



## Protogrid Quickstart Tutorial (Primer)

The Protogrid team is pleased that you would like to get to know Protogrid better. This guide shows you the first steps and leads you in a short time to a working application with Mobile App.

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### o. Register

First you need your own environment in which you can create the application. If you do not yet have your own environment, you can register one right now: <https://protogrid.com/bisc/de/006-signup>

Creating your environment takes a moment. You will then receive an email with a link to activate your environment. As soon as your environment is ready, we can start!

In the following, we will create a simple app for capturing and storing documents and files of any type.

#### 1. Naming the application

Think of a self-explanatory name between 15 and 40 characters long. Then write a descriptive text (subtitle) telling a first-time visitor what your application is all about. And finally come up with an abbreviation.



We go for the name "Document repository" and write "Here we store documents, which should be available on mobile devices" as subtitle. As our abbreviation we choose "docu".

## 2. Defining user roles

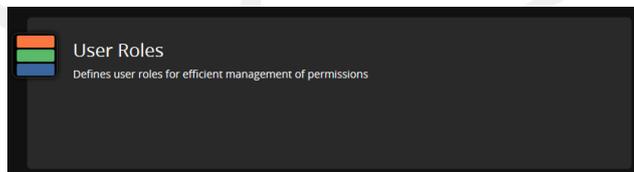
A role describes a group of users. The role can later be used to assign access privileges.

In other words: Users holding a certain role enjoy the access privileges in the respective applications. Possible privileges are: editing, entering data, reading or deleting.

Every application needs at least two roles:

- Developers and administrators
- Regular users

Let's now define the roles for our new App in the existing "User Roles" App.



First, we would like to define the administrator role for the App. To do so, click on "Create" and define a suitable role name in the field "Role Name (en)". Go for an expressive name which does not need any explanation. "(en)" means, it is recommended to do this in English.

We define the role name "Admin-docu" as administrator of the application with the abbreviation "docu". The "Comment" field can be used to enter a short explanation of the role. We write: „This role can be used for the administrators of the application ‚Document repository‘.“

The completed form (called "Card" in Protogrid) looks as follows:

Click on "Save & Close". The newly registered role appears on the list with the prefix "Role:".

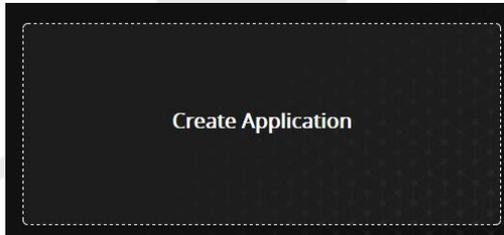
<input type="checkbox"/>	Role:Admin-docu	Admin-docu	MI 15.06.2016 15:05	MI 15.06.2016
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Similarly, we enter a role for standard users. As role name we choose "StdUser-docu" and write in the comment box: „This role can be used for the standard users of the application 'Document repository'.“



## 3. Creating the new application

Click on "Create Application"



You just have generated a new App (still empty of information) and see now the App properties card in front of you.

## 4. Completing the App properties

The most important properties are:

- Name for URL: Good news! Every Protogrid App is a webapp right from the start. It can be accessed from any web browser right away. Choose a short meaningful App name for the URL. Concerning our 'document repository' example, we choose the URL name „docu“. Be aware that the URL name should be as general as possible and still suitable when the App gets further developed in the future. Everyone can invoke the App with a simple web link such as myorganisation.protogrid.com/myApp which is really useful.
- Title: It's the name of the App users see in the Environment Overview. It should be comprehensible like in this case: "Document repository".
- Theme Color: Choose a main color for your App. Protogrid engineers have selected a range of predefined colors which look nice on various devices.



- Description: This is kind of a subtitle. One inserts an expressive, short description, which explains everyone what the App is good for. For our 'Document repository', we write: "Here we store documents, which should be available on mobile devices".

New Application Properties

Save Save & Close Close

Name for URL: docu  
Only use a-z, A-Z and 0-9

Title (en): Document repository  
Use any character but try to keep it short

Description (en): Here we store documents, which should be available on mobile devices.  
Appears below the application title in the environment portal

## 5. Assigning User Roles

We now proceed to assign the user roles we defined in chapter 2.

Full Access Role: We assign this role to „Role:Admin-docu“. Full Access Role provides the assigned users with all the privileges for this application.

User Access Role: We assign this role to „Role:User-docu“. User Access Role provides access to the data of the application. Attention! If you leave this field empty, every user of your environment has access to the App.

Full Access Role: Role:Admin-docu

User Access Role: Role:User-docu

Visible in Environment Overview for Role: [Empty]

Users with this role have full access over this application's design and data. As an application creator you should choose a role that is assigned to you. Please note that changing this setting in production is potentially insecure if local replicas exist on devices. In that case it is better to explicitly remove the roles of such users.

This role limits the access to this Application's data. Leaving this field empty will allow access for any Environment user. Proto Definitions give you more fine-grained permission control - however only for users that already have access according to this field 'User Access Role'.

Defining a role here will hide the application from users without that role (except environment administrators). In case another application has relation(s) to this application, users can still see the related data in relation fields and TableViews.

## 6. Saving the App

Click on "Save". After saving the new application for the first time, it shows up in your Protogrid environment and additional information appears:

Two of the most important ones are the list of all the Protos and the list of all menu entries.

Protos

Create Actions Columns: 10 of 17 Q

<input type="checkbox"/>	Short Name	Name	Plural Name	Theme Color	Comment	Fields and Widgets	Modified On	Modified By	Created On	Create...
No data available in table										

Showing 0 to 0 of 0 entries  
Start designing your application by creating the first Proto. Protos define the design of Cards.

Menus

Create Actions Columns: 2 of 3

<input type="checkbox"/>	Menu Title	Menu Entries
<input type="checkbox"/>	Design	Application Properties,Protos,Code,Multilanguage Definitions
<input type="checkbox"/>	Administration	All Cards By ID,Application Log,Trash,Import   Export
<input type="checkbox"/>	Main	

Attachments

Add Actions Columns: 2 of 2

Filename	Size
No data available in table	



# Protogrid

Click on "Close".

In order to understand the next steps, chapter 7 introduces you to the terminology and simple structure of Protogrid.

## 7. Overview: Terminology and structure of Protogrid

**Cards:** Cards are the central elements of Protogrid containing the information users share and consume. Cards contain design elements such as text fields, table views, buttons, relations and more.

**Menu:** Menus are collections of Cards. They provide a starting point to open the application as well as the possibility to sort the Cards in an arbitrary way.

**Proto:** Protos are the design plan of the Cards. Every Card is based on a Proto. A Proto defines how depending Cards behave and what they look like. A Proto is either of the following:

- Input mask
- Table view
- Input mask including one or several table views

With the Proto concept, developing Apps becomes quick and easy. Once you've created your Protos, you're already close to the finish line. You can use as many design elements in a Proto as you need. The most important types of design elements are:

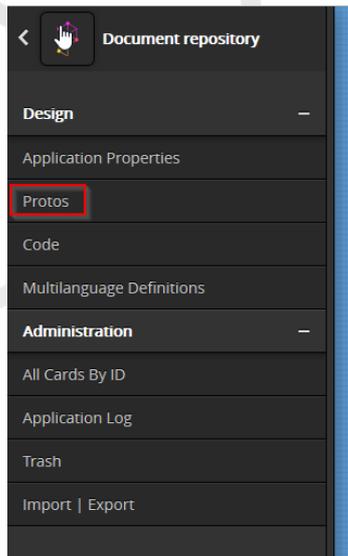
- Text fields
- Date and Time fields
- Numeric fields
- Table views

In Protogrid, we have two different types of Protos:

- Data Proto: contains text, data, time fields, table views etc.
- Overview Proto: contains only a table view

## 8. Creating a Proto

Go to the menu bar on the left-hand side, and click on "Protos" in the section "Design":

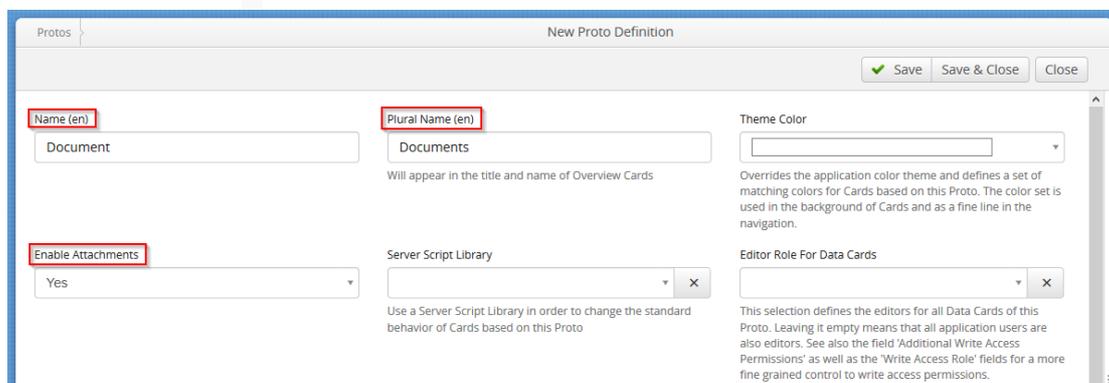


Then, click on "Create". Now, you need to complete the fields highlighted in red in the screenshot below.

Name (en): Choose a meaningful name for your Proto. In our application 'Document repository', we choose for our first Proto the name "Document".

Plural Name (en): Enter the plural version of your chosen Proto name – in our example: „Documents“.

Enable Attachments: Decide, whether you want to allow attachments or not. Since it is the goal of our example application to store files, we opt for "yes".



Click on "Save". Two new Protos are automatically created. The name of the Overview Proto is the specified plural. This Proto defines an overview of all corresponding data cards. The other Proto defines the structure of the data cards. In this case, an Overview Card is created with the "Documents" Proto, which immediately appears in the main menu. In addition, a "Document" Proto is created. If you now select the "Documents" entry, the above-mentioned Overview Card appears, which currently contains an empty list.

Hints:

- If you want to remove the menu entry, you can do this in the application properties under Menus → Main.



## 9. Changing a Proto

The Proto you created has no abilities for the time being. In order to change this, click again in the left-hand menu on "Protos". You see a list containing two Protos. The Proto type "Overview Proto" defines the (so far empty) table view, which you can reach through the menu item "Documents". The Proto type "Utility Proto" defines the Card. Click on this Proto in order to adjust it.

Move below to the properties „Fields and Widgets“ and click on "Create".

A dialog box titled "Creating New Definition" with a close button (X) in the top right corner. It contains the text "Please choose the type of definition you would like to create." followed by a dropdown menu showing "Text Field Definition". At the bottom, there are "Cancel" and "OK" buttons.

For the sake of our example choose the default type "Text Field Definition" in the dialog box and click "OK". A new Card opens, where the properties of a "Text Field Definition" are explained.

Label: Here you can define what label will be shown to the user. We choose "Document title".

Help Text: Support the user with hints on what information should be entered, like: "Write a title for your document. The title does not have to match the filename." It will be shown below the field in gray color.

User Input: Choose, whether this field should be optional or mandatory. Since every document should have a title and in our 'Document Repository' we do not want to have Cards without title, we choose "Mandatory".

A configuration window titled "New Text Field Definition" with a breadcrumb "Protos > Proto:Document" and buttons for "Save", "Save & Close", and "Close". It features a "Comment" text area. Below are three fields: "Label (en)" with the value "Document title", "Help Text (en)" with the value ".ent. The title does not have to match the filename." (highlighted with a blue box and a note "Will be shown below the field in gray."), and "User Input" with a dropdown menu set to "Mandatory".

Click on „Save & Close“ in order to finish the creation of the field.

## 10. Creating a selection field

Next we would like to assign a category for each document, meaning, you want to select a category of the document from a given list of categories. Therefore, those categories should not be a simple text field. In order to achieve this, we first create a new Proto as described in step 8: in the menu entry "Proto", we create a new Proto which we name "Category" (plural: "Categories"). We do not allow attachments for this Proto. We save the Proto and add the necessary fields. In the lower part of the Proto definition Card in the section "Fields and Widgets", we add a new field with the type "Text Field Definition". In the Card, we fill in



the Text Field Definition as shown in step 9. We choose "Category Name" as label and "Enter the name of the category" as help text. Since each category needs a category name, this field is mandatory.

The screenshot shows the 'New Text Field Definition' dialog box. The 'Label (en)' field is 'Category Name', 'Help Text (en)' is 'Enter the name of your Category here', and 'User Input' is 'Mandatory'. A red box highlights these three fields. Other fields include 'User Enabled' (Editable), 'Display Priority' (10), 'Size in Grid' (One Column), and 'Vertical Space' (Single Line). The 'Trigger' section is empty with a note: 'Please save this Card first to see this content.'

By Clicking "Save & Close", we leave the Text Field Definition.

Now we need to add a selection field in the Proto "Documents". We open the menu entry "Protos" and there the Proto "Document". In the section "Fields and Widgets", we "create" a new field. We define this field by the type "Relation Field Definition". Now we enter the information on the label and the help text using "Category" and "Enter the category of this document here". As "Related Application" we choose "Document repository", since our newly created "Category"-Proto is part of this application. As "Related Proto" we therefore choose "Proto:Category".



With "Save and Close" we finish the creation of our field. Our selection field is ready!

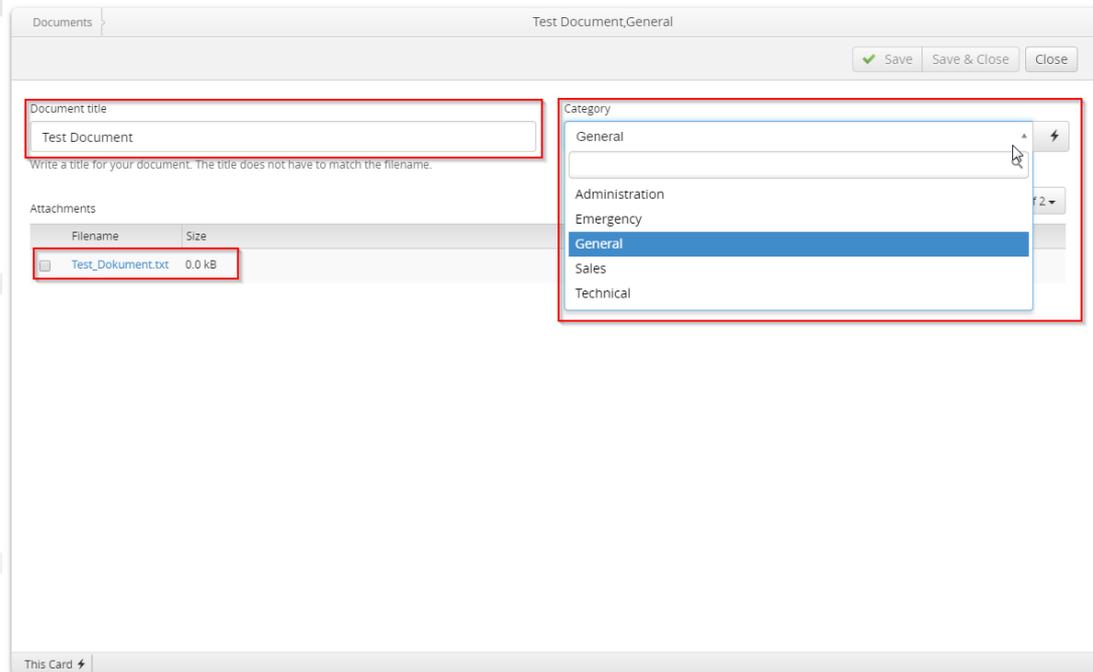
## 11. Uploading a document

Before we can upload our first document, we need to define our categories. Select "Categories" in the main menu. Open a new Card by clicking "Create" and enter the name of the category, for example "General". Afterwards we save and close the Card. Create multiple categories in order to get a nice selection list (for example "Administration", "Emergencies", "Technical", "Sales").

Now you can upload your first document. In the Main menu, click on the item "Documents", and there on "Create". The Card which opens now was designed by you!

Choose a title for your first document. We choose: "Test Document". Now you can select one of your defined categories. We choose "General". Click on "Save".

Now the options in the right top corner are changing, and at the bottom a new table view appears. To upload a document, click "add" in the options area. Now you can choose a document on your local computer. We choose a newly created document with the file name "TestDocument.txt". This file is now visible in the table view.

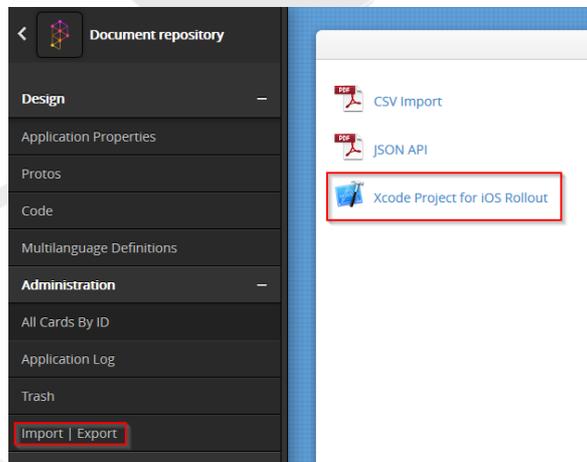


Click on „Close“.

## 12. Done!

You just created your first application successfully and stored your first document in it. During this process, you created roles, defined the application properties, created and changed a Proto and uploaded a first document. You can now create other Protos (step 8), add other fields to an existing Proto (step 9) or upload more documents (step 11).

You also have the opportunity to export your application as an iOS-App. In the menu, click on “Import | Export” in the section “Administration” and choose „Xcode Project for iOS Rollout”.



You can store the .zip-file created in the process. When you open it, you find a “README.md” file. All additional steps are explained there. Now, we wish you a lot of fun with your first Protogrid application!

## 13. What's the next step?

After you have created this first learning app, you are now ready to develop your own apps.

Still looking for inspiration for your app? In this blog article you will find some ideas:

<https://protogrid.com/bisc/en/blog/2017-07-10-sbl-Protogrid-one-platform-lots-of-applications>

Maybe one of the start applications offers the desired functions and you can take them over? More information on these applications can be found in Appendix A: Start Applications.

Or register for a webinar. Based on your requirements, we create your personal business app together. The next dates can be found here:

<https://protogrid.com/bisc/en/004-events#webinar>

If you want to get a deeper insight into Protogrid development, our courses are the right thing for you:

<https://protogrid.com/bisc/en/004-events#crash-course>

The documentation for advanced Protogrid developers is currently under construction. You can find them here: <https://protogrid.wiki/>

Valuable background information, interesting facts and announcements can also be found in our blog:

<https://protogrid.com/bisc/en/003-blog>

Would you like to implement something more complex, but don't know exactly whether and how this is possible? The Protogrid team is always at your disposal. Send an e-mail to [protogrid-customer-support@ategra.ch](mailto:protogrid-customer-support@ategra.ch) or simply call us on +41 44 392 21 20.



## Appendix A: Start Applications

Some applications are already preinstalled in your environment. We distinguish two types of preinstalled applications:

- System Applications
- Start Applications

The applications „User Roles“ and „Environment Users“ are System Applications. They are necessary in order to properly utilise Protogrid, and cannot be altered. The applications “Documents”, “Action Items” and “PPAD” are Start Applications. These applications give you an idea of the possibilities of Protogrid. You can develop them further if you like to. We provide you with a short introduction of these applications here.



The application “Documents” stores documents and files of various types. It has a Proto called “Document”, which defines that Documents have a category. The Proto “Subdocument” defines documents, which related to another document. For example we have the document “Building description” belonging to the category “Building Information” with a subdocument for the “Head Office”.



The application “Projects, Persons, Activities and Documents” (PPAD) can be used to store projects, persons, tasks, documents and more, and link those items. It allows a quick overview on open tasks, including corresponding people, organisations, and documents.



The application “Action Items” stores simple tasks. One can provide a description of the task, a date, a responsible person as well as a status. This simple application gives you a short overview on all open tasks.



The application «IT Emergency» supports the Management on technical emergencies. Every extraordinary event can be solved and documented without any dependency on the concerned infrastructure. Since Protogrid is also available offline, this application can be especially useful during mail or internet blackouts.



The application «Product Catalog» keeps track of all products you produce or sell. You can store all data you need for each product, and update it centrally from your office, so that your field staff has always access to the newest information of all your products.



The application «Project & Investment Requests» manages and speeds up your project and investment requests. To every request, responsible people are automatically assigned and have to accept or reject the request. Through the enclosed workflow engine, the next person in charge immediately gets informed after an acceptance or a rejection.



If you want to use these Start Applications and make them accessible for your co-workers, you can follow the checklist below:

- Choose a Start Application, which matches your requirements and ideally only needs a few changes.
- Make the necessary changes.
- Adjust the role assignments: necessary step outlined in in chapter 5 in order to make the Start Applications visible for other users of your group/organisation.
- Register appr. 10 test users, using the application "Environment Users" and assign them the role you specified for the application.
- Inform the test users: Give them the link to the application, the password you chose for them and make them aware to change the password soon. Ask them to use the application as often as possible and to provide you with feedback on possible functional improvements.
- Optimize your application based on the feedbacks you get. Conduct surveys in order to push ahead with the development of your application.
- If you are happy with your application, you can make it accessible for all intended future users. Register them as users or change their roles, in order to give them the access you want them to have.
- If you need any assistance during the development, have a look at [www.protogrid.com](http://www.protogrid.com) or the Protogrid blog. On request, we offer you further assistance for the development and launching of your application.