

Projects for Palm OS

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Introduction

Why such an application?

Every user of the Palm Operating Systems knows the excellent `TO-DO` application shipped with the PalmOS. Many people, including me, use it to keep track of things that need to be done. By taking advantage of categories it is possible to quickly find a specific item in a long list of to-dos. The major drawback is ... you can only create 16 categories. As I began working on multiple projects I needed to track "many" to-dos. Although as I mentioned, I was working with the categories in the `TO-DO` application, I needed a more structured way of organizing my to-do items. And so, the idea of writing a new application was born.

Why this name?

At the beginning of writing such an application, I had a problem with what to name it. It should actually be named something like *To-dos* or *To-Do+*. At the time I started coding I was in my first practical semester, and where I worked everything was called a "project" ... so, after extending the application with a few features that are not part of the built-in `TO-DO` app I decided to name it *Projects*.

A little bit of history...

In the first versions `Projects` was quite limited and used a different database format than the built-in `TO-DO` app. As of version v1.5 the database format used in both apps is the same, so it is possible to work on the same to-do list in both applications. This may change in future versions, as there is a demand for certain features that require a new format for the database. However, version 1.8.1 is still compatible with versions down to v1.5. As of version 1.8.2 there is a small upgrade utility which needs to be run once to upgrade from version 1.8.1 or below.

Requirements

`Projects` is independent of any other third party software on your PDA. All you need to run the application is a Palm OS compatible PDA with an OS version of 3.1 or higher.

Upgrading

If you have a version prior to v1.5 on your PDA, you'll need to delete the whole application and its data before upgrading!! Please use the default way to delete an application! Launch the "Delete..." menu item in the built-in application launcher to erase it from you handheld. Users of versions v1.5 and higher may simply reinstall the PRC to upgrade.

Warning

While every effort has been made to find and remove bugs from `Projects`, it is still under active development. You use it at your own risk! Since `Projects` is still under active development, there may be bugs which will cause your PDA to crash to the point where a hard reset is required. (Hard resets cause loss of all data on the PDA.)

Contact and resources

Where to find more information?

Thanks to the SourceForge¹ team, `Projects` is now an “Open Source” project, and has been released under the terms of the General Public License (GPL). For more details read the *COPYING* file distributed with the release packages, or visit www.gnu.org² to read more about the GNU project and the Free Software Foundation.

The official web page for the application can be found at <http://projects4palmos.sourceforge.net>. There you will find information, the latest news, documentation, mailing lists and forums for `Projects`.

The official web site for the whole project at SourceForge is <http://sourceforge.net/projects/projects4palmos> and is mainly indented for developers.

If you want to contact me directly regarding any issues related to `Projects`, just send an email to “*projects4palmos (at) gmx.net*” (to prevent spam bots @ has been replaced by “(at)”).

Where can I get it?

You can go to http://sourceforge.net/project/showfiles.php?group_id=41739 to download any available releases and stable sources.

If you want to checkout the latest (though not always stable) sources, go to http://sourceforge.net/cvs/?group_id=41739 for a description of how to obtain the code via `CVS`.

MainForm (*Project List*)

About

The top level view in `Projects` is called *MainForm* or *Project List*. It shows you the available projects registered by the application. The format consists of several columns, each showing different information about the projects. On colored versions, some projects may be grayed out, indicating that a project is not “active”. This will be described more fully later.

Priority column

The first column indicates the *priority* of a project. Projects’ priorities range from 1 to 5, with 1 being the highest and 5 being the lowest priority. You can set the priority of a project directly by tapping on the number and choosing one of the values from the pop-up list. By default, projects are sorted by their priority. If you change the priority of a project, the item will be reordered into its proper position in the list. If you feel you don’t need this column and want to have more space for other columns, you can turn it off. (See Preferences).

Begin date column

The next available column shows you the *begin date* of each project. Every project must have this value set to a valid date; it cannot be set to “no date”. The column displays only the day and month of the date. Because of the small screen on PDAs, I’ve decided not to show the year portion of the date. Tapping in a cell of this column

will open up the appropriate project and bring you directly to the *GeneralPage*. This column is turned off (hidden) by default so you need to check the Preferences to make it appear.

Project name

The most important column displays the *Project name*. Tapping on it will open up the project to the *ToDoPage*. This column cannot be turned off; it is always visible.

ToDo information

In the same column (at the end of the *Project name* column) you will find something like "2/16" or "7/26". This is referred to as the *To-Do information* and displays the number of to-dos for the appropriate project. While the first number counts the completed items, the second number shows the total amount of (all) to-dos for a project. These "To-Do Numbers" can be used as a kind of status, telling you how far a project has progressed. You may be wondering why this information is not shown as a graphical progress bar, or something similar. Well, remember that PDAs have a very limited screen size and resolution where small graphics are sometimes hard to read. You may then wonder why it is not displayed as something like "84%" to show that a project is 84 percent complete. This would be a possible solution, but it is not very practical since it is not accurate enough. Reading that 8 tasks out of 28 are completed is more helpful information, in my view. Once again, if you do not need this information you can turn it off. (See Preferences).

State column

As of version v1.8.2a you are able to define your own project states. The column next to the project name (or ToDo Information) shows the first letter of the current state of a project. You can also turn this column off. By tapping the column, a list with already defined states will appear. If you choose the last entry in the list you can edit the states, in the same way that you edit categories. Note that there can be only 16 states. On colored devices you can also define a color for each state. The same color will be used to draw the projects' information on the *MainForm*.

In previous version (v1.8.1 and below) you could choose to hide all projects that were not active. This option has been changed. Now you can filter projects by their states. Just check the Preferences.

Note icon column

There may be a note icon in the last column. If there is such an icon it indicates that a text memo is associated with the project. Tapping in that column opens the project directly to the *MemoPage*. This column is always visible; it cannot be hidden.

Category column

As of version v1.8.1 of *Projects*, you can display an additional column which will show the category of each item in the project list. Tapping on a category cell, you can select and assign a new category to the appropriate project on the fly, just like you can set the state or the priority of an item. This column can also be hidden from view by using the Preferences dialog. If this column should be shown, it will be displayed *only* if you are viewing "All" items.

Preferences

Tapping on the **Show...** button will pop up the Preferences dialog. Here you may set the sort order of the project list. Beside choosing to have `Projects` sort the list automatically, you can also do it by hand (manually). If you choose to sort manually, new projects will be created at the top of the list. To reposition a project in the list, tap on its name, then hold down the pen and drag it to the desired position. This works much like in the built-in `Memo` application. Note that you need to tap into the *project name column* to make it work. The abbreviation "asce." stands for *ascending* while "desc." means *descending*. Further, you can turn off some of the previously mentioned columns by unhooking the appropriate check boxes. One special check box is *...Only*. If you check this box, only projects in the defined state will be listed. If this checkbox is unhooked all projects will be shown.

Create a new projects

Finally, to create a project all you need to do is to tap on the **New...** button. A small dialog will appear where you need to enter a name for the new project. Project names must be unique within the `Projects` application, they may be up to 27 characters long, and may contain any characters available on the Palm OS.

QuickView - Viewing to-dos of listed projects

As of version 1.8.0 there is a small **ToDos** button beside the **New...** button. Tapping this will open up the *QuickView*, which lists all the currently shown projects along with their to-dos. This enables the viewing of items across project boundaries. This view has no caption associated with it. To show the menu you need to tap on the "Menu" soft button in the left bottom corner beside the Graffiti area. The two horizontal arrows allow you to quickly jump to the next or previous project in the list. Tapping the check boxes of to-do items allows you to mark an item as "complete". Tapping on the item itself will open up the *ProjectForm* to the *ToDoPage* with the cursor on that item, if it was a to-do item. If you tap on the project name it simply opens the *ToDoPage* but does not select an item. As of version v1.8.1, if you choose a particular to-do category for a project while in *QuickView*, you will see listed only the corresponding to-do items for each project. With the v1.8.2 version you can also filter to-do items by their priority.

Switching current category

To switch the category currently displayed on the *MainForm* you can use the popup trigger in the upper right corner of the form. If you have set a hardware button on your PDA to launch `Projects`, then pressing the button repeatedly will cause the *MainForm* to cycle through all available categories, while skipping those which are empty. Just have a try.

Menu items on *MainForm*

Def.Categories...

This will open up the dialog where you define categories, just as in the standard Palm applications. The main difference here is that these categories will be used for *new* projects. Maybe this seems a little bit useless, but it was implemented for the following reason: Since I use `Projects` mainly for keeping track of my programming projects, I used the default categories "Basic, Optional, Planned". This means that any new project I create receives those categories for its to-do list. But there are people who would like to have other default categories ... once you

have configured those default categories all your new projects' to-do lists will have these categories. There is only one thing to out for: each time you (re)install `Projects` these default categories are lost! This means that you have to review this menu item again to make sure that next time you create a new project it gets the default categories you want.

Scan for DBs

This is a special menu item that you will probably rarely use. It can be very useful when you have installed or beamed a projects database and the project does not appear in the projects list. If you perform this action `Projects` will look for all project databases in RAM of your PDA (not on extension cards), and insert these databases into the application's projects list if they aren't already there.

Font...

Here you can select a font that will be used to draw the items on the *MainForm*.

Security...

This item displays a form that allows you to determine whether to show, hide or mask projects marked as "private". You will see this menu item only on devices running the Palm OS version 3.5 or greater. On devices with an earlier OS version you will need to go to the `Security` application to define the state of private records.

About

... displays the *About* dialog.

ProjectForm

One Project's Data

Begin date

Must be a valid date. It cannot be set to "no date".

End date

Can be a valid date or set to "no date".

Priority

Must be one of 1, 2, 3, 4, 5 with 1 being the highest priority and 5 the lowest.

State

This must be one of your defined states.

Category

A category for the project. For example I have some projects under the "Palm OS" and some under the "School" category.

Private flag

This flag determines whether the project is "private" or not. Private projects will not be shown or will be masked if you have set the security options of your PDA appropriately.

To-Do list

This is the list of to-do items for a project. These items are stored separately from the other data for the project, in a database that has the project name plus the string "PRJT".

Memo

Each project has one memo associated with, which may be up to 4K long. There are plans for future versions to allow a list of memos for each project, just like the list of to-dos.

Since all this data does not fit on one screen, there are three "pages" that separate that data, which are discussed in the following sections.

All three pages have a **Done** button which brings you back to the projects list. Under the title of the form you will find three rectangles reading **General**, **ToDo** and **Memo**. Tapping one of these brings you to the appropriate page. Note that the menus differ on each page. If you have a hardware button set to launch `Projects` you can press this button again to get back to the project list instead of tapping the **Done** button. This works on all three pages.

The title of a project will always read "Pr:" plus the name of the project. The name may be shortened if it does not fit on the screen.

General Page

General Page GUI

As you can see, on the *GeneralPage* there are controls for *begin* and *end* dates, which may be set by tapping on the selector triggers or using the small horizontal arrows. *Duration* is expressed in number of days, and is the difference between the begin and end dates. One of these three values is always locked (the check box at the right border), so you cannot alter its value. Changing one of the other (unlocked) values will automatically update the third remaining value. The *priority* can have one of five values with 1 being the highest priority. You can change the *state* of a project here, too. Further you have the possibility to set the *category* of a project. Last but not least you can mark a project *private*, which means that it will be shown as masked or hidden depending on the current security settings on your PDA.

Menu items on the *General Page*

Rename

This menu item provides you with the opportunity to give a new name to the currently opened project. Note that the name must be unique and cannot exceed 27 characters in length.

Delete

When this menu item is activated a confirmation dialog will appear asking you whether you really want to delete the whole project. Note that after deletion of a project you cannot restore it. There is no backup! So be careful with this command.

Duplicate

This offers you an opportunity to create an exact copy of a project. You'll need to enter a different name for the copy. Although it may seem useless to have two

exact copies of a project, this way you can create a template project and reuse it for new projects.

Beam

This allows you to beam an entire project to another Palm OS device.

Clear End Date

Will set the *end* date to “ - ” and duration to zero.

About

... displays the *About* dialog.

ToDo Page

With a few exceptions, the *ToDoPage* behaves much like the built-in `TO-DO` application. For a detailed description read the Palm OS documentation of that app.

Things that differ ...

`Projects` allows you to sort to-do items by hand. If you set the sort order to *Manual* (launch **Preferences...** menu item) there will be two arrows beside the **Details...** button. While an item is selected you can use these arrows to move the selected item up and down in the list.

If you have a color enabled PDA and `Projects` has been compiled with the `CONFIG_COLOR` flag (see *About* dialog) “past due items” will be drawn red.

Much like the built-in application, `Projects` provides a “Details” dialog for to-do items. Both dialogs are equal except of one thing. In `Projects` you can export (copy) an item into a different project or into the built-in to-do list, as well as into the `Datebook` application (as an untimed event). In the “Details” dialog you will find a button reading **Exp.** (for export). If you tap this button a list of available projects will appear. Choosing an entry from this list will copy the item into the appropriate database. There are three special entries, one for the `TO-DO` and two for the `Datebook` application. If you export an item into `Datebook` with the “Datebook DueDate” its due date will be used for the `Datebook` entry. If the item has no due date set, the current date will be used. By using the “Datebook ToDay” entry, the item will be copied into the datebook under the current date regardless of the due date of the item.

As of version v1.8.1 you can also have the *ToDo Page* show you the category of an item when viewing “All” items. Whenever the category is not shown there will be a very small column, only 5 pixel wide, which contains only a “dot”. Tapping into a cell of the category column will produce a pop-up list where you may set the category of the appropriate item on the fly. This has been implemented to avoid having to launch the *Details* dialog each time you want to set a category for an item.

Menu items on the *ToDo Page*

Delete Item...

The currently selected to-do item will be deleted after a confirmation.

Attach Note

This menu item attaches a note (if there isn't already none) to the currently selected to-do item, and pops up the note view.

Delete Note...

... will delete the note of the currently selected to-do item. You need to confirm this action.

Purge...

This item works slightly different as in the built-in `TO-DO` application. Instead of deleting all items marked "complete" it removes only those of the current category. Only if you have the "All" category selected and perform "purging", will all items marked "complete" for that project be deleted.

Beam Item

To beam an individual To-Do item use this menu item. Note that the receiving device must have `Projects` installed, too.

Beam Category

To beam a category of To-Do items choose 'Beam Category'.

Rescan ToDos

If you feel that the ToDo information displayed on the project list is not correct, perform this action. This item will count all items, perform some computation and update the ToDo information. There is a good reason for this function. Since the database format of the `Projects` to-do list is equal to the built-in `TO-DO` list, you have the ability to synchronize a project database outside with the Palm Desktop software and even modify it. When modifying the database outside of `Projects`, the ToDo information is not updated. After performing the Rescan function ... things are set right again.

Edit menu

These are the default copy/paste menu items you can find in every application that deals with text.

Font...

Lets you set the font that will be used for text on the *ToDo Page*.

Preferences...

Opens up the preference dialog, where you can set the sort order of to-do items and determine which columns should be shown on the page.

Phone Lookup

Let's you look up and insert a phone number from the `Address book`.

About

... displays the *About* dialog.

Memo Page

The *MemoPage* offers you a chance to associate a written text as a whole, with the project. The text may be up to 4K (4096) characters long. There is nothing special about this page. However in future, this page may change into a catalog of Memos (something like the built-in `MEMO` application).

Menu items on the *Memo Page*

Delete Memo...

... will ask you whether you are sure you want to delete the whole text, and will remove it upon confirmation.

Import Memo...

Will give you the opportunity to insert text from the built-in Memo application. It works much like **Phone Lookup**.

Export Memo

When this item is been selected the text on this page is copied to the built-in Memo application.

Beam Memo

Choose this menu item to beam the memo of the project to the Memo application to another device.

Edit menu

These are the default copy/paste menu items you can find in every application that deals with text.

Font...

Lets you set the font that will be used for text on the *Memo Page*.

Phone Lookup

Let's you look up and insert a phone number from the *Address book*.

About

... displays the *About* dialog.

Beaming in Projects

In *Projects* you can beam an individual *ToDo* item, a category of *ToDo* items within a project, a project memo, or an entire project itself, to any Palm handheld that has a copy of *Projects*. I strongly recommend that both, the transmitting and the receiving device, have the latest version installed.

Here is how to perform each of these tasks:

To beam an entire project (General, ToDo and Memo tab values).

Launch *Projects* and select the proper project category. Select your project, then choose the *GeneralPage*. Tap the menu bar icon (bottom left of grafitti area) to produce the menu bar. From the menu bar choose **Project**, then **Beam** to begin the beaming process.

To beam a category of ToDo items within a particular project.

Select your project, then choose the *ToDoPage*. Ensure you are in the proper category of *ToDo's*, then tap the menu bar icon. From the menu bar choose **Record** and then choose **Beam Category** to begin beaming.

To beam an individual ToDo item.

From within your project, choose the *ToDoPage*. Tap to place the cursor on the proper ToDo task. From the menu bar choose **Record** and then **Beam Item** to begin beaming.

To beam a Memo.

From within your project, select the *MemoPage*. From the menu bar choose **Record** and then **Beam Memo** to begin beaming.

About dialog

The most valuable information in the *About* dialog is the description of the flags used to build the version. At the time of this writing the source code for `Projects` is designed to support the following flags:

[ERROR_CHECK_LEVEL]

This shows the error check level. For release versions you should find an `ERROR_CHECK_NONE`. For any other versions there may be a `ERROR_CHECK_FULL`. Building a version with no error checking results in a smaller and faster PRC.

[CONFIG_COLOR]

This flag indicates whether the version supports colors or not.

[CONFIG_OS_BELOW_35]

If this flag is used the resulting PRC will run on OS 3.1 or higher. If it was not used, the `Projects` version requires a minimum OS version of 3.5.

[CONFIG_EXT_ABOUT]

Well, if this flag has not been used to build the version, there will just be a plain "About" dialog, not showing you any of the flags. However, the PRC will be about 1KB smaller.

[CONFIG_HLP_STRS]

If set, dialogs will have an "i" icon in its title bar supplying you with some help messages.

[CONFIG_ADDITIONAL]

If this flag has been used the following features are available:

- On the *MainForm* and the *ToDo Page* the "MenuCmdBar" will be filled with some icons/buttons.
- On the form showing you all to-do items across projects boundaries (Quick-View), checking items but hiding them will result in a small animation (striking that item and then removing it from view).
- A small (only 5 pixel wide) column will be visible on the *ToDo Page*. Tapping this will let you change the category of the appropriate to-do on the fly.

[CONFIG_ALLTODOS_DLG]

If this flag was defined, the *QuickView* will be included in the version.

[CONFIG_DEF_CATEGORY]

If defined you will be able to set *default categories* for new to-do lists.

[CONFIG_DEF_STATES]

If not defined, you will not be able to edit the projects' states. You will be forced to use the predefined states. If this flag is used at compilation time you can edit the state names the same way you can edit category names.

[CONFIG_SONY]

If set the version supports Sony's high resolution screen.

[CONFIG_HANDERA]

If this is used to build a version, it will support HandEra330's high resolution screen.

[CONFIG_JOGDIAL]

If this flag is used at compilation time, the final PRC will support the JogDial that is available on Sony and HandEra330 devices. This flag is always used together with CONFIG_SONY or CONFIG_HANDERA.

Also notable is the build date. Please, when making reports about bugs or some other issues, mention the version and the build date as well as the flags that were used to build your version, so I can find out what's wrong more quickly. Thanks.

Converters

Meanwhile there are two tools that allow you to convert data created with `Projects` on the PDA into data that can be used on the desktop. However those are available only as sources, since I don't have a compiler for Microsoft Windows. If anybody would like to help me with these programs do not hesitate to send an email to "projects4palmos (at) gmx.net" (to prevent spam bots @ has been replaced by "(at)").

Tips & Tricks

How to integrate the built-in To-Do list into Projects?

NOTE: Please, make a backup of your built-in to-do list before trying this!

I've been often asked how someone can import items from the To-Do application. Well, there are reasons why `Projects` does not do this by default, but doing yourself is not tricky and takes just a couple of minutes. You will need a file management tool like `Filez`. You can download this freeware application from www.palmgear.com⁷.

1. Create a new project which will later receive the built-in to-do list. Let's assume for this example that you've named the project "myOldToDos".
2. Now launch `Filez` or your favourite file management tool and find the "myOldToDosPRJT" file.
3. Delete the file "myOldToDosPRJT".
4. Now find the file "ToDoDB". This is the to-do list created by the built-in To-Do application.
5. Rename the "ToDoDB" to "myOldToDosPRJT".

After these steps you should be able to open the “myOldToDos” project, in Projects and see the list of your to-dos from the built-in `TO-DO` application. Now choose the **Rescan ToDos** menu item on the *ToDo Page* to update the *ToDo information* displayed on the *MainForm* of `Projects`.

Furthermore, you should be able to open the built-in application and see the same list. Now you are able to modify the list through both applications. This may result in some incorrect *ToDo information*. However this is not problematic, as `Projects` does not rely on this information to function properly, so nothing happens. To correct this information in Projects, use the **Rescan ToDos** menu item on the *ToDo Page*.

If you have a new, empty list in the built-in `TO-DO` application, and don't want to be able to modify your to-do list with both applications (only with `Projects`), you may also do this: Change the creatorID of the renamed database to “PRJT” and its dataID to “DATA”.

Thanks

There are many people I want to thank for being with me and helping me with this project directly or indirectly.

First of all, special thanks to *Eva Tesar-Novotnik* and *Alois Novotnik* for being wonderful parents and supporting me in every way as well as my uncle *Horst Kahl* for animating me to go beyond the possible as of my point of view.

A great thanks goes to Brian Hetrick, who has independently written an first time tutorial and send me an palm to start implementing the beaming functionality. I just couldn't believe it! A million thanks, Brian!

Furhter I want to thank *Manuel Giorgini* who translated `Projects` into Italian and also helped me with many things.

For the french translation and help with the converters my thanks belong to *Eric Santonacci*.

The idea to translate `Projects` into German came from *Carsten Schlegl* who also helped me a lot with it. Thanks!

Gordon Dykstra has helped with the english `Projects` documentation. I greatly appreciate his work and want to thank him for it.

Also a special thank to the SourceForge⁸ team for supporting many projects and being great!

Last but not least, a thousand thanks to all people that gave me feedback about the application. Feedback makes it possible to improve the application.

Notes

1. <http://sourceforge.net>
2. <http://www.gnu.org>
3. <http://projects4palmos.sourceforge.net>
4. <http://sourceforge.net/projects/projects4palmos>
5. http://sourceforge.net/project/showfiles.php?group_id=41739
6. http://sourceforge.net/cvs/?group_id=41739
7. <http://www.palmgear.com>
8. <http://sourceforge.net>