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1 Introduction to RADWiki

Rapid Application Development Wiki

1.1 Idea

Rapidly create web applications by using a set of functionality plugins and "glue" them together in a wiki.

Why the wiki approach?

Creating web based applications typically involves a lot of work with page design (templates) and localization, which is often increasing development time. The goal of RADWiki is that it will make design and localization as easy as writing a wiki page. A normal application can roughly be divided into two parts; the data and the text explaining the data. The RADWiki equivalent would be wiki plugins (providing the data) and the wiki text.

To re-design/localize an existing RADWiki application you don't have to modify templates or language text files (except if you want ro re-design/localize plugins). Instead you copy the application directory (will make a new application) and change the language used in the wiki pages.

1.2 User Plugins and Plugin Modes

User plugins can be inserted on any wiki page. They will render their output on the page in the place where the plugin tag has been inserted. Every place where a plugin is inserted on a page is a seperate domain is created, meaning that clicking on links and buttons will only have an effect on that instance of the plugin. This makes it possible to do things like showing two picture albums on the same page, sharing the same directory of images, but using a different layout and having seperate navigation.

Plugins can be used in two modes:

1. Normal mode (as just described)
2. Settings mode. The RADWiki system detects if plugins can be used in settings mode and will automatically create pages (1 per such plugin) where these settings can be used. System Settings Plugins RADWiki comes with some plugins that can only be used in settings mode. These are used to setup the behaviour of the wiki.

1.3 Design your own settings pages

Settings pages for user plugins can or rather must be designed by you (the person setting up the wiki). As said earlier RADWiki automatically creates pages for each plugin that can be used in settings mode. These pages are empty and you must insert the plugin tag yourself (plus whatever else you find neccessary).

The reason for this approach is to find in the "RAD" part of RADWiki. Besides a wiki this is also an application framework. You build up an application for an end user. You decide what plugins to use and what plugins can be used in settings mode. This also means that extra help text with images and links can be inserted on each settings page making everything more close to the needs of the

intended end user.

1.4 Available User Plugins

- **autotable**
  Auto created database tables by giving a table name, a list of columns and some headers to describe the columns. Features list/record view, record editing/deletion and sorting.

- **autorecord**
  Insert any record from any table into a wiki page, by giving the record's ID or other column(s). Depends on the autotable plugin.

- **album**
  Thumb based image album. Specify a directory with images (jpg, png, gif) to create an album.

SQLite.
The autotable and autorecord plugins use an embedded SQLite database.
Database access is done through PDO database abstraction, so in theory any PDO supported database can be used with minor modifications to the RADWiki source code. There is no immediate plan to support other databases. Maybe if more developers join the project....

2 Installation

2.1 Windows

On windows you have 2 choices. 1. Follow the Unix guide (next section) or 2. download the installer.

The windows installer is basically re-packaged XAMPPLite distribution which contains Apache, PHP and some extras. RADWiki has been added to the package and everything is wrapped up in an installer.

Note that for the sake of simplicity you can only install into `c:\RADWiki`. RADWiki can be found in `c:\RADWiki\dist` and other XAMPPLite files in `c:\RADWiki\xampplite`

If you want to set up things somewhat different, but still rather quickly, you can of course downlodad XAMPPLite yourself (or XAMPP, a distribution with more bells and whistles). Check it out at `http://apachefriends.org`. Note that they also have distributions for Linux. If you decide to do it yourself please follow the Unix guide.

2.2 Linux/Unix, OSX, etc

Setting up RADWiki is a fairly standard procedure (for a PHP project). Before you start the following components must be installed and functional:

- Apache
- PHP 5
    - PDO with SQLite (shared library) enabled. Make the following changes to your php.ini file:

        ; Add (or uncomment) the following lines in the php.ini file

        ; replace ".so" with the extension that is correct for your platform (Windows: ".dll")

        extension=php_sqlite.so

        extension=php_pdo.so

        extension=php_pdo_sqlite.so

If your operating system is Ubuntu Linux (tested on 7.04) you can install apache, php and sqlite running this command (remember to modify the php.ini file afterwards):

    apt-get install php5-sqlite

Installation instructions;

- Extract the RADWiki archive into the web root of the Apache server
- You may rename the default directory (the top directory extracted from the archive) if you wish to do so.
- Rename or copy site.ini.dist (in the top directory) to site.ini and modify this file as needed (see below).

- Test that everything works by directing your web browser to
  `http://<installation_host>/RADWiki`

- Note: If your host is doolittle.com and you extracted and renamed the default directory to myWikiApps that would be http://doolittle.com/myWikiApps

- Go to *Settings* -> *useradmin* to change the administrator password. When prompted for a user and password use *Admin/Admin*.

- To setup/add/remove applications the *applications.ini* file must be edited. See the ApplicationGuide for more on this subject.

Configure site.ini

- Make sure that SITE_ROOT_DIR and SITE_ROOT_URL are correct.

- Change SITE_NAME to get a different title in the browser "bar".

- If you are going to make lot of page changes set MAX_REVISION to a high number. When the value of page versions (for a single page) is equal to MAX_REVISION old page versions will be deleted.

Example (See section 6 for full documentation of *the site.ini* file):

```
;*** Site Directories ****
SITE_ROOT_DIR      = /CHANGE/PATH/TO/RADWiki
SITE_ROOT_URL      = /RADWiki


;**** Other ****
STYLE     = default
SITE_NAME = R*A*D*Wiki


;**** Choose the default application ****
DEFAULT_APP = RADWIKI


;**** Select the number of page revisions to save
MAX_REVISION = 25
```

3 Applications

When you set up RADWiki for the first time, the first thing you want to do is probably to add your own application. You may also want to delete the application that were in the installation package.

Note: The demo application has examples of the usage of all plugins. So, if you are not yet familiar with the plugins it is a good idea to keep this application as a reference while you set up your own.

To add a new application we must modify the applications.ini file and add a new application entry. In the following example 2 applications are set up.

```
[RADWIKI]
NAME          = RADWiki
APP_DIR       = apps/radwiki
START_PAGE    = WelcomeToRADWiki
LINKS         = WelcomeToRADWiki ReleaseNotes
DB            = auto
DISABLE_ADMIN = 1


[WIKI_2]
NAME       = Demo App
APP_DIR    = apps/wiki_2
START_PAGE = IndexPage
DB         = auto
```

Description of the ini parameters

Parameter / Section	Description
`[<internal app name>]`	(Mandatory) The internal name of the application. If the DB parameter is "auto" the application database will be automatically created and use the internal application name in the file name. If you at some point change the internal application name you must also change the DB parameter to a full SQLite connection string. If it stays as "auto" a new database will be created (the old one will not be deleted). If the application name before the change was MyApp the connection string should be `"sqlite:<wiki_app_dir_relative_to_RADWiki_install_dir>/setup/MyApp.sqlite.db"`
`NAME`	(Mandatory) The application name seen by end users
`APP_DIR`	(Mandatory) The location of the application directory (relative to the RADWiki installation directory). Normally this would be apps/<dir> If you install this on a Unix like system, make sure your application directories are writable by the user that runs the Apache process.
`DB`	(Mandatory). Choose auto to let RADWiki create a database in the standard location. Otherwise give a full SQLite connection string, like the one used in [WIKI_3] of the example ini-file above.
`START_PAGE`	`(Optional, defaults to IndexPage) The first page shown when the application is started.`

`LINKS`	(Optional) Application page links shown in the application menu
`DISABLE_ADMIN`	If this is different than 0 or empty the edit, page setup and settings links will not be shown

4 Wiki Markup

4.1 Text_Wiki

RADWiki uses the Text_Wiki engine from PEAR (PHP Extension and Application Repository: http://pear.php.net/package/Text_Wiki). Below you will find most of the markup rules from this engine. These are copied from the Text_Wiki documentation site found at http://wiki.ciaweb.net/yawiki/index.php?area=Text_Wiki&page=HomePage.

Name	Syntax	Description
Anchor	`[[# name_of_anchor]]`	Adds a named anchor target on the page. Note that the anchor name may use only dash, underscore, dot, A-Z, a-z and 0-9, There should be a space after the starting hash mark.
blockquote	Any line starting with one or more > signs, followed by a space	Use this to mark block-quoted text. Usually, the text will be indented, and line breaks should be honored
break	Any line ending with a space and an underscore	Use this to explicitly mark a line break. Use in lists, tables, etc. to break lines without breaking the element
center	Any line starting with an = sign followed by a space	Use this to center a paragraph line
new line	_ with at least one space before and after	Adds a new line. Doesn't seem to work in some situations, if not use @NL
code	`<code>` on a line by itself at the beginning of the line, followed by content block, followed by `</code>` on a line by itself at the beginning of the line. Syntax with type `<code type="type">;...</code>` to indicate the type of code; e.g., type="PHP" or type="HTML"	Use this rule to mark a generic code example. Text inside the code block will be treated as preformatted and monospaced.
colortext	##color|text##	Use this rule to mark colored text. You describe the color using one of the W3C CSS color names...
deflist	Definition term : definition text	Use this to present a definition list. Generally, the term is rendered on a line by itself, and the text is placed on the next line and indented.
emphasis	//text//	Use this rule to mark emphasized (usually italic) text.
heading	1 to 6 plus-signs at the beginning of a line, followed by a space, followed by the heading text	Use this rule to generate section headings
horiz	---- on a line by itself at the beginning of the line	Generates a horizontal bar line

html	<html> on a line by itself at the beginning of the line, followed by content block, followed by </html> on a line by itself at the beginning of the line	Use this rule to mark "real" HTML code that should be honored in the browser. It will not be parsed by the Text_Wiki engine.
list	Zero or more spaces at the beginning of a line, followed by * or #, followed by a space, followed by the list item text	Use this to create ordered lists with a # character, or unordered lists with a * marker
raw	Two backticks (``), followed by the content, followed by two backticks	Use this when you want to mark text that should not be processed by the remaining Text_Wiki rules (i.e., it should be displayed literally as it is).
revise	@@---delete this text+++insert this text@@	Use this rule to mark revisions in the source text without actually deleting anything
strong	**text**	Use this rule to mark strong (bolded) text.
superscript	^^text^^	Use this rule to mark superscripted text.
table	|| at the beginning of a line, with || to separate cells, and || at the end of the line, with optional alignment character (< for left, = for center, > for right) or a ~ to mark a header cell	This will let you create tables in your source text
toc	`[[toc]]`	Looks through all the heading elements in the source text and creates a table of contents from them; each table of contents entry is linked to the appropriate heading, so you can click on it to go to the heading.
tt	{{text}}	Use this rule to mark teletype (monospace) text.
url	inline: http://example.com/, footnote: [http://example.com/], described: [http://example.com Example Link]	The URL rule allows you to place links in the source text in three ways.
wikilink	Normal: AnyPageName, Described: [AnyPageName displayed link text]	As you should know by now, page names in wikis are made of WordsSmashedTogether in StudlyCapsMode. The wikilink rule looks for WikiPages and creates links out of them.

4.2 Other Markup

This is markup build in to RADWiki that does not depend on a 3rd party library

Images

Name	Syntax	Description
`Show Left adjusted image`	`@IMG_L{<path>}`	Inserts a left adjusted image from <appdir>/images/<path> into the page. Text will wrap around the image.
Show Right adjusted image	`@IMG_R{<path>}`	Inserts a right adjusted image from <appdir>/images/<path> into the page. Text

		will wrap around the image.
Show attached image	`@A_IMAGE{<file>, <width>)`	Inserts an attached image with a certain <width> (optional). Text is shown before and after (no wrap) the image.
Show attached left justified image	`@A_IMAGE_L{<file>, <width>)`	Inserts an attached, left justified image with a certain <width> (optional). Text will wrap around the image.
Show attached right justified image	`@A_IMAGE_R{<file>, <width>)`	Inserts an attached, right justified image with a certain <width> (optional). Text will wrap around the image.
Show image	`@IMG{<path>}`	Inserts an image from <appdir>/images/<path> into the page. Text is shown before and after (no wrap) the image.

Links and paths

Name	Syntax	Description
Application URL (Relative)	`@APP_URL_REL`	Current application URL relative to server root
Application URL (Absolute)	`@APP_URL_ABS`	Full URL of the current application (including http:)
Help	`@HELP{<anchor>}`	Inserts a link to <current_page>_Help . Help pages are like normal wiki pages but has no Navigation.
Page ID	`@ID{<page>, <link_text>}`	Create a link to a wiki page. Use this if the page name is not in "CamelCase"
Image URL (Relative)	`@IMG_URL_REL`	Relative path to the current application's image directory (same as @APP_URL_REL/images)
Image URL (Absolute)	`@IMG_URL_ABS`	Full path to the current application's image directory (same as @APP_URL_ABS/images)
Page attachment link	`@A{<file>, <link_text>}`	Inserts a link to a page attachment
Site URL (Relative)	`@SITE_URL_REL`	Site URL relative to server root
Site URL (Absolute)	`@SITE_URL_ABS`	Full site URL (including http:)
URL parameter	`%<parameter name>%`	Substitute %<parameter name>% with a parameter from the URL

Effects

Name	Syntax	Description
Fold	`@FOLD{<ID>, <link_text>, <css1>,<css2>}` `<contents>` `@END`	Creates an expandable and collabsible ares around <contents>. Collabsed it look like this: "[+] <link_text>". If you have more than 1 fold on a page, you must use a diffeent <ID> for each of them. <css1> is css style for <contents> and

		the <css2> is css style for <link_text>

Pop-up	`@POP{ID, <click>, <title>,`
	`<close>, <css1>, <css2>}`
	` <contents>`
	`@END`
		Creates a a pop-up (not a new window) that shows <contents>. If you have more than 1 pop-up on a page, you must use a diffeent <ID> for each of them. <click> is the link text that will initiate the pop-up. <title> will show on the top of the pop-up. <close> is the a link shown on the pop-up that will close it e.g [x]. <css1> is css style for <title> and <css2> is css style for <contents>

Layout

Name	Syntax	Description
Borderless table	`@R< ... @R+ or @R>| ...` `@R>`	@R< starts a row (and table), @R+ adds a new row, @R| splits a row into columns, @R> ends a row (and table)
New line	`@NL`	inserts the tag
Span	`@SPAN{<width>}`	Force a page to span according to <width>. Measuring system must be added (px,em)

5 Plugins

For a brief introduction to plugins see sections 1.2 – 1.4.

5.1 The Basics

To use plugins in an application simply include them in a page by using the following syntax:

```
@{plugin_name[.<instance>] [<option>=<value>...] }
```

You should use an instance when a plugin is shown more than once on a page. This will ensure that URL and form parameters are send to the correct copy (instance) of the plugin. If you use a plugin more than once on a page and don't specify instances, URL and form parameters will be picked up by every copy of the plugin. An instance can be identified by any combination of letters and numbers.

RADWiki comes installed with an example application called "PluginDemo" which has examples of all build in plugins.

Getting Help

If a plugin provides usage instructions you can get them by using the DOC option with the plugin tag. As an example, `@{album DOC=1}` returns the instructions for the album plugin. If the DOC paramter is used, a plugin will not render its normal contents.

5.2 Plugin Administration

Some plugins have a special settings mode where general plugins settings can be modified. To see if a plugin can be used in *settings mode*, the name of the plugin should be visible on RADWiki's settings page in the *Plugin Setup* section. Clicking on a plugin name opens the settings page for the plugin. If a plugin is properly implemented instructions should be included on this page.

As mentioned in section 1.3 plugin setting pages are initially empty except for the help text provided by the plugin. To show the actual settings you must insert the plugin tag using the normal style (@{plugin_name[.<instance>] [<option>=<value>...] }) . A plugin may have options applicable only to *settings mode*. **Note** that in moist cases the options used in *normal mode* will have no effect.

5.3 Core plugins

The following explains the options core when using RADWiki core plugins.

5.3.1 Album

Show images in an album. Provides thumbs and paged navigation. This is the same information which can be retrieved by using a plugin's DOC option.

Example
`@{album location=images/album/wallpaper thumb_size=100 max_view=8 view_size=500}`

Option	Mandatory	Description
location		Directory. Full path or relative to the application directory. If location is not used it is assumed that the images to use are attached to the current

page.

thumb_size	Max X and Y size (in pixels) of generated thumbs. Default size is 100.
max_view	Number of thumbs per page. Leave empty to show all thumbs.
view_size	Max X and Y size (in pixels) of viewed images. Default size is 500.

5.3.2 Auto Table

Show a table as rows of records. Insert, edit and delete records.

Example
`@{autotable name=contact column=name,address,phone title=Contacts record_title=Contact header=Name,Address,Phone list=name,address,phone order=name,address,asc show=4 key=name,address detail_page=auto_contact_detail detail_column=auto_id,name width=50%}`

Option	Mandatory	Description
		Table and column related options
name	X	The name of a database table to use
header		A list (csv) of headers for the columns. When no headers are defined, column names will be used.
list		A list (csv) of columns to show when viewing the record list
key		A list (csv) of columns to define a unique table key
order		A list (csv) of columns to order by. If the last entry is *asc* or *desc* the list will as default be sorted accordingly
hide		A list (csv) of columns that should not be shown when record details are viewed
search		A list (csv) of columns to have as search fields in a search form
criteria		Criteria used to select the list of records. Format: [<column>,<value>]{,<column>,<value> ... ,<column>,<value>}.
parent		If a table has a child relationship to a parent table and child records should be deleted when the parent record is deleted, specify the condition under which the child records should be deleted. Format: [<table_name>,<column_name>,<value>]{<column_name>,<value> ... ,<column_name>,<valque>]
		Layout when table is shown
show		The number of records to show in the record list
title		Add a title to be shown at the top of the plugin
record_title		Add a title to be shown at the top of the plugin when viewing,modifying or deleting a record.
width		The width of the table. Examples: 600px, 50%, 60em
		Options used when row urls should take the user to a new page
detail_page		Override the record viewer by defining a wiki page to go to when clicking on a record in the record list
detail_column		A list (csv) of columns to add to the URL as a parameters when using the *detail_page* option. Columns will be added like this: &autotable_<column name>=<column value>. On the destination page you can access any URL parameter like this: @%{<parameter name>}. Columns to be added to the URL must be present in the *list*

Option	Mandatory	Description
		or *list_hidden* option.
list_hidden		A list (csv) of columns. Columns that do not need to be in the record list, but need to be selected to be used as URL parameters. In other words, if a column is used with the *detail_column* option, but is not shown (*list* option) add them here

5.3.3 Auto Record

Show a single record from a table. Provides modify and delete functionality. This plugin relies on the AutoTable plugin being in use.

Example
`@{autorecord name=contact_type title=Contact_Type criteria=type,@%{autotable_type} header=Type,Description reference=1}`

Option	Mandatory	Description
name	X	The name of a database table to use
criteria	X	`Criteria used to select a record. Format: [<column>,<value>]{,<column>,<value> ... ,<column>,<value>}. If the criteria retuns more than one record only the first record will be used.`
title		Add a title to be shown at the top of the plugin
header		List (csv) of column headers. The list must be in the same order as the columns in the table definition. The table and columns are set up on the AutoTable setup page
reference		If not left empty this indicates that the record is view only. Edit and delete buttons will not be shown
auto_upd ate_url		If the current page URL contains parameters that are equal to the current table's columns and the record is modified. The page will be refreshed and the URL parameters will be set to the same values as the changed table columns. Pameters in question will have this format: autotable_<column name>. To use this option set it to "non-empty"
on_delete		A name of a wiki page to redirect to if the record is deleted

6 RADWiki Administration

RADWiki administration is done in two places. 1. In the *site.ini* file 2. On the *Settings* page under *Wiki Administration.*

6.1 Site.ini

A full explanation of the parameters that can be used in the *site.ini* file.

Parameter	Description
SITE_ROOT_DIR	The physical path to where RADWiki is installed. Note that even if RADWiki is served from Windows you can use '/' as directory seperator
SITE_ROOT_URL	The directory of where RADWiki resides relative to server root
DEFAULT_PLUGIN_DIR	A directory relative to SITE_ROOT_DIR where plugins are to be found
STYLE	The style (html/css) to be used. RADWiki has 2 styles included: *default* and *OneApp*. The *default* style shows links for all available applications. Use *the OneApp* when only one application should be available. This may be the best choice if the wiki is used as a portal.
SITE_NAME	The name shown on the top frame of your browser window
DEFAULT_APP	An application to be loaded automatically. If this is not set, no application is loaded and the user must select one. If the *OneApp* style is in use this parameter is not checked, and the first application found in the *applications.ini* file will be loaded.
MAX_REVISION	Before an edited page is saved, a revision (copy) of the unedited page will be saved. Through the *Page Setup* page users can choose to go back to an older revision of the current page. This parameter sets the number of page revisions to be saved.
LOCAL_PEAR	A local repository of PEAR packages is included in RADWiki. If you want to use a local PEAR repository instead of the one included set LOCAL_PEAR to something different than empty or 0. As of version 0.2 RADWiki uses the following PEAR packages: `Text_Wiki`
INI_ADMIN	This parameter offers a remedy to the situation where the *Admin* password has beenn lost. If this is parameter is not empty or not 0, you can add the *init_admin* parameter to the URL which will reset the *Admin* password to 'Admin'. **Note:** Remember to change the password afterwards.

6.2 User Administration

The user administration system in RADWiki is simple and do not offer user roles, groups etc.

A user can be of 3 types:
- Administrator - Users of this type can use the *Wiki Administration* and *Plugin* Setup on the *Settings* page. Actions also include those of *Superuser* or *normal* user types.
- Superuser - No specific actions are assigned to this user type, but includes those of the

normal user type.

- Normal – This user type is allowed to use the *Edit* page and *Page Setup*.

Plugins have access to the user system, and can require logins as any of the mentioned types. It is however up to the implementer of a plugin to decide how the user levels should be applied.

Find the *User Administration* page under *Settings->Wiki Administration*.
If the page is blank modify it and add the tag `@{useradmin}` and a newline (return/enter). If other instructions should be added to the page, just put them before of after the tag.

This page shows existing users and allows to certain modifications (also deletion) to them. New users can also be added. The following information (fields), per user, is available:

Information (field)	Description	Changeable
User Name	The login name of a user	When adding
Real Name	A users real name, used for display purposes only.	When adding, modifying
User Type	A user's type	When adding, modifying
Password	User password	When adding, modifying

6.3 'Edit Page' Administration

Find the Edit *Administration* page under *Settings->Edit Administration*.
If the page is blank modify it and add the tag `@{editadmin}` and a newline (return/enter). If other instructions should be added to the page, just put them before of after the tag.

On the page a set of icons is shown. Clicking on them will insert a predefined markup tag into the current position of the edit area. Hovering over an icon will show a tool tip with a short explanation of the tag assigned to the icon.

On this page ('Edit Page' Administration) you can assign icons to a certain tag by a simple select and click. Entries are saved in the *edit.ini* file which can be found in the root of the RADWiki installationj directory.

6.3.1 Customization of edit icons and tags

By modifying *edit.ini* file new icons and tags (or any text) can be added.

The tool tips are localized and must be added to the localization file
`~/RADWiki/locale/<language>/edit.properties` (change <language> to the site language in use).

New icons can be introduced by adding them to the directory
~/RADWiki/layout/<style>default/images/edit.

Note: if you upgrade RADWiki, a backup of the files (*edit.ini* and *edit.properties*) should be taken, as they will be overwritten.

Note: The icons currently in use are all transparent and have a white foreground, so they may seems

to be blank by some viewers and editors. When shown in RADWiki the css property *background* is used to make them visible.