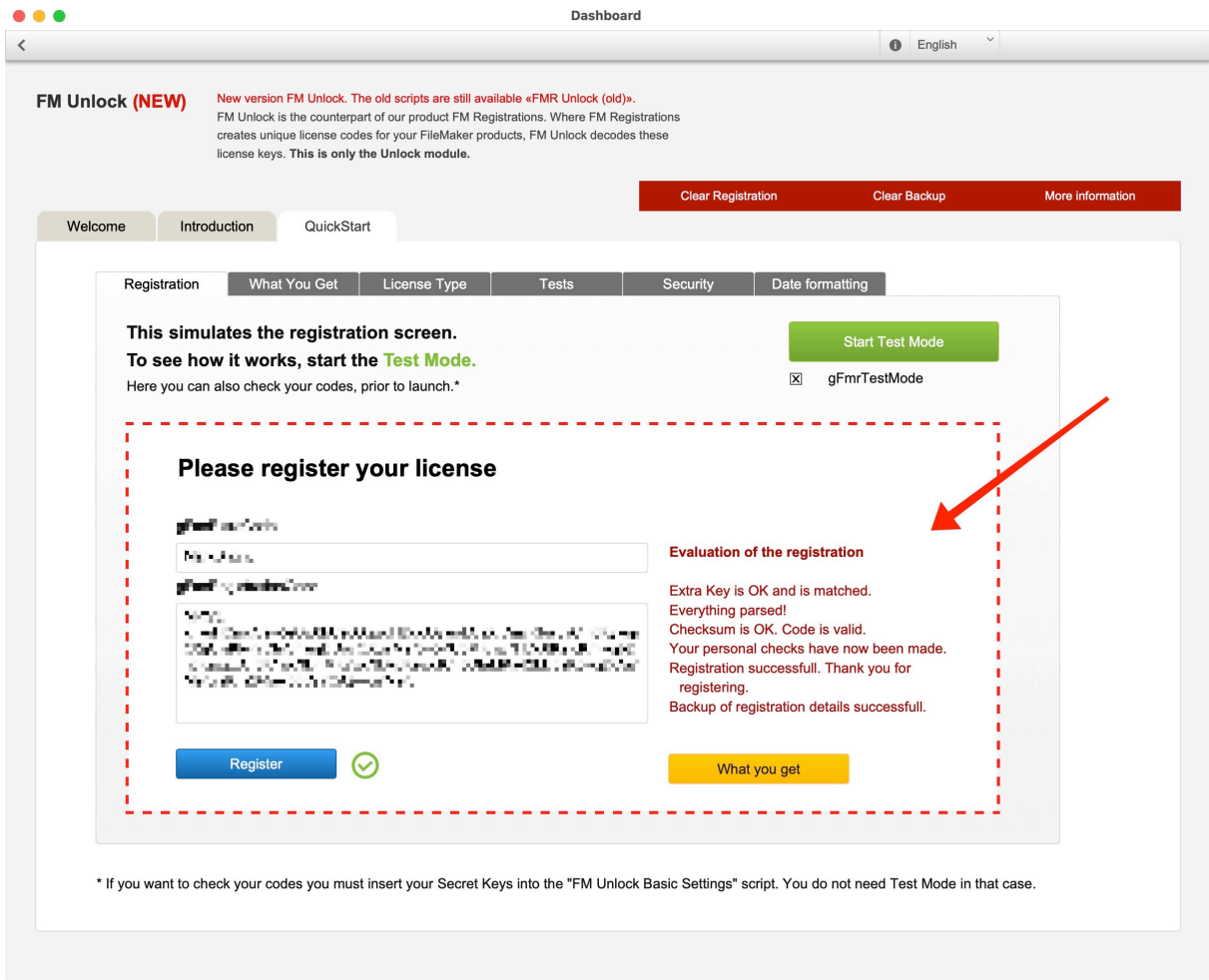
## Registering

Now click on "Register" to start the registration process. This is the procedure for the user. As a result, you will see a feedback about what has been done.



## Feedback

During registration, the module provides feedback on all steps of the exam.



For the end user, registration is a familiar process. As a developer, registration gives you access to all the details so that you can unlock or configure the solution based on the license data.

What exactly you get in terms of information can be queried under "What You Get".

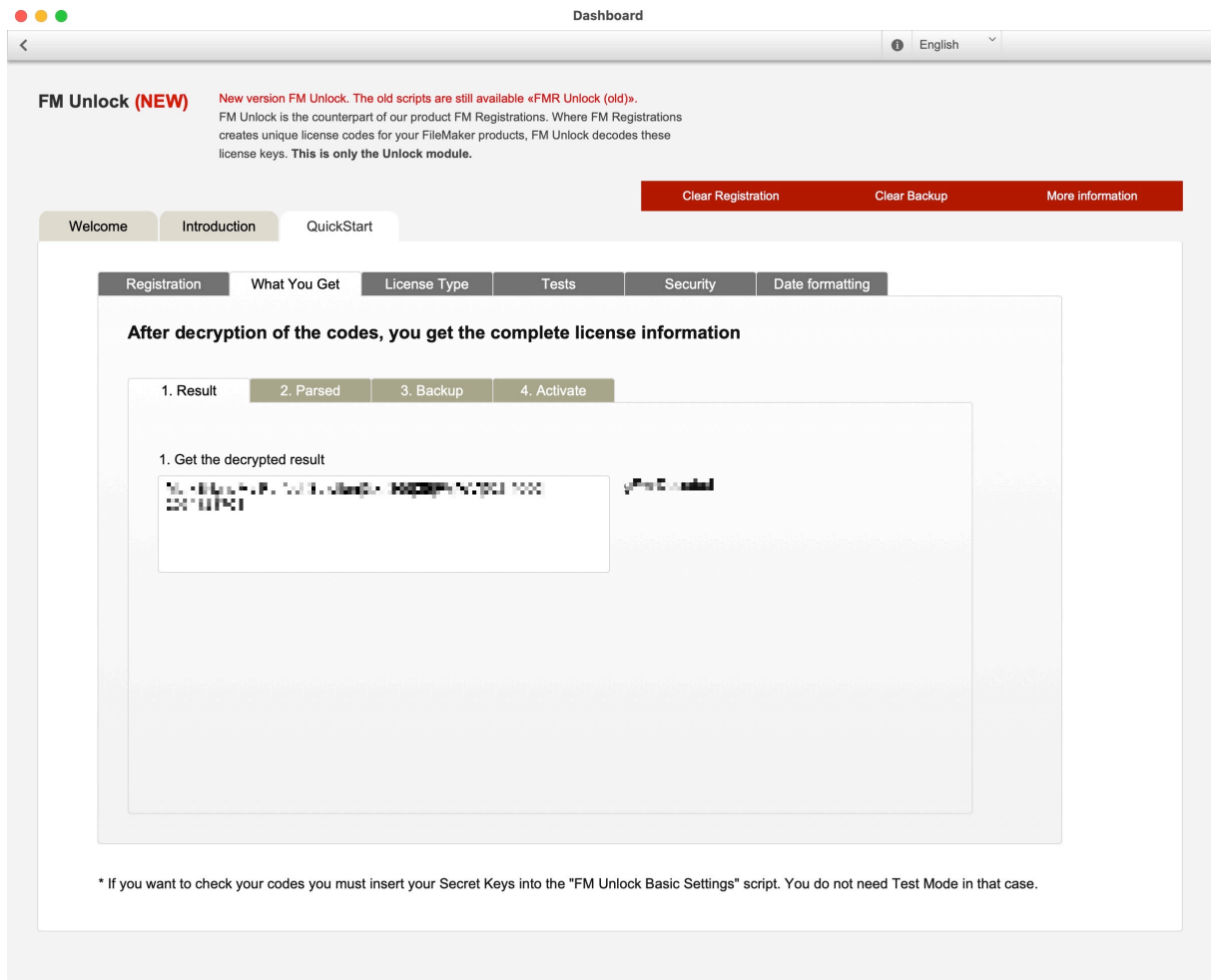
# What You Get

The sample file has a tab called "What you get". After you decrypt a license, you get the full decrypted string. In several sub-tabs you can see the parsed information. Check the sample file to see the decrypted result, the parsed result, the backup fields, and the final activation.

If you install the FM Unlock module as in the sample file, you will have all the parsed information right at your fingertips.

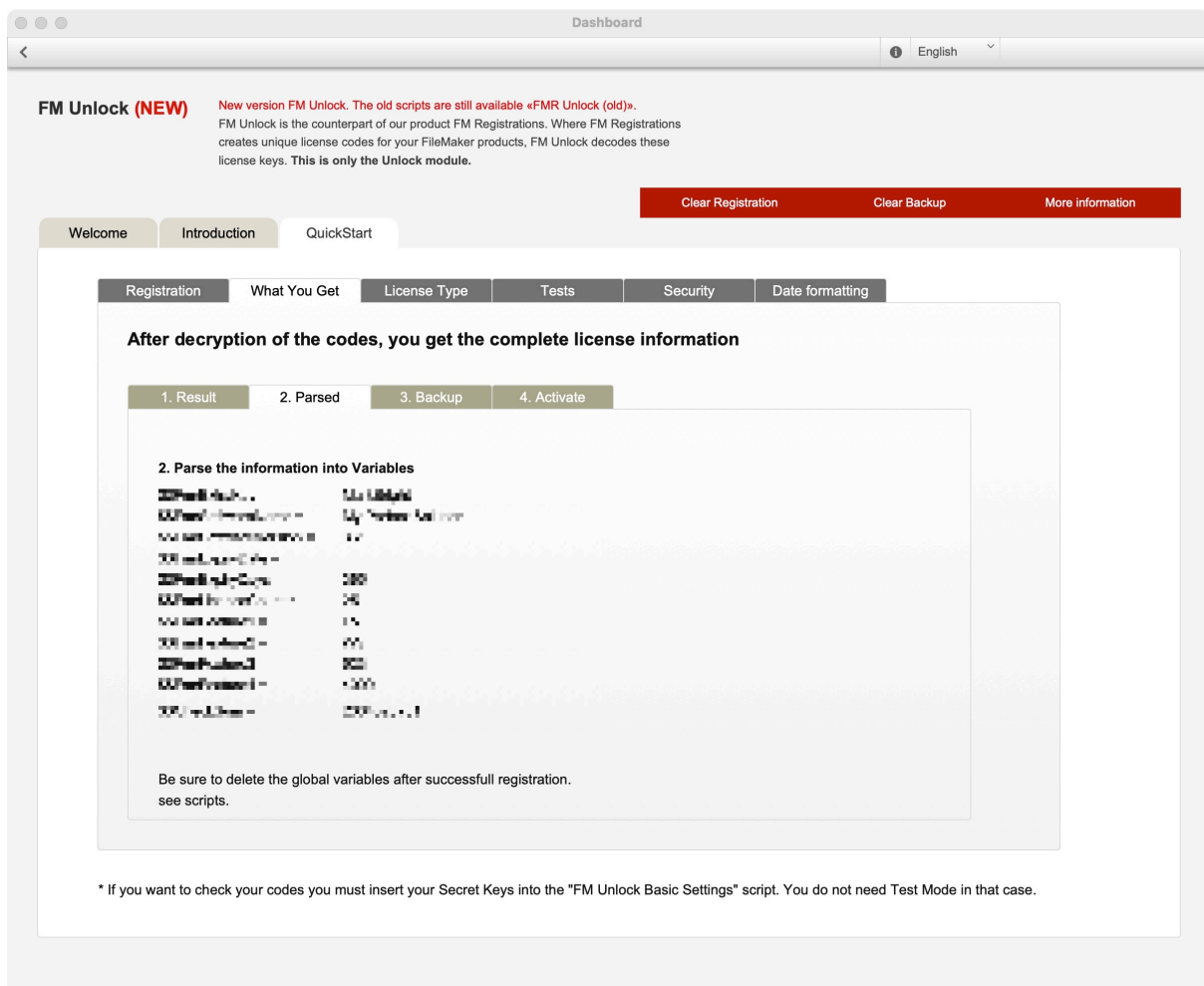
## 1. Result

You will receive the decrypted license key (hidden in the screenshot, but look at the sample file!).



## 2. Parsed

All information will be parsed into global variables (temporarily. The variables are hidden in the screenshot) and will be available for any checks or processes you want to run now.



### 3. Backup

A full backup is created of all registration details. Each detail is stored in its own field. This allows you to use this information at any time for reviews, comparisons, etc.



Dashboard

English

**FM Unlock (NEW)**

New version FM Unlock. The old scripts are still available «FMR Unlock (old)».

FM Unlock is the counterpart of our product FM Registrations. Where FM Registrations creates unique license codes for your FileMaker products, FM Unlock decodes these license keys. This is only the Unlock module.

Clear Registration
Clear Backup
More Information

Welcome
Introduction
QuickStart

Registration
What You Get
License Type
Tests
Security
Date formatting

### After decryption of the codes, you get the complete license information

1. Result
2. Parsed
3. Backup
4. Activate

3. Save the registration details in some fields for further processing and as a backup.

FmrExtraKey	
FmrSoftwareName	
FmrSoftwareVersion	
FmrExpiryDate	< Today
FmrExpiryDays	<<< Neutral storage of any date. To interpret this number >>> GetAsDate (FmrExpiryDate).
FmrLicenseCount	
FmrFeature1	
FmrFeature2	
FmrFeature3	
FmrFeature4	

Backup of registration details successfull.

BackupFmrRegistration
Status field. See «4. Activate»

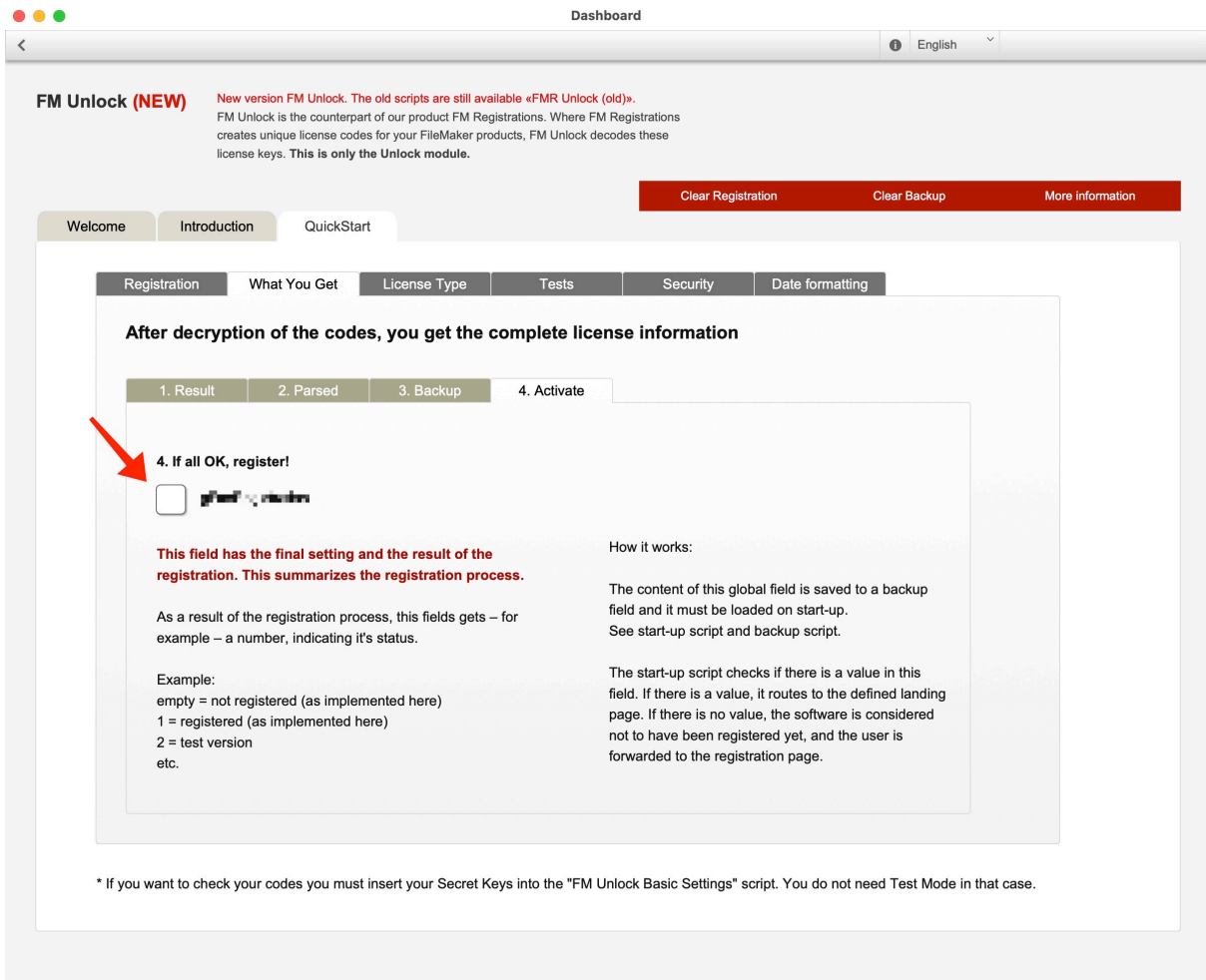
BackupFmrDecoded

\* If you want to check your codes you must insert your Secret Keys into the "FM Unlock Basic Settings" script. You do not need Test Mode in that case.

## 4. Activate

If everything is in order, the software is now unlocked. This is confirmed by setting a single flag in a field. This field is like a summary and the result of the registration process. In words it could look something like "Registration OK", but we suggest using a simple number that is easier to manipulate. Since it is a simple status field, it is easy information to check, for example with a startup script when opening a file.

The resulting status field is important because you do not want to register the software every time you start it. To do this, you need to save some information about the result of the registration process.



## All information is available

When you decode a license code, you get a fully parsed set of information - that's all you had defined for the code. You can now use that information to do whatever you want. Be aware that you will need to take this information and create your own checks to make it work. For example, a check for an expiration date or a check for specific functions.

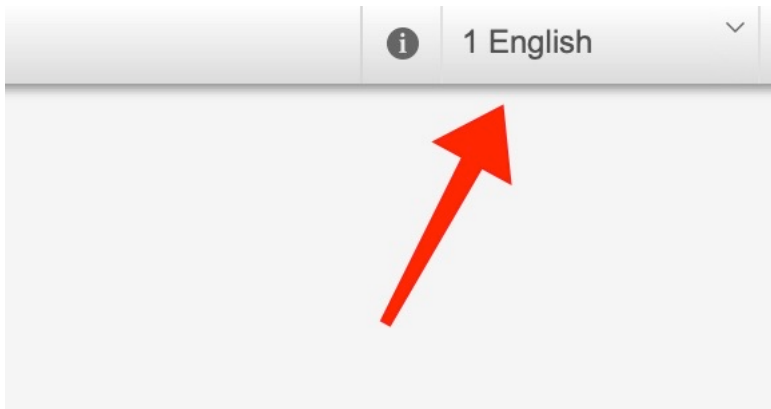
Use the information from the decrypted code to configure your solution with appropriate scripts.

# A first try

Everything you need to know to create your own first license code can be found in this chapter. Use the sample file together with FM Registrations to see how to...

- List your applications in FM registrations
- create the characteristic settings for the product and its license codes
- use the sample file to test your first license code
- it works!

*Preliminary note: All screenshots in this manual are in English. However, you can switch the language in FM Registrations at any time. The language switch can be found on the top bar of every page. The example file is in English only.*



# The first test run

After checking the test mode in the sample file, we suggest that you create a record in FM Registrations for your own software. This will contain all the settings to define your own license codes. This setup will have its own secret keys as needed for encryption and decryption. Copy and paste the secret keys into the sample file, create a proper license code for this software in FM Registrations and test the decryption in the sample file.

This short workflow ensures that the solution actually works with your code before you start implementing it. This is important feedback before you proceed.

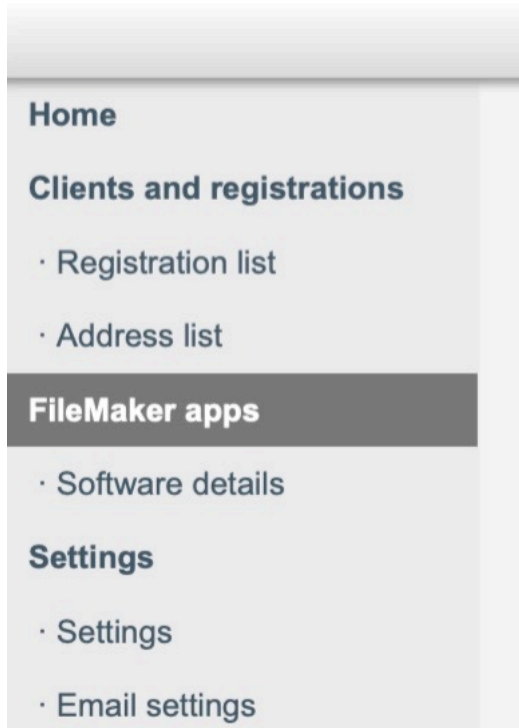
To be able to do this, you need to do the following:

1. Create your own secret keys for your own app in FM Registrations
2. Inserting the secret keys into the sample file
3. Test the registration with some sample unlock codes you created.

Let's go!

# FileMaker Apps

Each of your products needs its own entry in FM Registrations. Go to > FileMaker Apps to add your first product or another product.



Clicking this link will take you to a list of current solutions. If you want to add a new solution, just click +.

Software list				
For each version or product requiring a unique code, generate an own entry. Keep older records to maintain a history and reference.				
			Registrations	License count
<b>My Beautiful Software</b>				
1	My Beautiful Software 2	No registered users	0	
2	My Beautiful Software 3	No registered users	0	
<b>Papadum</b>				
3	Papadum 1.x	No registered users	0	
<b>TestSoftware</b>				
4	TestSoftware 3.2	No registered users	0	

Alternatively, you can click > Software Details and then click + to add a new record.

+

Home

Clients and registrations

- Registration list
- Address list

FileMaker apps

- Software details

Settings

- Settings
- Email settings
- Code settings
- Backup
- Import-Export
- Resources

Software

Features

Secret keys

Software details

Basic software settings

My Beautiful Software 2

Software name

My Beautiful Software

Version

2

Short form

☒ MBS2

Beta

☐ Use beta key

Code type

☐ Random code
☒ Features

You can now start defining the license type you want to create. Without going into too

much detail here, just see the next section on how to create a new record and your own secret keys in it.

# Create secret keys

For this step you need the main application FM Registrations. This is the tool that allows you to create license codes for your own applications. This is how you proceed:

1. Create a record for each application or new application version
2. Create the secret keys for encryption
3. Copy the secret keys to the sample file

Es gibt natürlich noch mehr darüber zu sagen, wie man einen korrekten Datensatz für die Lizenzierung erstellt. In diesem Abschnitt werden wir uns nur auf die geheimen Schlüssel konzentrieren.

## 1. Create a record for each app

Klicken Sie in FM Registrations (Startbildschirm) auf FileMaker Apps auf der linken Seite. Dies führt Sie zu diesem Bildschirm mit einer Liste der vorhandenen Apps. Dies sind Beispiel-Apps. Sie können sehen, dass es zwei Softwareprodukte gibt (My Beautiful Software und TestSoftware). Für das Produkt My Beautiful Software gibt es zwei Einträge, jeder für eine andere Version. Dies dient der Unterscheidung zwischen den Versionen und ermöglicht es den Benutzern, für ein Upgrade zu bezahlen (sie können keinen alten Code verwenden, um eine neue Version freizuschalten).

Um ein neues Software-Produkt hinzuzufügen, klicken Sie auf das +-Zeichen oben auf der Seite.



Software list				
For each version or product requiring a unique code, generate an own entry. Keep older records to maintain a history and reference.				
			Registrations	License count
<b>My Beautiful Software</b>				
1	My Beautiful Software 2	Registration list	1	1
2	My Beautiful Software 3	Registration list	1	1
<b>TestSoftware</b>				
3	TestSoftware 3.2	No registered users	0	

## 2. Create the secret keys to handle encryption

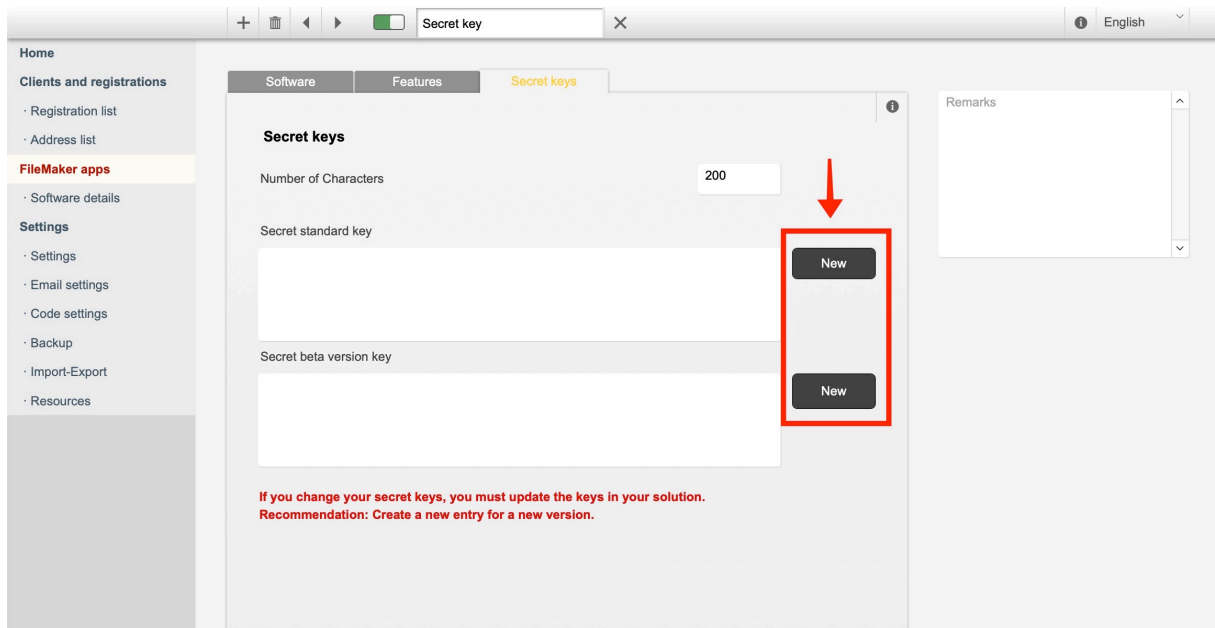
When you click the + button, you will create a new record and be redirected to a page where you can add the name of your application. Please add the name and version as shown below.

The screenshot shows the 'Software details' form with the following fields and values:

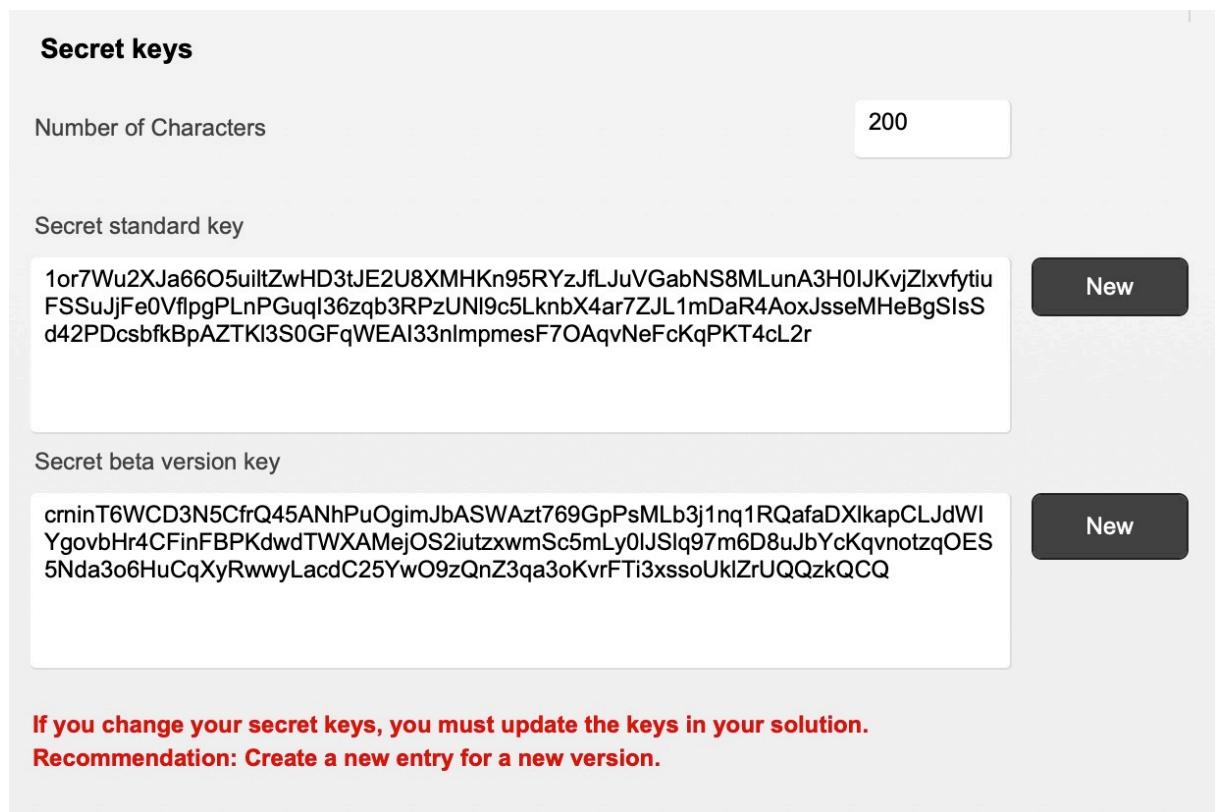
- Software name:** Papadum
- Version:** 1.x
- Short form:** ☒ P1.x
- Beta:** ☐ Use beta key
- Code type:** ☒ Random code, ☐ Features

A red arrow points to the 'Software name' field. The left sidebar shows navigation options like 'Home', 'Clients and registrations', 'FileMaker apps', and 'Settings'.

Once you have given this record the name of your application, go to the "Secret Keys" tab and add the secret keys for both the default key and the beta key:



The keys look like this:



These are the secret random keys you need to encrypt and decrypt your codes. Each version you want to distinguish from another should have its own keys. Let's say you want to sell upgrades when a customer moves from version 1 to version 2 of your application, then you need to be able to create codes that work in version 1 but not in version 2. For this reason, each "product version" must have its own record and secret keys. The secret keys of each version must be copied from FM Unlock module to your solution in the settings script.

These keys can be configured in the settings.

You need these keys for implementation in your software. As a first step, you should try to implement these keys in the sample file to see how it works.

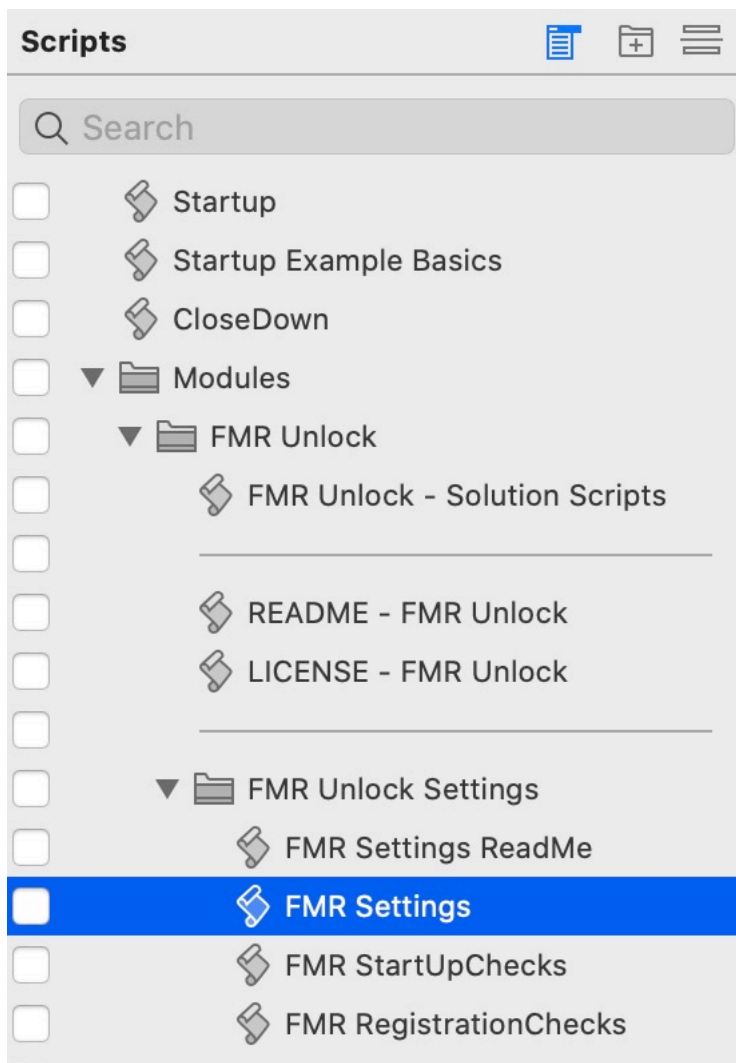
## Using the secret keys

In the last section we saw how to create secret keys in FM Registrations. In this section I describe how to easily test these keys in the sample file. Since the sample file in itself is already a working solution, everything is there to test your own keys with a real registration code. This will also ensure that the solution works before you start implementing it in your own solution.

The secret keys are used to encrypt your information when creating the unlock code and to decrypt it when registering. Therefore, the same secret keys must be present and used for the same solution, both in the FM Registrations code generator and in your solution. The keys can be easily copy-and-pasted into the sample file (or later into your own application) in a script.

### Secret keys are the key

Copy the secret keys from FM Registrations. To do this, open the sample file and the script environment. Look in the FMR Settings Script of the module where you paste the codes. This is really simple. Copy and paste the default code into the appropriate script step (as indicated there) and the beta key into its own script step. Save the script.



The secret keys are not stored in a table, but only in scripts, which increases security.

You are now ready to run a test with real license codes.

# Creating a license code

License codes are created in FM Registrations. This is the code generator, so to speak.

## License codes belong to addresses

You have listed your application in a first step. Now you are to create a correct license code for a customer. To do this, you must first create a new customer address (or use your own address for testing). License codes belong to addresses.

The following steps are required

1. create a new address or search/select an existing address.
2. add a license to the address
3. create the license code for this license.

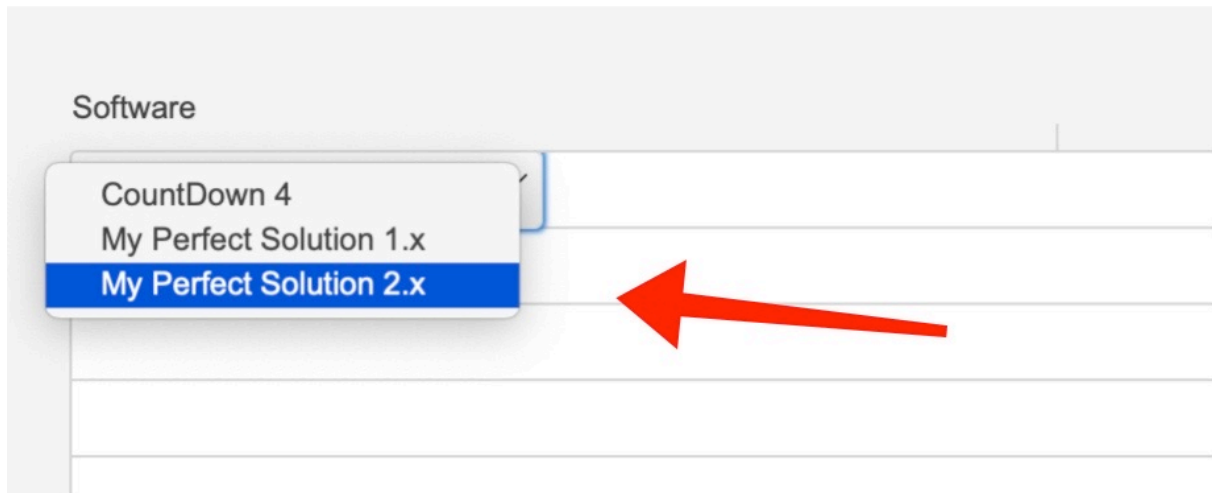
## 1. Creating a new address

In FM Registrations click on "Customers and Registrations". Here you first add a new address by clicking on the + sign at the top of the screen.

The screenshot shows the 'FM Registrations' software interface. At the top, there is a navigation bar with a '+' icon, a search bar, and a language dropdown set to 'English'. Below the navigation bar, the main content area is titled 'Home' and 'Clients and registrations'. A sidebar on the left contains a list of navigation items: 'Registration list', 'Address list', 'FileMaker apps', 'Software details', 'Settings', 'Email settings', 'Code settings', 'Backup', 'Import-Export', and 'Resources'. The main content area displays the 'Address' form, which is divided into two columns. The left column contains fields for 'Company' (Bright Living), 'Street' (Bright way 123), 'ZIP' (00001), 'City' (Splendour), 'Country' (US), and 'Reseller'. The right column contains fields for 'Department' (Department of ideas), 'First name' (Mark), 'Last name' (Bright), 'Email' (mark@brightliving.com), 'Phone', 'Created' (Fri, Sep 11, 2020), and 'Modified' (Fri, Sep 11, 2020). A red arrow points to the '+' icon in the top navigation bar. Below the form, there is a 'Create Multiple Codes' button. At the bottom of the screen, there is a 'Software' section with a 'Choose software' dropdown menu.

## 2. Add a license

To add a license to an address, look at the bottom of the screen and click "Select Software" to choose a software product from the pop-up menu. This is the list of software applications you have previously added to FM Registrations.



After you select a product, the row will be filled with some presets defined for the product:

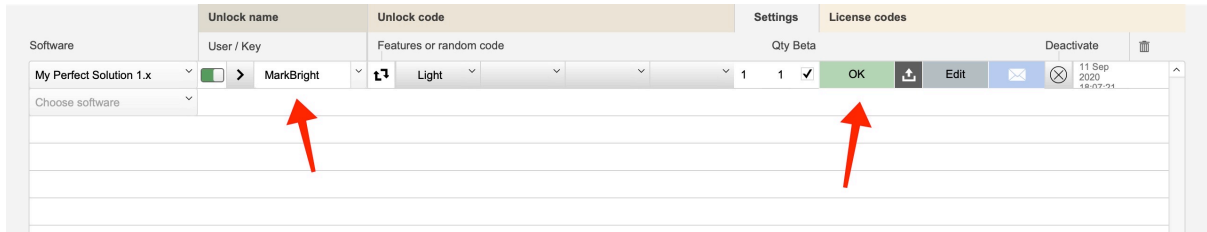
		Unlock name		Unlock code				Settings		License codes						
Software		User / Key		Features or random code				Qty Beta					Deactivate			
My Perfect Solution 1.x			>	Unlock name		Light			1	1	✓	Generate		Edit		11 Sep 2020 18:07:31
Choose software																

Each line consists of 4 parts:

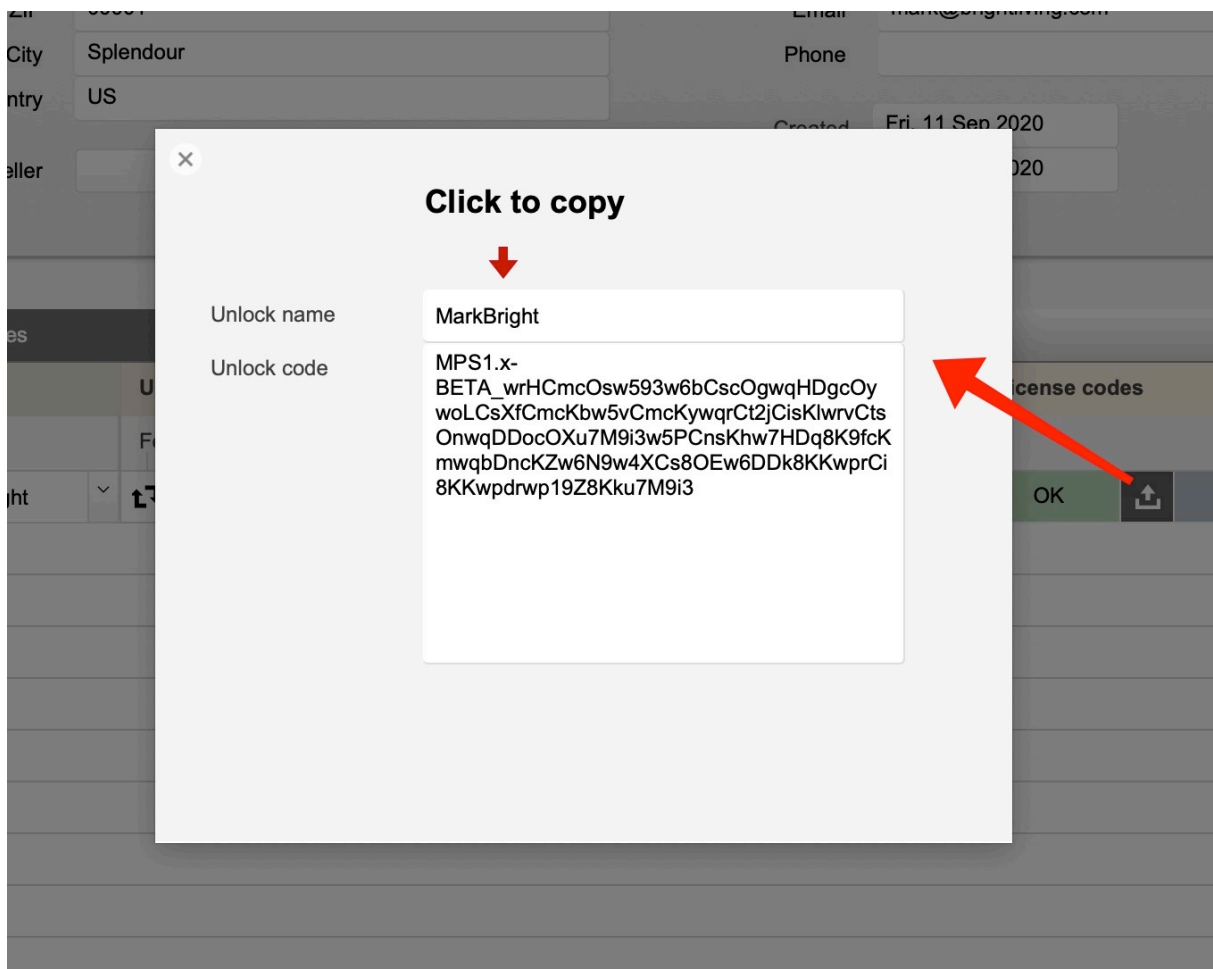
1. Unlock name (optional)
2. Unlock code (mandatory, properties or random)
3. Settings (options depending on the type of unlock code)

#### 4. License codes (Generate, View & Copy, Edit, Email, Deactivate, Delete)

In the image above, the unlock name still needs to be set. Click the > button to create a random code and click "Generate" to create the license codes (it turns green and says OK). It will look like this:



Now display the unlock code and unlock name by clicking the Copy button.





If you have defined both an unlock name and an unlock code, you can copy them by clicking in these fields.

Now view the full license details by clicking the Edit button.

English

My Perfect Solution 1.x

Bright Living, Splendour, Mark Bright

Code type

Features

Random code

Feature 1

Feature 2

Feature 3

Feature 4

Light

Software Expiry Date

Number of days till expiration of the software

365

1

Calculate the expiration date when the code is created, based upon Current Date + Number of Days till Expiry.

Codes

Code settings

Prefix (MPS1.x)

Use beta key

Unlock name

MarkBright

Unlock code

MPS1.x-BETA\_wrHCmcOsw593w6bCscOgwqHDgcOywoLCsXfCmcKbw5vCmcKywqrCt2jCisKlwrvCtsOnwqDDocOXu7M9i3w5PCnsKhW7HDq8K9fcKmwqbDncKZw6N9w4XC8OEw6DDk8KKwprCi8KKwprdrwp19Z8KKu7M9i3

Code test

Summary

My Perfect Solution|1.x||365|1|LV|||

Preparation

MarkBright|My Perfect Solution|1.x||365|1|LV|||

Complete license

MarkBright|My Perfect Solution|1.x||365|1|LV|||3168473656

Decrypted

Unlock code Decrypted

Decrypt

In this screen you can change or check all settings if necessary.

## Test in the Example File

If you have followed the manual to this point, we have extended the sample file with our own secret keys from our "My Perfect Solution" software product and also created a license for the same product for a newly created customer address.

Now we have everything we need for testing. Copy and paste the unlock code into the registration form in the sample file as shown below (leave the unlock name field blank as we didn't generate that part!).

Click Register to test it. Now everything should work. Also read the chapter "The decrypted information" to interpret what you have received.

The screenshot displays the 'FMR-example040' application window. At the top, there are three tabs: 'Startup', 'FM Registration' (which is active), and 'Landing page'. Below the tabs, the title 'FM Registrations – Example File' is shown, followed by the subtitle 'Implementation example.' and a 'Clear Backup' button. The main content area has four sub-tabs: 'What You See', 'What You Get', 'Solution Settings', and 'Tests'. A large green button labeled 'Start Test Mode' is positioned to the right of these tabs. A grey arrow points down from the text 'USE THIS FOR YOUR REGISTRATION SCREEN' to a registration form. The form is titled 'Please register your software' and contains two input fields. The first field is labeled 'Unlock Name: Extra Code' and is empty. The second field contains the alphanumeric code 'P1.x\_Z8OVwqV6w4nCtlnCnMODwrJnwo7Cl2vCq8Oew6jCq8KPwqx4eGTCqckDeA==u7M9i3'. A red double-headed arrow points between these two fields. Below the code field is a blue 'Register' button. To the right of the button is a green checkmark icon and the text 'Look under "What You Get" to see the results.'

If something doesn't work here, just check if you copied the security codes correctly. The scripts used are exactly the same as for Test Mode. If it works there but not with your license, then something is wrong with the copied information. Check

- secret codes
- Unlock codes.

If everything works well, you now have the certainty that this solution works with your own codes and you can start implementing the logic of the sample file into your own application.

# FM Unlock Integration

If you have successfully gone through the previous steps, you have seen that everything works fine. The sample file is a neutral test site. You can now start implementing the unlock module in your own solution.

# When do you need FM Unlock?

FM Unlock decrypts license codes created with FM Registrations. This module must be part of your solution to verify the issued license codes.

## When you use FM Starter

If you already work with our startup solution "FM Starter", then you don't need to integrate FM Unlock. It is already part of the startup file. You just need to activate it in the developer dashboard and insert the appropriate secret keys in the appropriate script.

### Integrating into your solution

If you want to use FM Registrations with your own solution, you need to integrate the FM Unlock module in your FileMaker solution. There are two ways to do this: You import the FM Unlock module from the sample file, or you import the add-on. The easiest solution is to integrate it as an add-on. However, this requires that you work at least with FileMaker Pro 19.1.

1. You are working with FileMaker Pro 19.0 or older: Import the module
2. You are working with FileMaker Pro 19.1 or later: Import the add-on.

In the following pages, these two options are presented in detail.

# FileMaker 19.0 or older: Module

The sample file has the "FM Unlock" module (formerly called "FMR License Registration"). This is the unlock module that you need to implement in your solution. If you are working with FileMaker Pro 19.1 or higher, it is recommended to use the add-on for this. You can then skip this section.

## Modular FileMaker

FileMaker modules are a concept developed by Todd Geist and presented on [modularfilemaker.org](http://modularfilemaker.org). The structure of a FileMaker module is always the same and the modules can be easily integrated into your solution. Please read the introduction on the mentioned website - it is short and valuable to get a basic understanding.

## Script folder

As with any FileMaker module, there is a Read Me script within the Module Script folder that explains how to implement the module into your solution. For this module, the following steps are required (and verify this against the Read Me script):

## Step by step

1. Import custom functions
2. Import table "FmRegistrations" and create 1 record in it
3. Import all layouts based on the "FmRegistrations" table (make sure to use only the same names). Do not copy any objects yet!
4. Import the scripts
5. Copy all objects from the layouts in the sample file to the same layouts in your solution file
6. Look at the settings script and set the secret keys correctly
7. First check the result and then add more checks as you deem necessary.

The sequence of steps is chosen so that no links are torn off. Please make sure that all scripts are correct and check the functionality as in the section "[Test in the Example file](#)".

## **FileMaker 19.1 or later: Add-on**

The sample file is also available as an add-on. As an add-on, the FM Unlock module can be integrated into other solutions particularly easily.

### **Requirements**

FileMaker supports add-ons from version 19.1, so you need at least this version to use the add-on. If you work with an older version of FileMaker, please use the sample file and import the FM Unlock module from there.

### **After import**

Once you import the add-on, all the layouts, scripts, custom functions, and flows are available in your solution. Many add-ons have elements that you can drag and drop onto the layout. There is no need for this within FM Unlock. The element you drag onto the layout only points to the configuration page - which can be accessed in a different way.

### **Testing the configuration**

Once the add-on is loaded, the functionality can be used. You should now use the test mode of the configuration page to see if everything works. If the test mode works, next you can use the secret keys of your software. This way you can already create real license codes in FM Registrations and check them in your solution.

### **Enhancing the configuration**

After the configuration is working, you can continue with the script settings.

# Script settings

The unlock module or add-on "FM Unlock" (formerly called FMR License Registration) is a FileMaker module. In a FileMaker module, settings are kept separate from functionality as much as possible. To make adjustments as needed, use the scripts in the Settings folder.

The following scripts are part of the Settings folder:

- FM Unlock Settings (Secret codes must be used here)
- FM Unlock StartUpChecks (Your checks! This script is included in the startup script and performs the checks when a user starts the file).
- FM Unlock RegistrationChecks (The details you want to check during the registration process. This script is part of the registration script).



# First check the basic settings

After you have included the unlock module in your solution, run the same test as you did with the sample file. Since you have already seen that the sample file works, this ensures that your basic implementation is correct.

Only after this basic testing do you begin to make improvements as you see fit, not without regularly making backups of your work. Most support requests we received resulted from these two issues:

- The basic implementation was not complete (for example: no secret keys were added to the solution).
- Too many changes were made immediately before the basic configuration backup worked.

## Tip

Always compare with the sample file. If your solution does not work, but the sample file works, you can be sure that you changed something in your implementation.

Compare: Test in the [example file](#).

## **Include additional tests**

If you have followed the manual, you have succeeded in implementing the basics of FM Registrations. Congratulations!

The next step is to develop your own checks. FM Registrations helps you encrypt and decrypt information, but it does not automatically know what to do with it. Here you need to implement your own logic to achieve your goals. In the settings scripts, you add your customizations.

For example: When you choose an expiration date, you get (as information) this expiration date. There is no logic that automatically compares this date with the current date. This is something you have to implement yourself and customize to your needs.

There are two types of settings available to you: Constraints and Configurations.

### **Constraints**

You can set constraints on your licenses, such as a maximum number of people who can use the solution at the same time, or a maximum number of records in a table, an expiration date, or a number of days until expiration.

### **Configurations**

Apart from constraints, you can also create configurations for your solution. Let's say you have a solution, but you want to distinguish between a trial version, a light version, and a full version. If you know what the differences are, you can configure these differences by creating a script that sets the options for each version. After the registration is successfully completed, you could call a script with the information from the registration to configure the solution details according to the information from the license code.

# Setting the license details

Der Registrierungscode, den Sie in FM Registrations erstellen, kombiniert mehrere Informationen. Diese können Sie einstellen. Nachdem Sie den Code in Ihrer Lösung entschlüsselt haben, steht Ihnen dieselbe Information wieder zur Verfügung. Diese Information können Sie mit einem Script auswerten, und so eine Konfiguration auslösen.

## Beispiel

Sie haben 1 Produktdatei, die Sie in 3 Versionen anbieten möchten. Betrachten Sie jede Version als "Eigenschaft" und bezeichnen Sie diese beispielsweise so:

1. Trial version
2. Light version
3. Full version

Jede dieser Sorten wird in FM Registrations als Option erstellt und mit einem Shortcode versehen. Sehen Sie sich den Screenshot unten für die oben genannten Varianten an. Unter "Eigenschaften" (Features) haben Sie Ihr internes Label. Unter "Trigger" sehen Sie den Code, der als Teil Ihrer endgültigen Lizenzinformation erscheinen wird. Die "Version" dient zu Ihrer Information und der "Slot" definiert, wo das Feature angezeigt werden soll (es stehen 4 Slots zur Verfügung).

SoftwareFeaturesSecret keys

Each feature lets you create a "trigger", which you can evaluate in your solution to configure your app.

Active	Feature	Trigger	Version	Slot		
<input checked="" type="checkbox"/>	Full Version	S	1.x	1	⊗	🗑
<input checked="" type="checkbox"/>	Light Version	L	1.x	1	⊗	🗑
<input checked="" type="checkbox"/>	Trial Version	T	1.x	1	⊗	🗑
	Add text label					

1. "T" als Trigger für die Testversion
3. "L" als Trigger für die Light-Version
4. "F" als Trigger für die Vollversion.

Alle diese Eigenschaften erscheinen in Slot 1.

## **Wie definiert man den Inhalt für jeden Slot?**

Es stehen Ihnen bis zu 4 Slots zur Verfügung. Jeder Slot kann mehrere Einträge haben, aus denen in einem Popup-Menü ausgewählt werden kann. Um zu sehen, wie dies funktioniert, werfen Sie einen Blick auf die Seite [Software Details](#).

Es funktioniert folgendermassen: Jeder Slot kann mehrere Einträge haben, von denen nur 1 ausgewählt werden kann. Wenn Sie z.B. 3 Versionen zur Auswahl haben, werden Sie immer nur 1 für die Lizenz auswählen. Es handelt sich entweder um eine Testversion, eine Light-Version oder eine Vollversion. Alle passen daher gut in den ersten Slot. Zusätzliche Optionen, die gleichzeitig verwendet werden, können durch Funktionen in den Slots 2...4 aktiviert werden.

### **Erstellen des Codes in FM Registrations**

Es wird 1 Feld geben, höchstwahrscheinlich Slot 1 der Features, welches alle diese Optionen in einem Popup-Menü enthält. Wenn Sie die Lizenz erstellen, werden Sie festlegen, welche der Optionen für den Client gelten soll. Nehmen wir an, dass der Kunde eine "Light-Version" bestellt hat, dann wird der im Lizenzcode gespeicherte Textstring "L" für "Light-Version" stehen, wobei "L" der Trigger ist, der für "Light-Version" steht, wie oben erläutert.

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**Address** | Remarks | History

Company 1 This Company

2

Street 1 ThisStreet 123

2

ZIP 123456

City ThisCity25

Country ThisCountry

Reseller

**Create Multiple Codes**

Software	Unlock name	Unlock code
Papadum 1.x	<input checked="" type="checkbox"/> Unlock name	Features or random code
Choose software		Full Version Light Version Trial Version

The value list of the popups works as follows: You add the Light version to the license, and the "L" identifier will be part of the license. After decoding, you retrieve the "L" and you need to implement a script to retrieve this information and trigger a script that configures your solution based on this information.

## Using the code in your solution

After you decrypt the license in your solution, the information "L" is in slot 1 of the features, a separate field in the decryption module. This is what you will get as a result.

Next, create a script that you run after a successful registration to implement the desired configuration. If there is some restriction, such as an expiration date or a maximum number of users, you will also need to create a check for the startup script. This way you can verify the license even after it has been activated. If for some reason the license is not valid, you can then block the regular use of the software and offer the user alternative

options (renewing the license, exporting the data, etc.).

# Working with expiration dates

With FM Registrations you can use expiration dates for your solutions. To use them correctly, especially if you intend to distribute your solution across continents, some knowledge about handling data in FileMaker is required. That is the topic of this chapter.

## Two date options

There are two ways to include information about a date in your license code. These ideas are designed to be useful for defining an expiration date. The license itself can contain two types of date information:

1. An expiration date
2. A number of days till the expiration date

Access these two fields by clicking the Edit a License button in a client's license list.

The screenshot shows a web application interface for managing software licenses. On the left is a sidebar with navigation links: Home, Clients and registrations, Registration list, Address list, FileMaker apps, Software details, Settings, Email settings, Code settings, Backup, Import-Export, and Resources. The main area is divided into two sections. The top section, titled 'Clients and registrations', shows details for a client named 'Bright Living'. It includes fields for Company, Street, ZIP, City, Country, Reseller, Department, First name, Last name, Email, and Phone. The bottom section, titled 'License codes', shows a table of license codes. The table has columns for Software, User / Key, Features or random code, Qty Beta, and actions (Generate, Edit, Deactivate). A red arrow points to the 'Edit' button in the actions column for the license code 'MarkBright'.

Software	User / Key	Features or random code	Qty Beta	Generate	Edit	Deactivate
CountDown 4	MarkBright	Basic	3	Generate	Edit	Deactivate

Clicking this button opens a Card window that displays all options for this license, including the date fields:



If you want to embed the end date, it must be set manually in this window. If you want to set a number of days until expiration, it can be set in the software license description (Software Details) as the default value for each new registration.

## Number of days till expiration

The number field can be set to any value. You can think of a license for only one month or a subscription for one year. Anything you have in mind can be defined here. Think of a 30-day trial or a subscription for 1 year (365 days). In this example, the values 30 or 365 are encoded in the license.

To interpret this value, you must have implemented logic after the registration process that interprets the information from the license code. Analogous to the example here above: The FM Unlock module gives you the value 30 or 365 after decrypting the registration code, but you have to define what to do with these values.

# Date calculation

If you use expiration dates in your solution, read this chapter carefully!

When creating a license code, there are two settings for an expiration date:

1. Expiration date
2. Number of days till expiration.

Both settings are available when you click on "Edit" when creating a license. A Card window opens.

The screenshot shows a software interface with a sidebar on the left containing navigation links: Home, Clients and registrations, Registration list, Address list, FileMaker apps, Software details, Settings, Email settings, Code settings, Backup, Import-Export, and Resources. The main area displays a form for a client named 'Bright Living' with fields for address, contact information, and a reseller. Below this, there is a 'Create Multiple Codes' section with tabs for 'Unlock name', 'Unlock code', 'Settings', and 'License codes'. The 'License codes' tab is active, showing a table with columns for 'Software', 'User / Key', 'Features or random code', 'Qty Beta', and 'Actions'. A red arrow points to the 'Edit' button in the 'Actions' column of the first row, which is for 'CountDown 4'.

Software	User / Key	Features or random code	Qty Beta	Actions
CountDown 4	MarkBright	Basic	3	Generate Edit Deactivate

The Card window has all the details of the license, including the date options:

×

English

Software

CountDown 4

Licensee

Bright Living, Splendour, Mark Bright

Code type

Features

Random code

Feature 1

Feature 2

Feature 3

Feature 4

Basic

Software Expiry Date

Number of days till expiration of the software

↑

Calculate the expiration date when the code is created, based upon Current Date + Number of Days till Expiry.

License count

3

Codes

# Date formatting

Date formatting in FileMaker is both simple and tricky.

On the one hand, it's extremely simple: you enter a date in a date field, then you can display (format) that information any way you want. On the other, it can become a real problem when you're dealing with customers on different continents. Why is that?

Date formatting is different in Europe than in the USA, for example.

- USA: MM/DD/YYYY (month / day / year)
- Rest of the world: DD/MM/YYYY (day / month / year)

The differences in date formatting are not just the settings that you can manipulate to achieve the desired result. There is also a "locale" parameter set within each FileMaker file. This is where the tricky part begins.

## "Locale" parameter within the FileMaker file

Each FileMaker file, when created, defines a local setting based on the computer settings at the time of creation, called "locale". Depending on where this file is used, it can become somewhat confusing, especially if a file is moved across continents. Dates are not stored neutrally by FileMaker, but as a date with a specific formatting.

Example:

- When you create a file in the US, the file receives the US localization for date formatting. This information is part of the file. Of course, if someone in Europe uses this file, the localization for the user's system is European, but the localization of the file is still American.
- How this works: When the European customer enters a date into this American file, the date may be displayed with correct European formatting, but internally the file stores this information with American formatting. When the date is

displayed in a date field, there does not appear to be a problem. Using the system formatting it is easy to correct the appearance of the formatting to the European DD/MM/YYYY. But: This is for display only! If you use the information from this date field in a formula or simply write it as text in a text field, the internal file will be stored locally (i.e. in the USA).

This situation requires a different approach. Storing the date "as a date" can lead to confusing and simply wrong data. However, FileMaker has a way around this.

## **Date as an absolute number**

FileMaker can store a date as a number: `ReadAsNumber ( [DATE] )`. If you look up the date number for June 18, 2020, the number is 737959, which is the number of days from the zero date defined in FileMaker, which is 01/01/0001 (the first of January in the year 1 AD).

This number is independent of any date formatting. If you then reinterpret this date information in another file, you will not only get the correct date, but also the formatting according to the local information of this file.

Interpret this number in this way:

`ReadAsDate ( [NUMBER] )`.

### **TIP**

If you want to set the information to a date already during the activation, the easiest way is to use the variable of the date. This now contains a number. If you want to convert this number in the variable to the date, you must first declare the variable as a number and then evaluate it as a date:

`ReadAsDate ( ReadAsNumber ( [$DATENUMBER] ) )`

# Removing the Locale-information from a file

Because FileMaker stores a local system setting in the file when you create it, you may wonder how to remove it.

The sample FM Registrations file does not contain any local information. It sets the local information when you first start the file, and then gets the information from your system.

How to create a file without file-local information

To create an "empty" file, you must save the file as an empty clone with no data. This will remove the local setting.

## When do you need to resolve this issue?

Under normal circumstances, this is not necessary because files are mostly used within the same date formatting zones. However, if you provide off-the-shelf solutions and want to sell globally, you should consider how you handle date formatting, especially if you calculate dates, insert dates as texts, and so on. Customers may be on different continents and have different formatting requirements that may not be reflected in your file. Creating empty files without local storage might solve this problem.

# Expiration dates

Starting with the sample file, public version 1.5, the expiration date is calculated as the number of days. See the sample file for how this works and expires.

The Expiration Date field in the backup set now has a field type of Number. This is different from previous versions where the date was simply stored as a date. This day number reflects the exact expiration date, just differently.

In order to do date comparisons, you need to harmonize this information in some way. Probably the easiest way is to reset the number to a date and save the date. Another way would be to base all date comparisons on the exact number of days. How and where you do this is up to you.

## **If you save an expiration date in the license:**

- The license has a final expiration date in the form of a number
- This only applies if you want to save the date (affects how the number is interpreted)
- What kind of data is stored in your solution? As a number or as a date?
- How does your startup script check the expiration date? Does it refer to a number or a date?

# Define licensing requirements

Not every software license is the same. FM Registrations supports many options for your license codes. Each software (version) can have different settings. Use them.



# Software details

When you add a [FileMaker application](#), you can configure the license type. All details about this license are listed in the screen window named Software Details, as you find it in the navigation menu.

Configuring the license means that here you create the basics as needed for each license. You define the structure.

The screenshot shows the 'Software Details' configuration window in FileMaker. The window has a sidebar on the left with a navigation menu. The main area is titled 'Software details' and contains a form for configuring a software license. The form includes fields for 'Software name', 'Version', 'Short form', 'Beta', 'Code type', and 'Use Unlock Name'. The 'Short form' field is checked, and the 'Code type' is set to 'Features'.

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Software

Features

Secret keys

**Software details**

Basic software settings

**My Special Software 1.x**

Software name: My Special Software

Version: 1.x

Short form: ☒ MSS1.x

Beta: ☐ Use beta key

Code type: ☐ Random code ☒ Features

(Add date, number of users, other features)

Use Unlock Name: ☒

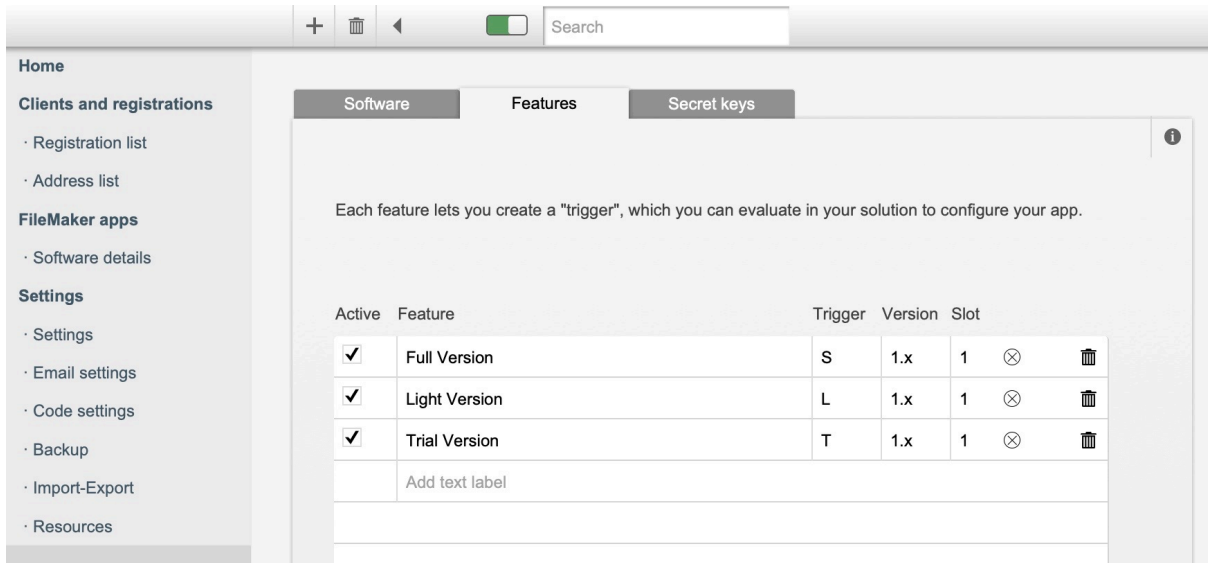
- Software Name: The name of your FileMaker application
- Version: The version number.
  - If you want to keep all sub-versions (1.1, 1.2, 1.3, etc.) under the same license and accessible, just keep the version generic, like "1" or "1.x".
- Short form as identification
  - The short form is calculated from the capital letters of your software plus the version number. The short form is prefixed to your code to make it

easier to distinguish the codes. Recommendation: Use the short form.

- Beta: Each application has two secret keys - one for the regular version and one for the beta version. This check mark defines which secret key should be used.
- Code type: Either random code or property code. This setting is used as default for new license codes.
  - Random code: No details, just a random code
  - Property code: Details and configuration options
- Use Unlock Name: If enabled, you will start each new registration with an enabled field for the unlock name. Disable it if you do not want this. An added unlock name increases security.

# Properties

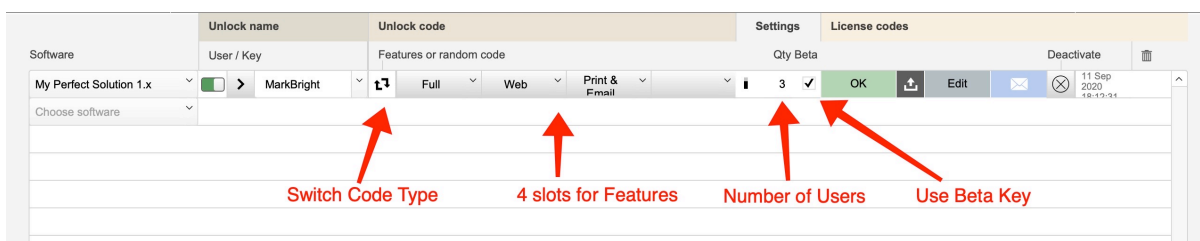
Properties can be used if they are enabled under the > Software tab.



The Properties tab is all about triggers. You can add as many features as you like, with any name. One feature per line. Each feature should have unique trigger information and be assigned to a specific slot.

When you create a license with features for a customer, you have 4 slots to choose from. Each slot can have multiple entries to choose from, but there is a maximum of 4 slots or opportunities that can be selected. This provides incredible flexibility in options and many more choices than I have ever seen in any other software solution or registration.

This is what it looks like when defining a license for a customer. The screenshot is from the > Customers and Registrations screen.



If you have multiple options, such as a basic version and a full version, these are not simultaneous options. Only one of these options is selected. Therefore, it is best to put these options in a single slot. In the first screenshot, all properties have been set for slot 1. It looks like this:

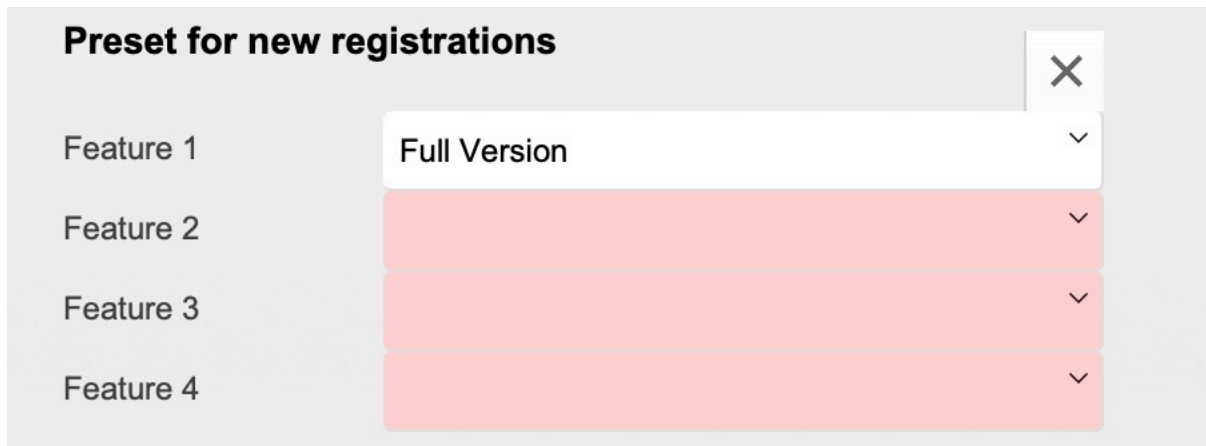
	Unlock name		Unlock code			
Software	User / Key		Features or random code			
CountDown 4	<input type="checkbox"/>	MarkBright	<div>Basic</div>			
Choose software						

2 Options in Slot 1

To speed up the creation of new licenses, you can set some defaults for properties as presets. See > Settings > Presets.

# Properties Settings

Under Software Details > Properties you can not only define the properties, but also set some preferences. The presets are used when creating new licenses. This applies to both single licenses and batch creation of licenses.

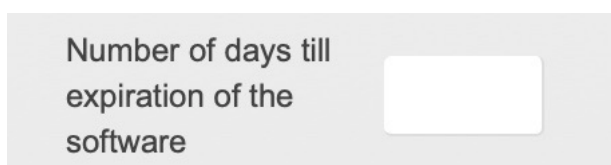


Preset for new registrations		✕
Feature 1	Full Version	▼
Feature 2		▼
Feature 3		▼
Feature 4		▼

In this screenshot, property slot 1 is set to "Full version". This means that for each new license created, this is the default value to be used. When you create a license for a customer, you can change this value at any time before generating the final license code.

Other options:

## Number of days until expiration

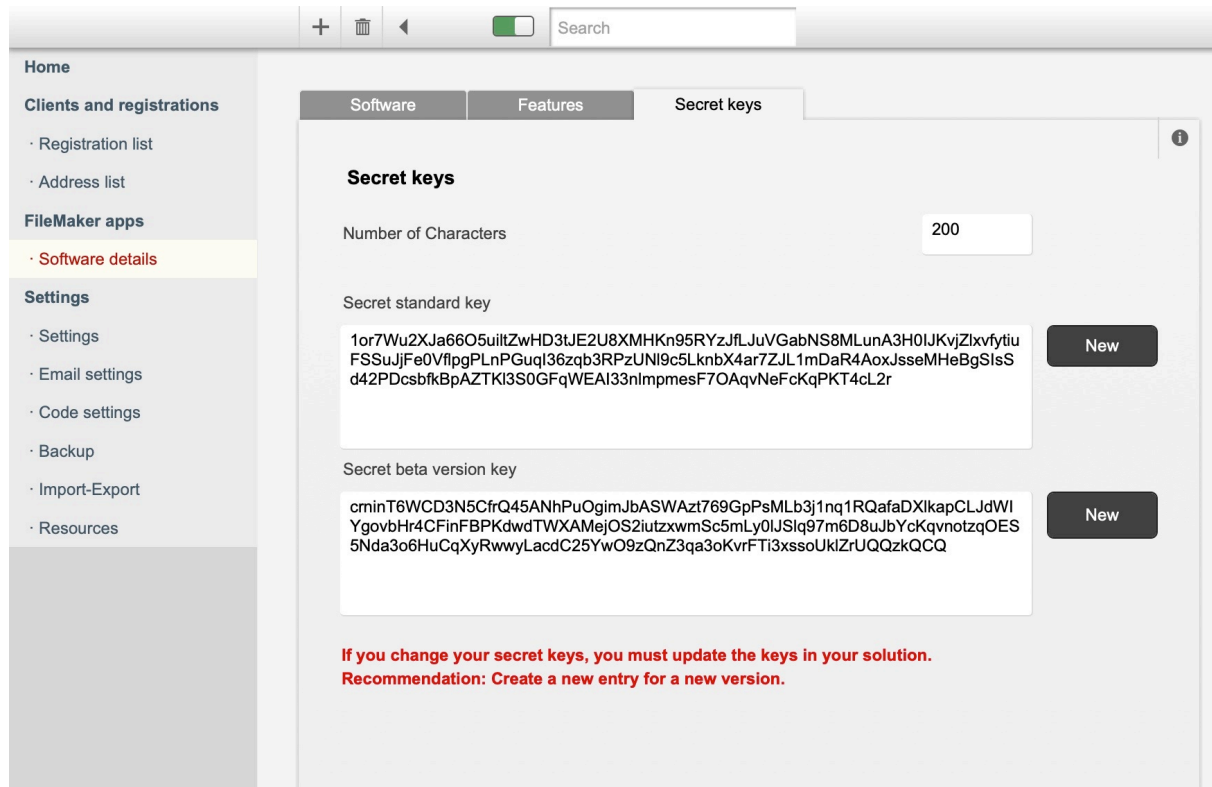


Number of days till expiration of the software	<input type="text"/>
--	----------------------

The number of days until expiration can be set. This default fills each new license with this value. For example, it can be 30 days or 365 days for a year.

# Secret keys

The third tab contains the information of the secret keys as they are used to encrypt and decrypt the license information.



When you create a new record for a new FileMaker application, the basic settings for codes are copied to these fields. This includes the length of this code, as well as the characters used in the randomized string.

## Number of characters

This value can be used to set the number of characters for the secret keys. If you want to change this value for all new applications, go to > Code Settings to change the basics.

## New keys

Whenever you press the "New" button, a new key will be generated. Be aware that the encryption of your licenses will change and therefore you have to apply this new secret key to your application as well, so that the decryption works properly.

## Warning

We strongly advise you not to change the keys of an existing and valid product if licenses have already been issued. Rather create a new record for this purpose. See also > Settings for upgrades.

How to work with secret keys was explained in > [Create secret keys](#).

# Creating licenses

From creating licenses to managing licensees – FM Registrations makes it possible. Track licenses already issued, associate each license with a unique address, or create multiple generic licenses at once.



# One record for each app

Before you can create licenses for your customers, you need to

1. List your apps in FM Registrations
  - [Create the secret codes for each app](#)
2. implement the Unlock module "FM Unlock" in your solution
  - [The FM Unlock module](#)

We strongly recommend that before implementing the FM Unlock module into your solution, you test your codes and find out how it works with the example file.

# Manage licensees

FM Registrations not only creates license codes, but also manages the addresses of your licensees. All unlock codes are linked to an address of a licensee.

Before you can add a license for a customer, you need to add the customer data. Go to "Customers and registrations" in the navigation. Click + to add a new address.

The screenshot displays a web application interface for managing licensees. On the left is a navigation menu with sections: 'Home', 'Clients and registrations' (highlighted), 'FileMaker apps', 'Settings', and 'Resources'. The 'Clients and registrations' section includes links for 'Registration list', 'Address list', and 'Software details'. The main content area is titled 'Address' and contains a form with two columns of input fields. The left column includes 'Company 1' (This Company), 'Street 1' (ThisStreet 123), 'ZIP' (123456), 'City' (ThisCity25), 'Country' (ThisCountry), and 'Reseller'. The right column includes 'Department 1' (Creativity Team), 'First name' (John), 'Last name' (Johnsson), 'Email' (john@johnsson.something), 'Phone', 'Created' (Wed, 15 Mar 2017), and 'Modified' (Tue, 01 Sep 2020). Below the form is a 'Create Multiple Codes' button. At the bottom, there is a table with columns 'Software' and 'Qty', featuring a 'Choose software' dropdown and several empty rows.

**Tip:** If you want to create generic codes, for example, with a limited license as a giveaway at shows to get people to use your solution, create a generic address for that purpose and create the codes for that address. You can also create multiple codes at once. More on this later.

After you create a new address at the top of the screen, you can start adding a license for any software you define.

In the navigation you will find two more layouts:

- Registration list – a list of all created licenses

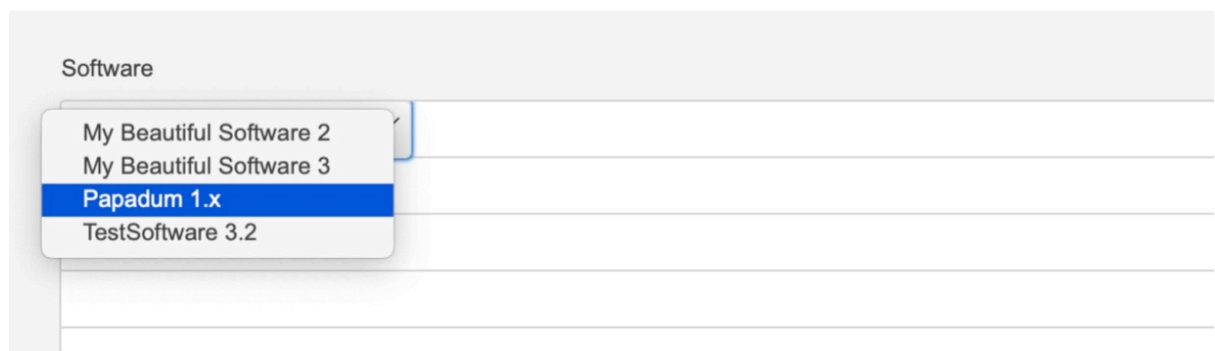
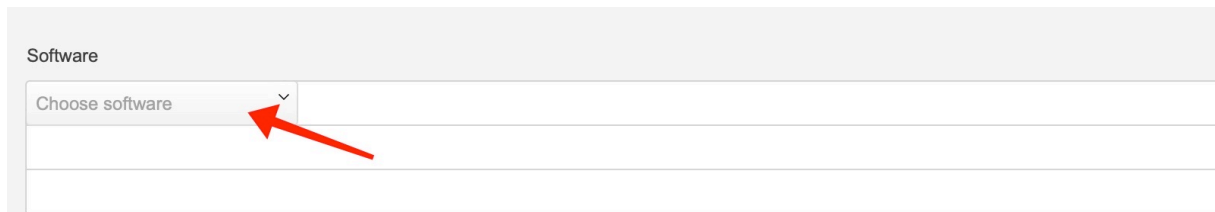
- Address list – a list of all addresses in the database.

These additional layouts should be self-explanatory, as they are only used to navigate the database.

# Creating a license

Licenses are added to an address. If you have not yet created an address, do so first (> [Manage Licensees](#)).

Once you have entered a customer's address, you can start adding licenses. In the lower part of the screen, click the "Select software" popup and select the appropriate application:



The selection in this popup was previously defined in > FileMaker Apps.

When you select a software from the popup menu, it is added to this row with all the default settings. Once added, you can change all settings before creating a final license code.

# Settings for upgrades

One of the advantages of FM Registrations is that you can restrict unlock codes to specific versions. By creating new records with their own secret keys for each new version, you ensure that old license codes will not work in newer versions.

Let's say you create an initial record for your own FileMaker solution. This application is version 1.7, and you want to provide customers with license keys that work for all versions 1, but you want to change that when version 2 arrives so you can sell upgrades. Here's how it works:

- In FM Registrations, create an initial record for your software, version 1. This record has its own secret keys that are used to encrypt and decrypt the license information. You can use the same settings and the same secret keys for all version 1 updates, and your customers can use their license keys to unlock any sub-version 1.X.
- When you are about to release version 2, you do not overwrite the record of the first version, but simply create a second record for version 2. This second record has its own secret keys, which you then implement in your version 2. This keeps the license keys for each version unique – and traceable.

By creating a second record, you keep track of all previous users and licenses associated with this record. The new version 2 cannot be unlocked with a version 1 code. Therefore you can distinguish between versions and sell upgrades.

Screenshot: 1 record for each version for which you want to distinguish codes.

My Beautiful Software	
1	My Beautiful Software 2
2	My Beautiful Software 3

# Batch creation of licenses

Batch creation of licenses can be useful for several reasons:

- Provision of a range of generic licenses for distribution partners
- Provide a set of generic licenses as a prize for a contest
- etc.

All licenses are linked to one address. This also applies to batch generation of licenses. The idea is that licenses are always generated for one person, even if that person is a distributor, a magazine you run a contest with (where you provide some free license codes, for example), or something similar.

## How to create a batch of licenses

First create or select a correct address. Then click the Generate multiple codes button:

Search

Home

Clients and registrations

· Registration list

· Address list

FileMaker apps

· Software details

Settings

· Settings

· Email settings

· Code settings

· Backup

· Import-Export

· Resources

Address

Remarks

History

Company 1

Bright Living

2

Street 1

Bright way 123

2

ZIP

00001

City

Splendour

Country

US

Reseller

Create Multiple Codes

Software

Choose software

In a popup window you can define all the details:

Select the software from the pop-up window, define the number of codes, the code type, whether to use an additional (random) unlock name, the number of users per license and, if necessary, a number of days until expiration or a final expiration date.

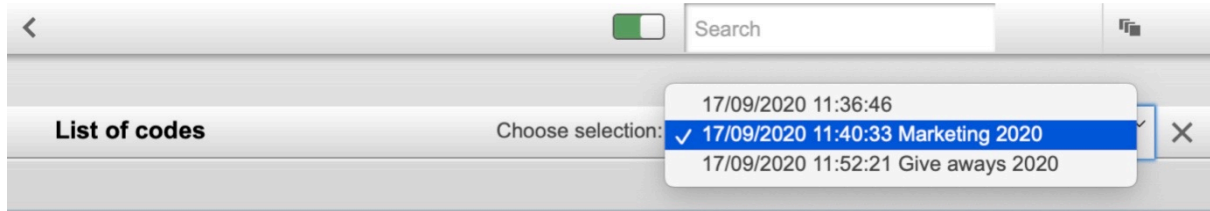
Each batch will have a batch identifier. You can either specify a name or have FM registrations generate a timestamp as an identifier.

Now create the codes. The result will be displayed in a list:

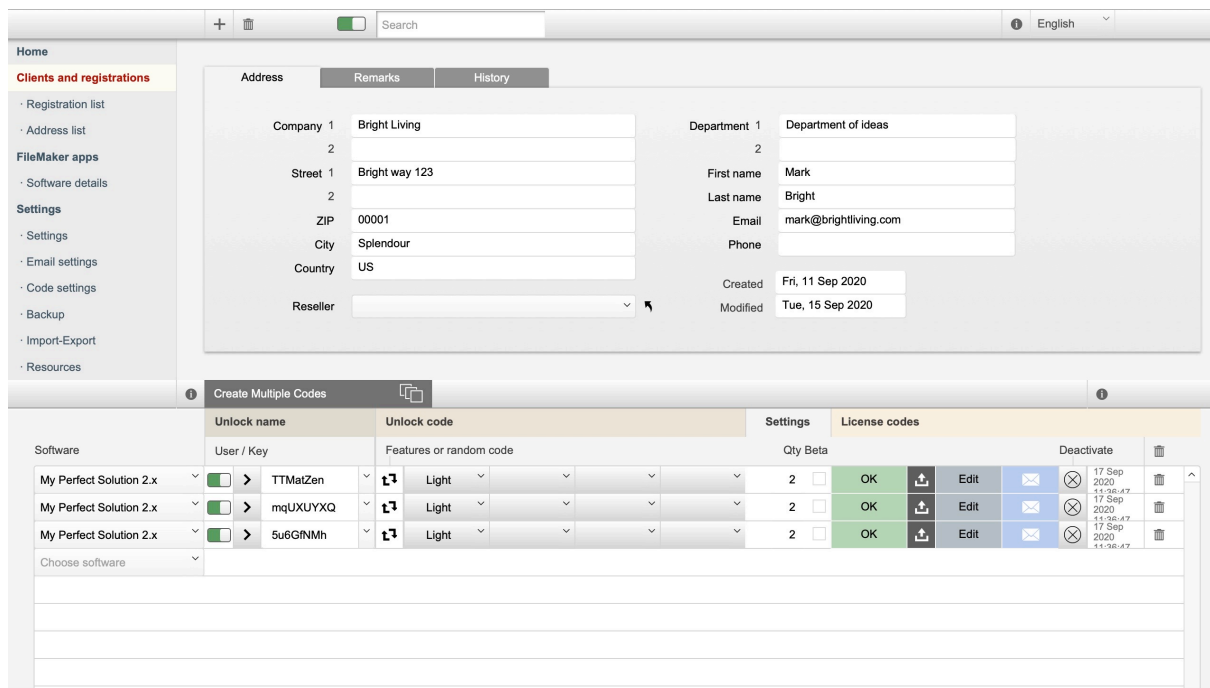
List of codes					
Choose selection:		17/09/2020 11:52:21 Give aways 2020		Delete selection	
Show all					
CountDown	4	CD4	CountDown[4][60][B]	Bright Living, Splendour, Mark Bright	
CountDown	4	CD4	CountDown[4][60][B]	Bright Living, Splendour, Mark Bright	
CountDown	4	CD4	CountDown[4][60][B]	Bright Living, Splendour, Mark Bright	
CountDown	4	CD4	CountDown[4][60][B]	Bright Living, Splendour, Mark Bright	



Der Stapelname (Batch-Name) in der Kopfzeile dieses Fensters ist ein Popup-Menü. Wenn Sie mehrere Batches (Chargen) haben, können Sie einfach zwischen diesen wählen.



The list view is just that. Click the "<" button in the upper left corner to return to the address. The licenses are properly attached to the regular address.



## List view, print and export

The list view window is easily accessible via the navigation ("Registration List"). You can print or export any selection to provide a set of licenses to a partner.

Search					English
List of codes		Choose selection:	17/09/2020 11:40:33 Marketing 2020	Delete selection	Show all
My Perfect Solution	3.x	MPS3.x	My Perfect Solution[3.x][60][5][L][V][I][I]	Bright Living, Splendour, Mark Bright	
My Perfect Solution	3.x	MPS3.x	My Perfect Solution[3.x][60][5][L][V][I][I]	Bright Living, Splendour, Mark Bright	
My Perfect Solution	3.x	MPS3.x	My Perfect Solution[3.x][60][5][L][V][I][I]	Bright Living, Splendour, Mark Bright	
My Perfect Solution	3.x	MPS3.x	My Perfect Solution[3.x][60][5][L][V][I][I]	Bright Living, Splendour, Mark Bright	
My Perfect Solution	3.x	MPS3.x	My Perfect Solution[3.x][60][5][L][V][I][I]	Bright Living, Splendour, Mark Bright	
My Perfect Solution	3.x	MPS3.x	My Perfect Solution[3.x][60][5][L][V][I][I]	Bright Living, Splendour, Mark Bright	
My Perfect Solution	3.x	MPS3.x	My Perfect Solution[3.x][60][5][L][V][I][I]	Bright Living, Splendour, Mark Bright	
My Perfect Solution	3.x	MPS3.x	My Perfect Solution[3.x][60][5][L][V][I][I]	Bright Living, Splendour, Mark Bright	
My Perfect Solution	3.x	MPS3.x	My Perfect Solution[3.x][60][5][L][V][I][I]	Bright Living, Splendour, Mark Bright	
My Perfect Solution	3.x	MPS3.x	My Perfect Solution[3.x][60][5][L][V][I][I]	Bright Living, Splendour, Mark Bright	
My Perfect Solution	3.x	MPS3.x	My Perfect Solution[3.x][60][5][L][V][I][I]	Bright Living, Splendour, Mark Bright	

## Print preview

A printed list can be helpful, especially in connection with batch generation of codes. The first column contains the unlock name, while the second column contains the unlock code:

## List of codes

### Bright Living, Splendour, Mark Bright

Batch: 17/09/2020 11:40:33 Marketing 2020		10 CODE/CODES			
		Version	Qty	Expiration Date	Days
1	5FhqsM1B	MPS3.x_wpl +w6LDpcKow4F5wrvCtcKaw69VwojCvMK7wpzDjsKWw4FnwbpCt8KjwqVdg8KqW6LCpcOuwpzCu7M9i3hcOlw6/DtcKlccOGwqXDrcKtwr7Do8Ktw6vCs3nCnMKOwo/Cm8KFwoLCI2zCnA==u7M9i3			
2	RIZnRw2J	MPS3. x_wrbCpMOUw6LCh8OresODwrXCmsOvVcKIwrzCu8Kcw47CIsOBZ8KWwrfCo8Krw4PCqsOiwwqX DrsKcu7M9i3woXDpcOvw7XCpXHDhsKlw63CrcK			
3	SM1Y1U41	MPS3. x_wrfChcKrw41mw4I8wqrCtcKaw69VwojCvMK7wpzDjsKWw4FnwbpCt8KjwqVdg8KqW6LCpcOuwpzCu7M9i3hcOlw6/DtcKlccOGwqXDrcKtwr7Do8Ktw6vCs3nCmcKOwovCoMKLworCmWzCog==u7M			
4	YVfBNCK8	MPS3. x_wr3CjsOgwrBcg8K3wpPCscK1wprDr1XCiMK8wrvCnMOOwpbDgWfCIsK3wqPCq8ODwqrDosKlw67Cu7M9i3nMKFw6XDr8O1wqVxw4bCpcOtwq3CvsOjwq3Dq8KzecKwojCiMKdwobCi8KVa8Kau			
5	o5HtRTN	MPS3. x_w5Ntw4LDomKpw4bCnMOHwrXCmsOvVcKIwrzCu8Kcw47CIsOBZ8KWwrfCo8Krw4PCqsOiwwqX DrsKcu7M9i3woXDpcOvw7XCpXHDhsKlw63CrcK			
6	EFZLLxvp	MPS3.x_wql +w5TDgMKBw6zCvsOpwrXCmsOvVcKIwrzCu8Kcw47CIsOBZ8KWwrfCo8Krw4PCqsOiwwqXDrsKcu7M9i3woXDpcOvw7XCpXHDhsKlw63CrcK			
7	acTY8jtX	MPS3. x_w4XCm8OOw41tw57CvMORwrXCmsOvVcKIwrzCu8Kcw47CIsOBZ8KWwrfCo8Krw4PCqsOiwwqX DrsKcu7M9i3woXDpcOvw7XCpXHDhsKlw63CrcK			
8	lpRGMhzb	MPS3. x_w5DCqMOMwrvCgsOcw4LDm8K1wprDr1XCiMK8wrvCnMOOwpbDgWfCIsK3wqPCq8ODwqrDosKlw67Cu7M9i3nMKFw6XDr8O1wqVxw4bCpcOtwq3CvsOjwq3Dq8KzesKWwojCj8KhworCiMKaZ8			
9	HsGmmHkY	MPS3. x_wqzCq8OBw6HCosK8wrPDksK1wprDr1XCiMK8wrvCnMOOwpbDgWfCIsK3wqPCq8ODwqrDosKlw67Cu7M9i3nMKFw6XDr8O1wqVxw4bCpcOtwq3CvsOjwq3Dq8KzesKVworCjCkbwo3Cq8KWaMK			
10	QEFFTmy5	MPS3. x_wrV9w4DCusKJw6HDgcKuwrXCmsOvVcKIwrzCu8Kcw47CIsOBZ8KWwrfCo8Krw4PCqsOiwwqXDrsKcu7M9i3woXDpcOvw7XCpXHDhsKlw63CrcK			

## Excel export

When exporting, an Excel file is created and opened. It looks like this and contains all the information about the licenses:

RunningNumber	ns_Users UserID::Com	SoftwareName	SoftwareVersion	SoftwareShort	Softwa
1	Bright Living, Splendour,	My Perfect Solution	3.x	MPS3.x	
2	Bright Living, Splendour,	My Perfect Solution	3.x	MPS3.x	
3	Bright Living, Splendour,	My Perfect Solution	3.x	MPS3.x	
4	Bright Living, Splendour,	My Perfect Solution	3.x	MPS3.x	
5	Bright Living, Splendour,	My Perfect Solution	3.x	MPS3.x	
6	Bright Living, Splendour,	My Perfect Solution	3.x	MPS3.x	
7	Bright Living, Splendour,	My Perfect Solution	3.x	MPS3.x	
8	Bright Living, Splendour,	My Perfect Solution	3.x	MPS3.x	
9	Bright Living, Splendour,	My Perfect Solution	3.x	MPS3.x	
10	Bright Living, Splendour,	My Perfect Solution	3.x	MPS3.x	

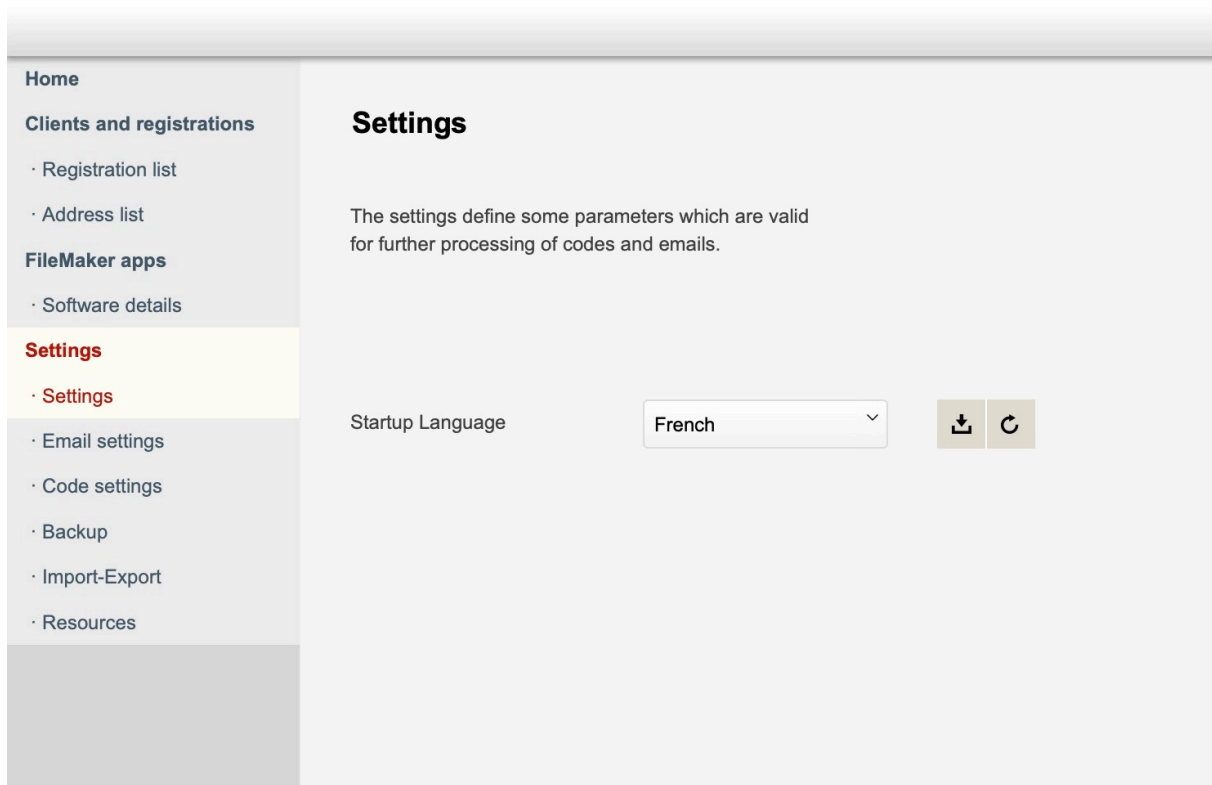
# Settings

Basic settings for FM Registrations.

# General settings

In the navigation you will find various settings. The general settings are listed under "Settings". Currently there is only one option where you can choose the start language of the FM registrations.

If you change the language, you have to save the settings. The startup language is set when you open the file.



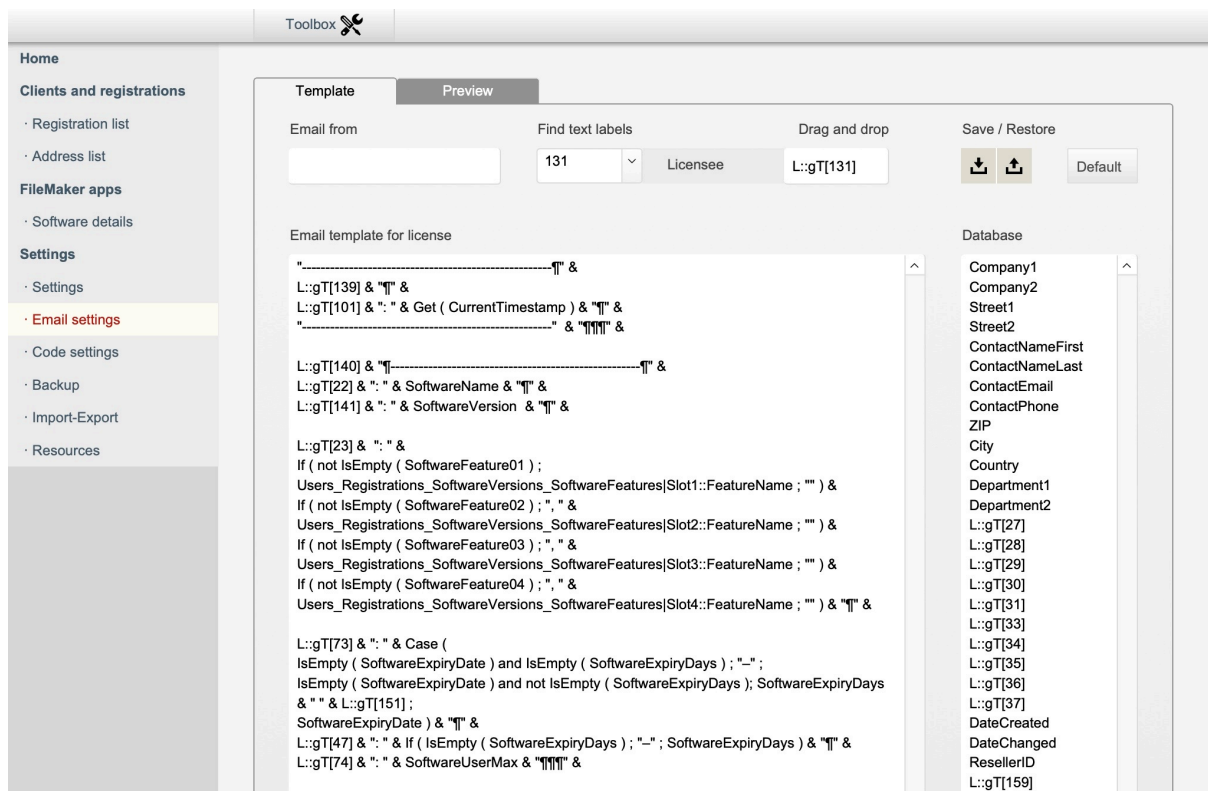
Of course, you can change the language at any time during a session by using the language switch at the top of the window.

# Preferences Emails

Email settings shows the settings and template with which an email with license details can be sent to the customer.

Lizenzcodes						
				Deaktivieren		
Erstellen		Editieren			17 Sep 2020 10:55:21	
Erstellen		Editieren			17 Sep 2020 10:55:23	
Erstellen		Editieren			17 Sep 2020 10:55:26	

## Die Email Settings



This screen has an email template that is multilingual and can contain all database fields with information. The basic setting can be used or customized.

To add normal text, put it "between quotes". Carriage returns or line breaks must be inserted exactly as you have them in Filemaker calculations (¶), which is similar for other functions. This field works as if you were composing a formula for a text field (which it actually is).

## Email from

The email address from which the email should be sent.

## Find text labels

Find multilingual text labels. Click the drop-down menu and select a wording. The translation ID is displayed and a short text label is shown next to it. As a result, the field you can use for the template will be listed under drag-and-drop. Simply click in the field and drag the field name onto the template.

## Toolbox

The toolbox is the translation table. If you need your own translations, add them here.

You can find more about the Toolbox in the [Toolbox](#) chapter.

## Save and restore

This saves the template or restores the template from the last saved version.

## Standard

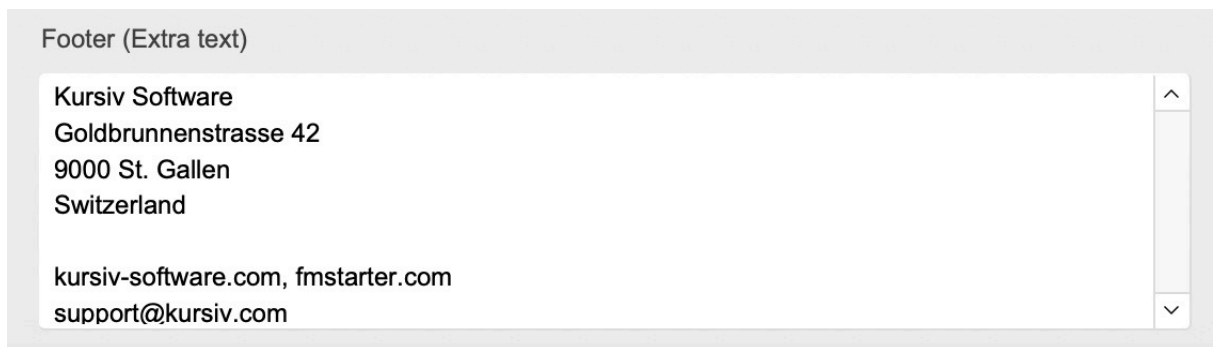
If you click on the default button, you will again get a basic email template to work with.

## Database

Available database fields can be copied into the email template as well.

## Footer text

In the lower part of the screen there is a field that is simply added as footer text. Enter your own information here.



The screenshot shows a text input field titled "Footer (Extra text)". The field contains the following text:

Kursiv Software  
Goldbrunnenstrasse 42  
9000 St. Gallen  
Switzerland

kursiv-software.com, fmstarter.com  
support@kursiv.com

The text is entered in a monospaced font. On the right side of the text area, there are two small arrows: an upward-pointing arrow at the top and a downward-pointing arrow at the bottom, indicating that the text can be scrolled vertically.



# Preferences encryption

Random codes are generated in several places. On this screen you can specify the length and the characters used.

	Secret keys	Unlock name	Random code	Save / Restore
Length	200	12	20	
Backup	200	12	20	

Characters used for the Secret Keys

abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789

Standard

## Length

The length settings are copied to new records as default values.

## Secret keys

The length of the secret key matters when you create a new record for a new FileMaker app. The key must be long enough to encrypt the full license description.

## Unlock name

The unlock name is used when creating a new license for a customer. The unlock name must be active. When active, it can have any text string, such as the username or email, but also has the option to include a random string. This is the length of this string.

## **Random code or random license code**

The random code can be used when creating a new license for a customer. The unlock code is a container that can be filled with either feature information or a random code. It depends on the type of code you define for this license. If you use a random code, it is just a random string with the length specified here.

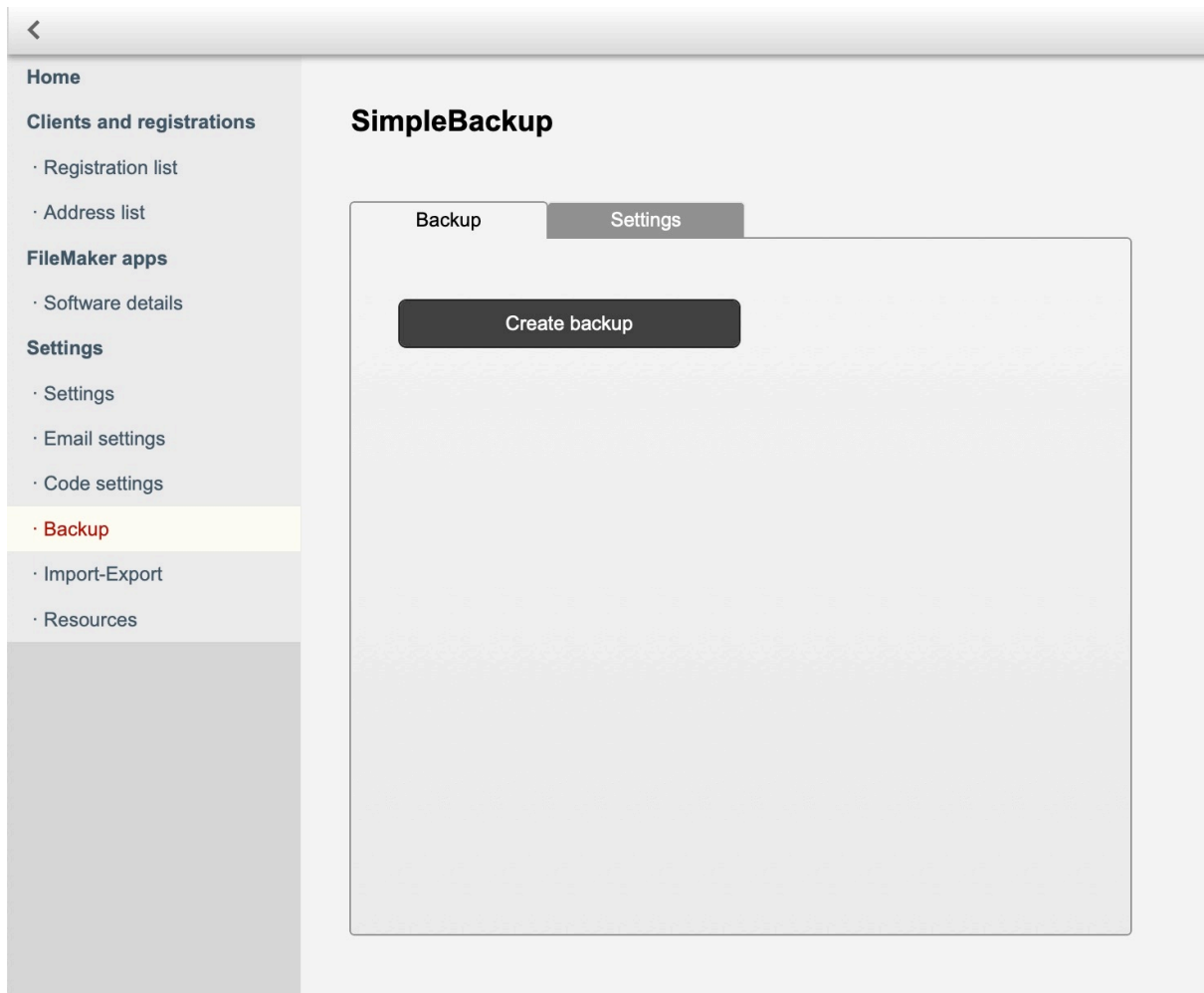
## **Charaters used to create secret keys**

You can define which characters can be used for the secret keys, the unlock name and the random code. (If you want to have a binary-looking-code, you know what to do.)

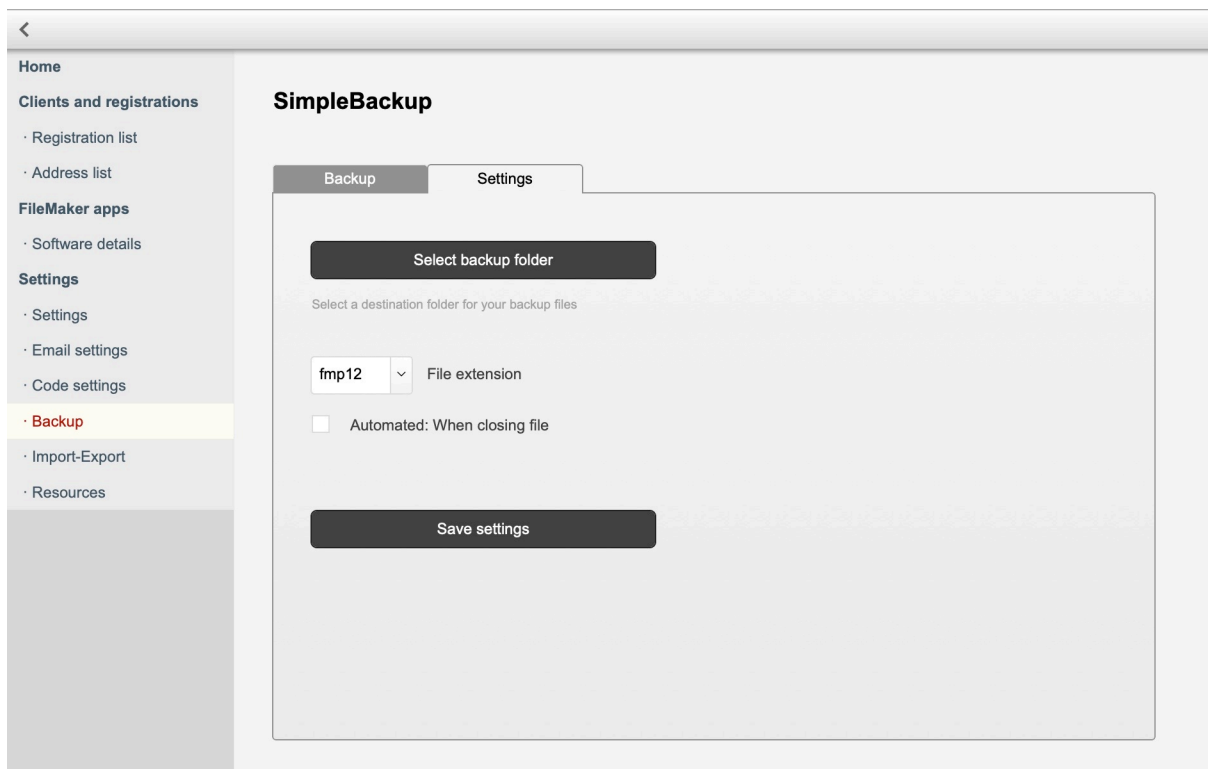
# Backup

The Backup screen provides a simple option to save a snapshot to your hard drive. This only works if you are using FM Registrations locally on your computer.

The first time you use the Backup feature, it will ask for a destination for the backup and save it for future reference.



In the Settings tab you can set various options:



## Select backup folder

Select another backup folder. If a folder has been defined, you will see a button to display that folder on your system.

## File ending

All backup files are saved with the selected extension.

## Automated: when closing the file

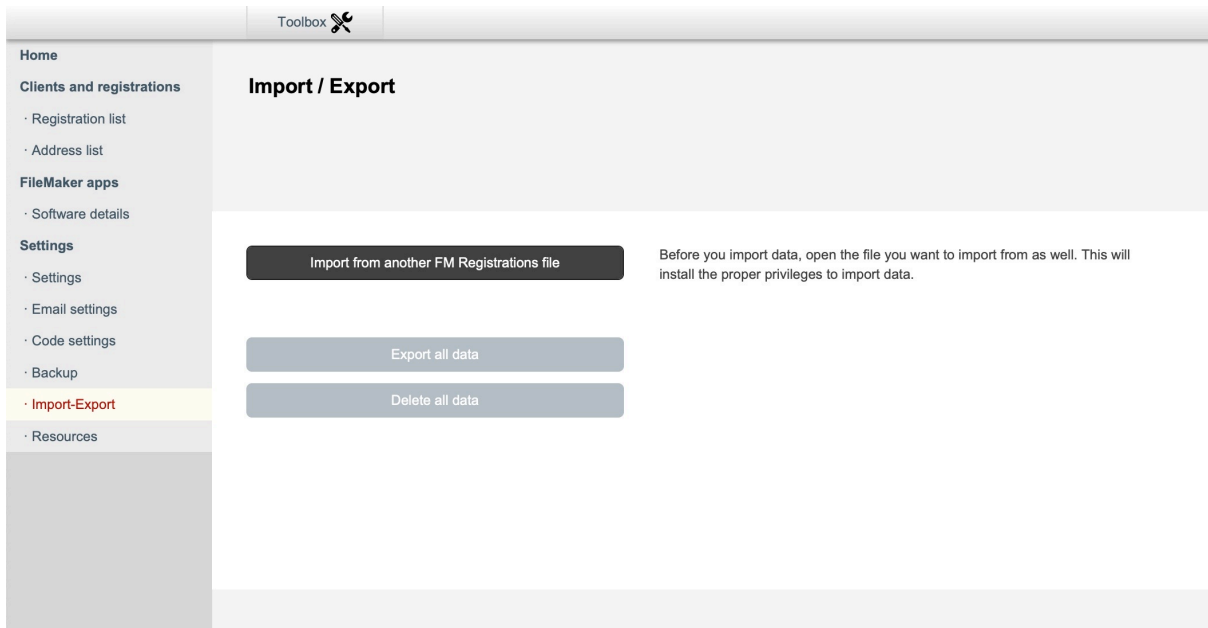
Check this box to automatically create a backup when you close the file.

Save any changes you make to the settings to keep them.

# Import-Export

There are 3 options available on this screen:

1. Import from another FM Registrations file
2. Export all data
3. Delete all data.



## Updates require an import

When you receive an update from FM Registrations, you open this file and then you can use this function to import the data from your old file. Your old file will not be deleted, nor will your data be affected. The data will only be imported into the new file.

Note the [upgrade procedure](#).

# Upgrade from an older version

When you get a new version of FM Registrations, you can import the data from an older file into this new file. These are the update steps:

1. Open both the old and the new file (this will install the correct rights for the import)
2. Make sure that all records in relevant tables are displayed in the old file (not required if importing from version 1.5.0.4 or newer)
3. Switch to the new file and go to > Import-Export
4. Import
5. Check results.

# Resources

On the Resources page you can find the sample file and the manuals in the available languages. Please export the files to use them.

Home

Clients and registrations

- Registration list
- Address list

FileMaker apps

- Software details


Settings

- Settings
- Email settings
- Code settings
- Backup
- Import-Export
- Resources


## Resources

A short introduction to FM Registrations:

- 1. How it works**  
**FM Registrations** helps you to *create and encrypt* license information. The counterpart is the **example file**, which shows you how *decrypt* that license information in your application.
- 2. Creating license codes**  
First choose **FileMaker Apps** at the left, then create a record for each software version of your product and define the details. Next move to **Clients and Registrations**, create a **user** and **add a license** for app. Finalize by sending the customer the license per email.
- 3. Adaption**  
FM Registrations does not know what you want to achieve, but only *encrypts* and *decrypts* information. You need to interpret that information in your application. **This requires FileMaker development.**
- 4. Security**  
Be aware that registering a software with FM Registrations requires the user to open the file. You need to leverage the security in your application because of this.

  
FMR-example142.fmp12

Export example file

  
FMRegistrations-EN.pdf

Export manuals

# Extra windows

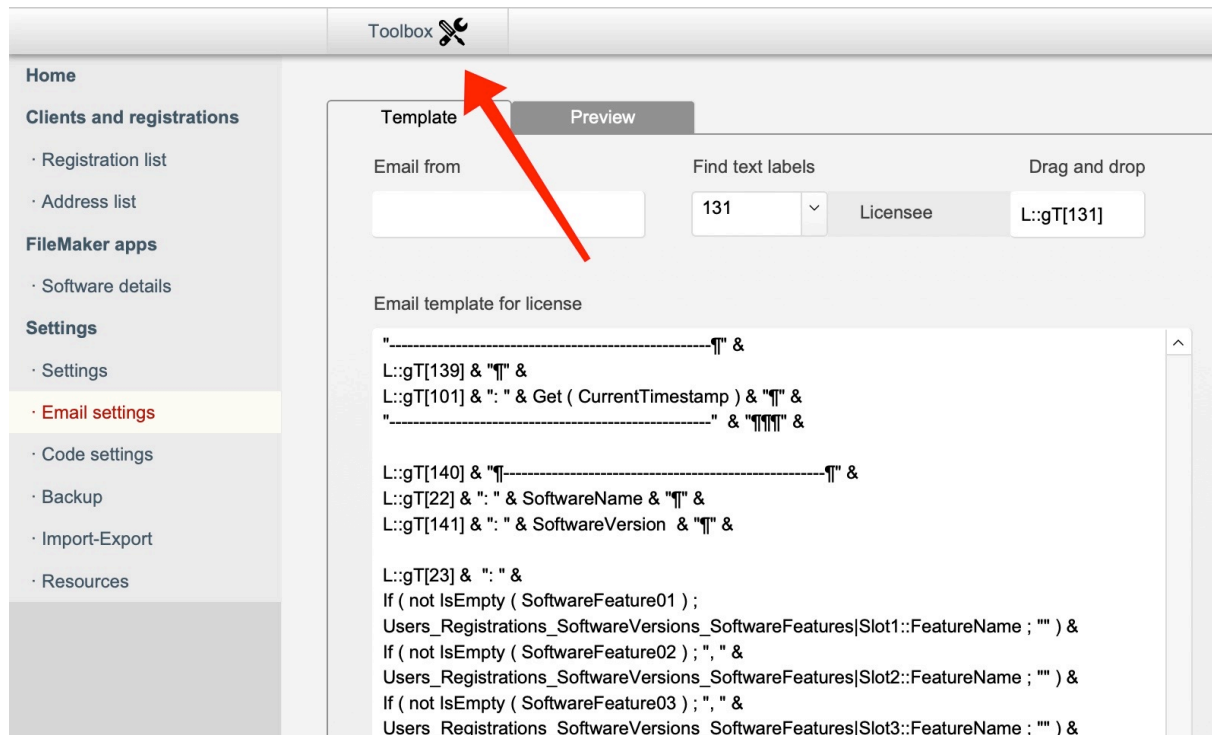
FM Registrations has a few additional windows for special purposes. What are they for and how can you use them?



# Toolbox

The Toolbox is an additional window with all translations for all texts in FM Registrations. It can also be used to create new text labels for use in the email template. Texts can also be corrected or adjusted here.

You can find the toolbox in the "Email settings" layout:



When you click the button, the Toolbox window opens. It is a list of all translations and has a search field to quickly find existing texts.

×

1 English

Find text labels / Translations

+

🗑️

☒

Search

	ID	Label	Edit
<<L::gT[11]>> 🗑️	11	Home	
<<L::gT[12]>> 🗑️	12	English	
<<L::gT[13]>> 🗑️	13	German	
<<L::gT[14]>> 🗑️	14	French	
<<L::gT[15]>> 🗑️	15	Spanish	
<<L::gT[16]>> 🗑️	16	Delete	
<<L::gT[17]>> 🗑️	17	New Record	
<<L::gT[18]>> 🗑️	18	Delete Record	

237 / 237

Copy

- ☐ 1 Label
- ☐ 2 Translation ID
- ☒ 3 Merge Field
- ☐ 4 Field

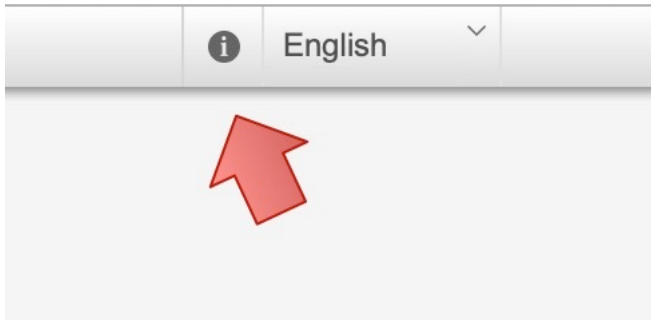
Click on "+" to add a new text label. Click the pencil icon to edit any text.

## Activate changes

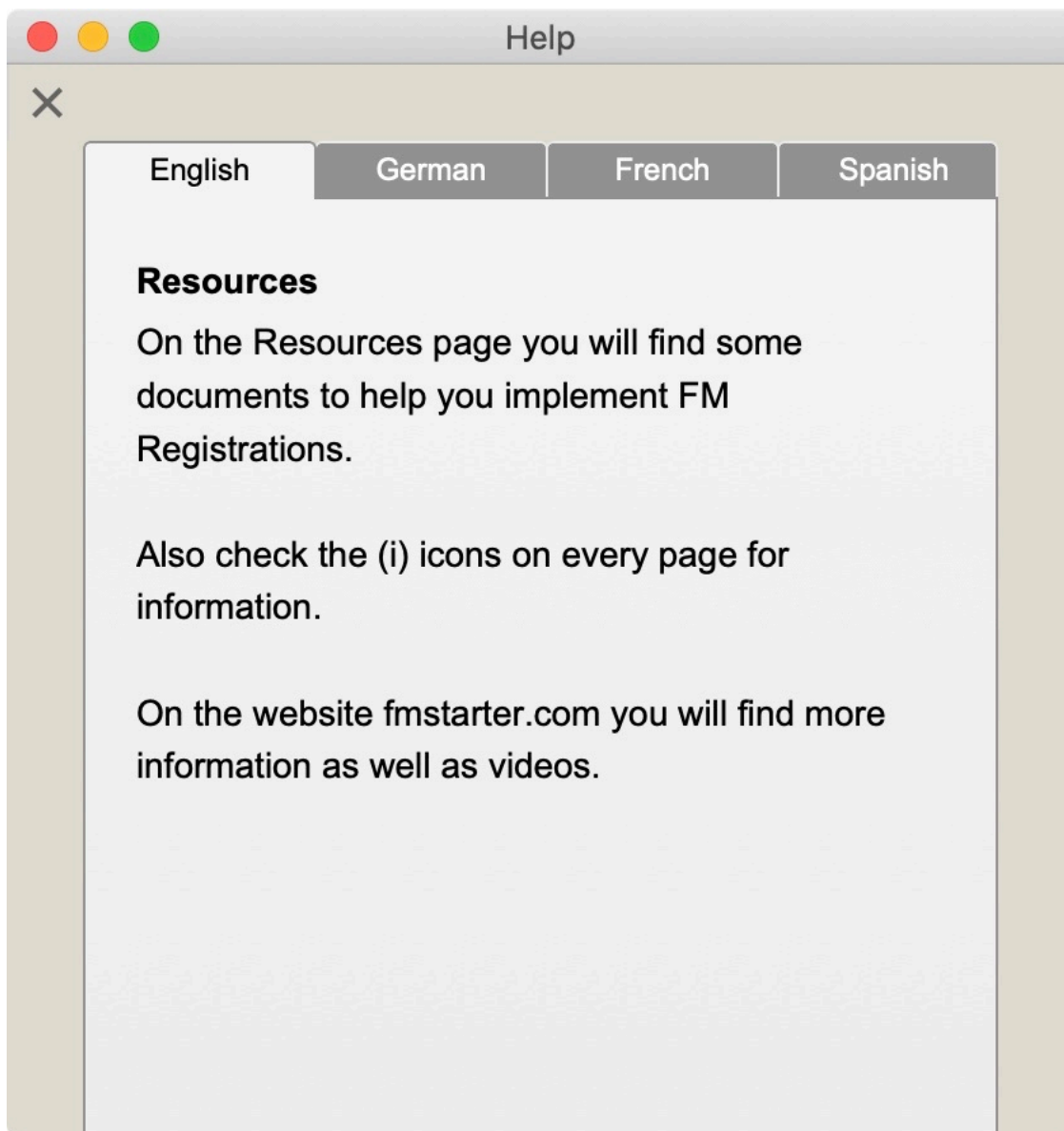
To activate changes or new labels, reload the languages by selecting a language from the language popup again.

# Help

Besides this manual, there is also a help function that is directly available on most pages. This help function is accessible by clicking on the information icon. It lists additional information for the page you are on.



The help window will open and look like this:



# Security

This is not a "Everything you always wanted to know about security but were afraid to ask" type chapter. It doesn't contain all the answers. It's just an introduction to an important topic from the perspective of standalone solutions built with FileMaker (after all, that's why you bought FM Registrations, right?).

## **Security is no coincidence**

Security does not happen by accident. Security is the result of careful thought, policies, strategies, and constant evaluation. With respect to your FileMaker project, the question is not whether something is "secure." That doesn't define anything. Security is against specific threats. Therefore, you must first consider what type of security you are looking for.

It may surprise you, but security is not just about technology.

# Safety related issues

Let's take a look at some security-related issues:

## Opening a file and its risks

There is no option in FileMaker to allow a registration screen without opening the file, except for the FileMaker login screen. This screen is the only way to legitimize a user before opening a file. If you don't use this option and open the file only to include a login afterwards, it seems to many developers like you're opening the door to an attacker. And yes, that can be the case. However, this is not the whole story. FileMaker offers good options for security. The question is whether we use them and whether we are aware of the limitations of all the options. Not every solution requires the same level of security.

Two questions are important:

1. What kind of security am I looking for? What needs to be secured?
2. The strategy and tools to get there.

## Risk management is a better description

I have found that many developers are hesitant to use anything other than the basic FileMaker login screen. The reason for this is security. Once you grant access to a file, it can potentially be hacked. That's true, but the reality that something can be hacked doesn't depend on that issue alone. The question is how to minimize risk. Security has more to do with risk management. Since not every situation is the same, risk management does not always involve (or require) the same procedures. It is the project that defines the rules by which to play.

## Security aspects of FM registrations

Offering users access to a login or registration screen means that they have to open the file. Whenever users can open the file, the number of security issues explodes. Therefore, you must be aware that when implementing something like a registration screen or a self-programmed login screen, all security issues must be carefully considered.

## There is no 100% security

As a first line of thought, it must be made clear that there is no such thing as 100% safety, only constantly evolving best practices to minimize risk.

## **Security is not a fixed value**

Security itself is not a fixed entity, but is measured against possible threats in specific environments. For example, if your application is running in an already secured environment, the security of the file has less risks than if it is running on a server and may be accessed through web links, etc.

## **FileMaker offers security options - use them**

FileMaker has many security features. If you do not use them, they have no effect.

## **Safety is more than technology**

Developers tend to overestimate technical aspects of security. This is understandable and desirable, but it is not the total reality. If your users carelessly share their passwords, no security approach will work. Security is a mindset and is always broader than your application or any implementation of security levels in software. Defining security as a mindset means it's not just about technology, but also about awareness and education, policies and accessibility. When you combine all of these thoughts, you will find the best way to implement the security you need for each project. Different projects will have different needs. Security includes backup strategies, user management systems, a proper lock on the door to your server room, firewalls, behavioral policies, etc.

## **Securing what exactly?**

When you think about safety, consider what you mean by it. It can mean many different things, for example

- I am a developer of standard software, and I want my code to be secure, so that no one can copy it.
- I am a user and I don't want to lose my data and work. IT projects and work should be backed up because I want to work on them.
- I am the business owner and I want to make sure that only my employees have access.
- I am from the technical department and I want to make sure that no one can use this software to block my servers.
- We are dealing with sensitive data, and security is about the associated workflows, including digital and non-digital information.
- etc.



## **FM Registrations is not a security tool**

It is fundamental to understand that FM Registrations is not a security solution. However, it can be a part of a security strategy. The main goal of FM Registrations is to protect the interests of the developer who produces a single software product that can be sold multiple times and that can be unlocked using a registration code. FM Registrations is therefore more about marketing than security. There is currently no other way to do this than to use the FileMaker options after opening the file.

# Safety and maintenance

If you have implemented the restrictions or configurations, your application may be in the wild on the Internet. More questions apply:

- File and data security
- Export options for user data
- Upgrade strategy for later updates of the software
- etc.

These issues have nothing to do with FM Registrations itself, but relate to FileMaker development, marketing strategies and the like.

# Default settings and login

FM Registrations is intended to support the distribution of standard software. The goal is the possibility of multiple sales by creating a separate license per customer. This is a very specific situation. Therefore, consider the differences to an in-house developed solution.

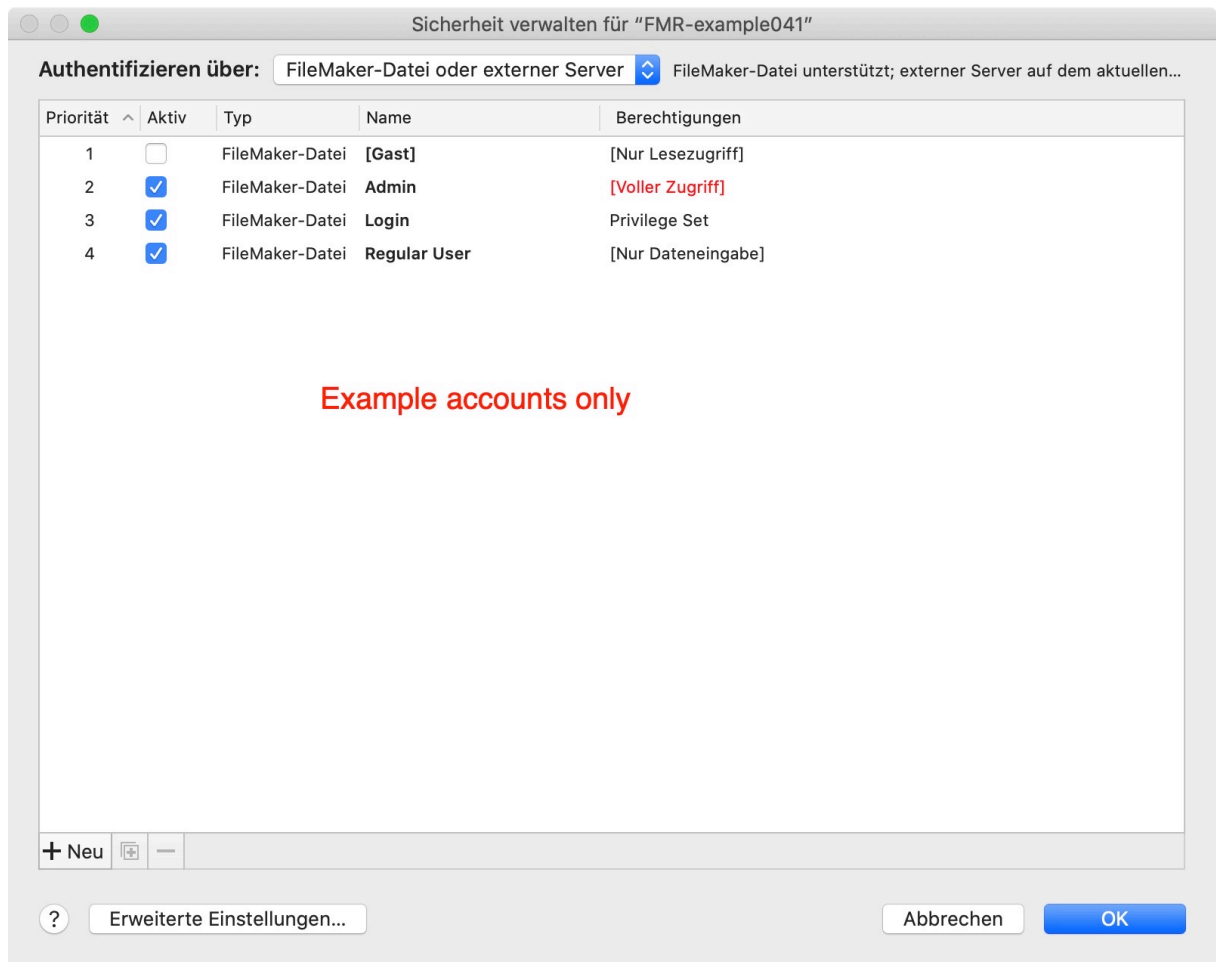
A standard software will have different vulnerabilities than an in-house solution. It is highly recommended to invest time in setting up security for your project.

One issue to consider is the opening of the file. When opening the file, the following aspects come into play:

1. Startup script.
2. Startup account.
3. Selected menu set at startup
4. FileMaker security settings.

The Startup Script (File Settings > Script Trigger > [OnFirstWindowOpen]) is the first script that runs automatically when the file is started. This script can make security settings before a user gets access to the software. In the sample file there is such a startup script in simple form.

The startup account can be defined in the file settings. Create an account with restricted access only for the registration process. FM Registrations requires you to open the file to enter the registration details. At this point, your file should be secure, which is best done with a separate account for registration (and/or login). After successful registration, you could log back in with another account with broader rights for the user.



The menu set at startup should be limited. It makes no sense to make everything available. It does not look good if menu items are still visible but cannot be selected. Create custom menu sets to suit your needs and better protect your file.

General security settings for the specific accounts can determine how the file can be accessed, with which technologies, etc.

# User accounts

FileMaker lets you create accounts "by hand" in the security settings. This is wonderfully simple if you run the files in-house. The more people who need access, the better it is to create user account solutions with scripts. Each user must have access with their own account. Who will create these accounts and how will the login process work? There are many security issues related to these questions and how you can resolve them. The basic considerations here are the same as in the "Standalone Settings and Login" chapter.

## TIP

If you are looking for a versatile but basic user account solution, take a look at our FM Starter product, which not only has the FM Registrations unlock module already integrated, but also provides a user account solution and many other modules. This will greatly simplify the setup of your security levels.

## **File access**

FileMaker security settings are organized per file and per account. Note that security settings are not limited to account access. In addition to the procedures that allow specific people to access the file, you can define many settings per account, including settings for accessing (or: restricting access) to the file from external sources (such as: FileMaker Server, WebDirect, etc.). It is probably advisable not to open everything, but to limit these options.

All these considerations are mentioned only because standard software solutions must be configured properly. These options are not part of FM Registrations, but must be considered for each project by each developer. To the extent that FM Registrations helps you create off-the-shelf solutions, these are things that matter.

## Next steps

Now that you've covered the basics of implementing and using FM Registrations to license your buyers, it's time to get back to marketing and developing your solutions.

# Pushing development forward

Development is an ongoing process. While FM Registrations provided the options to encode and decode an information chain, you create the magic to use that information now.

It is very likely that you will adapt your implementation later. How do you keep your development lean and uncluttered? This is one of the challenges that every developer faces. When they talk to colleagues, they all point out that they do many things differently than, say, 10 or 20 years ago. Their programming style is going to change. The technology is changing. The requirements are changing.

Prepare for the change. These are proven strategies for success:

- Think modular. Build small functions, test them, and then build larger functions with them.
- Comment on your scripts in detail.
- Create inspection routines and defect detection for critical parts.
- Talk to other developers - there's a lot of experience out there.
- Have fun doing what you do.



## Other Kursiv products

You can find more products and help files on our websites:

- [kursiv-software.com](https://kursiv-software.com)
- [fmstarter.com](https://fmstarter.com)

## FM Starter

### A starter file for new FileMaker projects

FM Starter is a starter file for new FileMaker projects. It has a modular approach and provides you with a solid structure to get started. FM Starter contains only basic modules, like a dynamic navigation, multilingual text labels or a user management solution and much more.

## FM Designer

### 10 Themes for a consistent design

FM Designer comes with 10 themes and a user interface for developing designs. Each theme has countless styles and each object is mapped (object index). All styles are compatible with each other and also with the base theme of FM Starter. Just import the design of your choice and start using it!