

# Chapter 1

## About MediaWiki

MediaWiki is an open-source wiki engine originally developed for use on Wikipedia, and Wikipedia is still by far the best-known use of it. But MediaWiki is also in use on tens of thousands of wikis around the world – it's almost certainly the world's most popular wiki software. It's also most likely the world's most powerful wiki software, although that statement will require more justification – hopefully this book will provide suitable proof.

In this chapter, we'll start with some of the non-technical aspects of MediaWiki.

### History of MediaWiki

The history of MediaWiki starts with Wikipedia, and the history of Wikipedia starts with wikis, so we'll begin there. In 1995 Ward Cunningham, a programmer who was already known for his work in defining software design patterns, created the first wiki, on his company's website, c2.com. It was a very simple website, with one bizarre-at-the-time feature: every page had an "edit" link, where random visitors to the website could modify its contents. The wiki was meant to hold information about design patterns, as part of a section on the website called the "Portland Pattern Repository". Cunningham was inspired by HyperCard, an Apple application from the 1980s that stored information on editable "cards" that could link to one another; he wanted to create something similar for the then-new World Wide Web. For the name of this concept, Cunningham originally thought of "QuickWeb", but then remembered the "Wiki Wiki Shuttle", an airport shuttle he had taken in Honolulu, Hawaii, and decided to call his new idea "WikiWikiWeb". "Wiki" or "wiki wiki" means "fast" or "hurry up" in Hawaiian; and in fact it apparently derives from the English word "quickly", so its new presence in English is somewhat of a return.

"WikiWikiWeb" for a while referred to four things: the website hosted on c2.com, the software used to run it (written in Perl), and later any user-editable website (what is now known as a wiki), and any application used to run such a site (now known as wiki software). There was no great distinction for the first five years or so between the code used to run a wiki and the content on it, partly because there was nearly a 1:1 correspondence between the two: many of the original wiki administrators were programmers, and they tended to create their own new, or modified, version of the software to run their own wikis.

In 2000, Jimmy Wales, an internet entrepreneur living in Florida, decided to create Nupedia, a free online

encyclopedia that would compete with the various subscription-only encyclopedias like Encyclopedia Britannica. He hired Larry Sanger to edit it. Like traditional encyclopedias, each article was written by an expert on the subject matter. Nupedia was a failure, managing to get all of 12 fully-finished articles in its first year. While the two were thinking about how to increase contributions, Sanger heard from a friend of his about wikis, and suggested the idea to Wales for use as a way to supplement Nupedia's content. Wales, though skeptical at first, put up a wiki. Sanger suggested that it be called "Wikipedia", and Wales agreed, obtaining the domain names "wikipedia.com" and "wikipedia.org". On January 15, 2001, Wikipedia was launched at wikipedia.com. Though interest was low at the beginning, it started to increase exponentially, and Nupedia was soon forgotten. Several months later, the first subdomains for non-English languages were created; the first was "deutsche.wikipedia.com" in March 2001. In August 2002, the content was transferred to wikipedia.org, reflecting Wales' new view of Wikipedia as a non-profit public resource, instead of the side-project of a for-profit website.

Wales and Sanger later had a falling-out over philosophical differences, and now Sanger has become one of Wikipedia's most vocal critics. That fascinating turn of events is a subject for another book; but in any case, the path was in place for Wikipedia to achieve its meteoric rise in popularity. It soon fundamentally altered the course of wikis, and later it would fundamentally alter the world as well.

The software that Wales and Sanger originally ran Wikipedia on was UseModWiki, a Perl application written by Clifford Adams. UseModWiki, like most wiki software at the time, was the work of tinkerers: it was based on AtisWiki, which was based on CvWiki, which in turn was based on WikiWikiWeb, Cunningham's original application. And again like most wiki software of the time, UseModWiki used flat text files to store all page revisions. That approach was slow, and, given Wikipedia's constant growth, was proving unworkable. Wikipedia also needed functionality that UseModWiki didn't provide, so in late 2001 Wales hired Magnus Manske, a German programmer and active Nupedia contributor, to rewrite the software in PHP, now storing edits in a MySQL database. In January 2002, Wikipedia switched over to this new (unnamed) software. This new software had performance problems of its own, though. Programmer Lee Daniel Crocker started working on a newer version of the software, and in July 2002 Wikipedia switched to that software. Crocker's code was now known as "phase III", with UseModWiki and Manske's code retroactively referred to as "phase I" and "phase II", respectively.

A year later, in June 2003, Wales created the Wikimedia Foundation, also known as the WMF, to manage Wikipedia and its growing number of sister sites, like Wiktionary. The name "Wikimedia" was based on "Wikipedia", and had been suggested by Sheldon Rampton on a Wikipedia mailing list in March. The next month, Wikipedia enthusiast Daniel Mayer, writing on that same mailing list, suggested a name for Crocker's "phase III" software: "MediaWiki", a play on "Wikimedia". The name stuck, and was quickly made official.

MediaWiki has been used by all Wikimedia websites since 2004.

Almost since the beginning of MediaWiki's existence, it started getting heavily used on non-Wikimedia sites as well. Two of the non-Wikimedia sites that launched in 2003, that ran on MediaWiki software, remain among the largest wikis today: Wikitravel, a travel guide (though its growth has been curtailed by the WMF's own travel site, Wikivoyage), and Memory Alpha, the main Star Trek wiki. In the years since, there have been tens of thousands, if not hundreds of thousands, of wikis launched using MediaWiki software.

By now, most early wiki software, like WikiWikiWeb, UseModWiki etc., is no longer in widespread use, but

there are certainly wiki applications other than MediaWiki that are still in regular use and under development. Interestingly, nearly all of the wiki applications in widespread use today were originally created between 2002 and 2006. They include, besides MediaWiki, the open-source applications PmWiki, Tiki and TWiki (an exception, since it was started in 1998), and the proprietary applications Confluence and Socialtext. There are also various content-management systems that include some limited wiki functionality; these include Jive and Microsoft SharePoint.

The first released version of MediaWiki was 1.1, and the current version, at the time of this writing, is 1.22. We won't get into the changes that happened in each version here, though suffice it to say that there have been a lot; virtually the entire codebase has been rewritten, in some cases several times. You can see the full version history for MediaWiki at:

[http://en.wikipedia.org/wiki/MediaWiki\\_version\\_history](http://en.wikipedia.org/wiki/MediaWiki_version_history)

During the over ten years that MediaWiki has existed, it has had contributions from hundreds of developers, translators and testers, along with a handful of usability experts, graphic designers, project managers, etc. It would be difficult to list here all of the people who have made significant contributions to MediaWiki, or even invaluable contributions. Two names stand out, though, for the scope of their involvement. The first is Brion Vibber, who is currently the Lead Software Architect for the Wikimedia Foundation, and who has essentially had that role in MediaWiki since nearly the beginning, adding enormous amounts of code and serving as the final word on what gets into the software and onto Wikimedia sites.

The second name is Tim Starling, who serves as the WMF's Lead Platform Architect, and who like Brion has been involved in development since nearly the beginning, has contributed a huge amount of code, and has had significant influence on the current state of the software.

## Community and support

There's a strong community of users and developers around MediaWiki, who can provide support. The best ways to get support are the mailing list, the IRC channel, and on the MediaWiki website at [mediawiki.org](http://mediawiki.org).

There are a large number of mailing lists for MediaWiki (15, at last count). Only two are important, though, for average MediaWiki users:

- [mediawiki-l](mailto:mediawiki-l@lists.wikimedia.org) – the main mailing list for questions about MediaWiki and most of its extensions.
- [wikitech-l](mailto:wikitech-l@lists.wikimedia.org) – discussions about the use of MediaWiki on Wikimedia sites, as well as topics related to MediaWiki development.

You can see information on these two mailing lists (like how to subscribe), as well as on the other mailing lists, [here](#)

[https://www.mediawiki.org/wiki/Mailing\\_lists](https://www.mediawiki.org/wiki/Mailing_lists)

Support is also always available at the MediaWiki IRC channel, [#mediawiki](#), via [freenode.net](http://freenode.net). There are other IRC channels, though they're not nearly as useful. You can see a full listing [here](#):

<https://www.mediawiki.org/wiki/IRC>

You can also get support at [mediawiki.org](https://www.mediawiki.org/wiki/Support). To ask questions about core MediaWiki, you can go here:

<https://www.mediawiki.org/wiki/Support>

And for any specific extension, you can use its talk page on [mediawiki.org](https://www.mediawiki.org/wiki/Support) to get support.

Many open source software applications also have their own user and developer conferences. MediaWiki doesn't exactly have such a thing, but there are various MediaWiki-focused "hackathons" each year, and there is also Wikimania, an annual conference on everything Wikimedia-related. In practice, Wikimania is mostly focused on Wikipedia, but MediaWiki does get significant attention. And Wikimania is a great way to meet the people behind the software.

The [mediawiki.org](https://www.mediawiki.org/wiki/Events) "Events" page shows a constantly-updated list of MediaWiki-related events and hackathons around the world:

<https://www.mediawiki.org/wiki/Events>

If you think you've found a bug in MediaWiki or one of its extensions, or you've created a software patch and want to submit it, the best way to do that is at the MediaWiki bug tracker (which uses the software Bugzilla), here:

<https://bugzilla.wikimedia.org>

Often, using Bugzilla is the best way to make feature requests as well.

Finally, there are various ways to get paid support, either from individuals or from consulting companies. The most definitive list of both individuals and companies doing MediaWiki consulting is here:

[https://www.mediawiki.org/wiki/Professional\\_development\\_and\\_consulting](https://www.mediawiki.org/wiki/Professional_development_and_consulting)

It would be odd not to mention my own company here – WikiWorks (<http://wikiworks.com>). We may be the most explicitly MediaWiki-focused consulting company at this point, though we're far from the only that provides such services.

## Available hosts

Instead of setting up a new wiki on your own domain, from scratch, you may want to have your wiki hosted on an existing website dedicated to wiki hosting – such sites are usually referred to as "wiki farms", or, as Wikipedia prefers to call them, "wiki hosting services". The advantage of such a setup is that it's much easier to get started – you can often set up a wiki on a wiki farm, and start editing it, in minutes. Also, for the most part, you don't have to worry about the software – you don't have to set up MediaWiki or any extensions, and you don't have to update it as new versions come out, because the wiki farm presumably takes care of that.

On the other hand, there are disadvantages to using a wiki farm, as there are any time that one's data is put in "the cloud" – to use the current buzzword for online data. There's no guarantee that the wiki's contents won't be lost, if the website in question stops operating, or there's some technical glitch, or it gets hacked. And if your

wiki is meant to be private, there's the risk that its contents will get revealed due to some security leak. Of course, all the same risks exist on any computer network that your wiki might run on – but on third-party websites, the perception, at least, is that the risk is greater.

Let's say that you do want to use a wiki farm, though, and (since you're reading this book) that you want the software it runs on to be MediaWiki. Thankfully, MediaWiki is a popular wiki engine for wiki farms – in fact, it appears to be easily the most popular, with at least five serious wiki farms that use it. By comparison, most other wiki engines power no more than one.

The biggest MediaWiki-based wiki farm, by far, is Wikia, at [wikia.com](http://wikia.com). In fact, it's the most popular wiki farm of any kind; according to the Alexa traffic-monitoring service, it's currently among the top 200 most popular websites in the world, and among the top 100 in the United States. And that may be even understating its popularity, since some of its most popular wikis, like Memory Alpha (for Star Trek) and WoWWiki (for the video game World of Warcraft) have their own domains, which means that Alexa isn't counting them as part of Wikia's traffic.

Wikia was founded in 2004 by Jimmy Wales – the co-founder of Wikipedia – as well as Angela Beesley (now Angela Beesley Starling), who was a Wikimedia Foundation board member at the time. For that reason, some people think Wikia is affiliated with Wikimedia or Wikipedia, but in fact there's no official connection.

Wikia differs from most other wiki farms in that they have to approve every new wiki that is proposed, with the main criterion being whether this new wiki will get sufficient traffic (Wikia currently gets all their revenue from the ads they run on the pages). So a wiki meant for use only by a specific group or organization wouldn't be accepted, and a private wiki wouldn't even be possible – all Wikia wikis are public. In practice, most wikis on Wikia – and certainly most of the popular ones – are on pop-culture topics: TV shows, movies, video games and books, with a special focus on anything related to science fiction or fantasy. If the wiki you're considering creating is anything along these lines, Wikia is a very reasonable choice.

Other wiki farms tend to allow anyone to create a wiki, with each wiki getting either a subdomain of the wiki farm's main domain, or a directory. In some cases, wiki farms make their money from ads, while in others, they get money from customers who pay for extra service.

The MediaWiki-based wiki farm closest to my heart is Referata, at [referata.com](http://referata.com) – that's because I created it and still run it, via WikiWorks. Referata has been around since 2008; it exists in order to provide hosting of a specific set of MediaWiki extensions based around Semantic MediaWiki – which you'll be hearing much more about later in the book. (To be fair, a few other wiki farms provide support for SMW as well.) Referata offers a standard usage of MediaWiki for free, with some options – like making one's wiki private – requiring a monthly payment.

Wikii ([wikii.com](http://wikii.com) and [wikii.net](http://wikii.net)) is another interesting host – [wikii.com](http://wikii.com) offers standard hosting, while [wikii.net](http://wikii.net) allows administrators to install any custom extensions and skins that they want. Both are free.

Other long-running MediaWiki-based wiki farms are [EditThis.info](http://editthis.info) ([editthis.info](http://editthis.info)) and Wiki Site ([www.wiki-site.com](http://www.wiki-site.com)).

How to choose one of these? For simple wikis, it shouldn't really matter. But if you have the need for special features, you can try looking at the site's "Special:Version" page, to see what version of MediaWiki it's running, and what extensions it has installed. You can also look at any of the wikis already hosted on that farm (usually there are a few linked from the homepage), to see what they look like, whether they're inundated with spam (you

can check [Special:RecentChanges](#) for that), how quickly they load, whether they have a distracting amount of ads, etc.

## Chapter 2

# Setting up MediaWiki

### The MediaWiki environment

MediaWiki is a program written in PHP, a very popular language for web applications. It can run on any operating system that PHP can run on, which is all the major ones. Similarly, it can run on any major web server. MediaWiki requires a database, which can be almost any of the major database systems: MySQL, PostgreSQL, SQLServer, Oracle and SQLite (Sybase is one major database system that is not supported). In practice, though, there are sometimes issues with running MediaWiki with database systems other than MySQL, since they get significantly less usage and attention. (Core MediaWiki, at least, seems to work fine with PostgreSQL as well.)

By far the most popular setup for MediaWiki is what's known as the "LAMP stack": Linux, Apache, MySQL and PHP. Only the last of these is required, but the other three are strongly encouraged.

You can see the following page to see what versions of PHP, and of the different database systems, each version of MediaWiki is compatible with:

<https://www.mediawiki.org/wiki/Compatibility>

### Download

There are essentially two ways to download MediaWiki: as a "tarball", or a single archive file, and via Git, a version-control system. Using Git is the recommended method, because it's easier to install, and it lets you upgrade your code much more easily later on. But if you don't have Git, you can get the code from here:

[https://www.mediawiki.org/wiki/Download\\_from\\_Git#Download](https://www.mediawiki.org/wiki/Download_from_Git#Download)

When MediaWiki is downloaded as a tarball, it comes pre-bundled with some number of extensions, contained in the `/extensions` directory: The exact set depends on the version of MediaWiki: from versions 1.18 to 1.20, the bundled extensions were ConfirmEdit, Gadgets, Nuke, ParserFunctions, Renameuser, Vector and WikiEditor. Since version 1.21, the set of extensions additionally includes Cite, ImageMap, Interwiki, Title Blacklist, Spam-Blacklist, Poem, InputBox, LocalisationUpdate and SyntaxHighlight GeSHi; while the Vector extension has been

removed, because its functionality is now part of core MediaWiki. Most of these extensions will be discussed in some detail later in the book.

If you have Git installed (and it's at least version 1.7), you can download MediaWiki with the following call:

```
git clone https://gerrit.wikimedia.org/r/p/mediawiki/core.git
```

This will create a directory named “core”, which you can (and should) then rename.

## Installing

Once you've downloaded the main MediaWiki code, go to the URL for that code in a browser. At that point, assuming you have PHP, a database system and a web server running, the MediaWiki code should get executed correctly, and it will then look for a file called `LocalSettings.php` – by default, it's not there, and its absence tells MediaWiki that this is a new installation. `LocalSettings.php` is the initialization file for MediaWiki, holding all the user-modifiable settings for the wiki; we'll get to many of them over the course of this book. Since `LocalSettings.php` is not there, MediaWiki will guide you on the browser through a series of steps where you have to specify the wiki's name, the name of the database to be created, and other settings, including the username and password for the wiki's first user (by default, the username is “WikiSysop”). This user is important even if you plan to create a different one for yourself later, because it has administrator privileges, so if you want to give yourself administrator privileges (and you will), you'll have to do it via that user.

Once you've completed all the steps, a `LocalSettings.php` file will be created automatically, and a new database should be created as well on your database system.

## Setting the logo

Most, though not all, of MediaWiki's skins include a spot for a logo, at the top left-hand corner of the screen (or top right-hand, if the wiki is in a right-to-left language). In MediaWiki, the logo is the customary way to individualize one's wiki – for better or worse, most skins don't display the name of the wiki anywhere on the page (other than indirectly at the bottom, in the “About \_\_\_” link). So the logo should show the name of the wiki, and ideally some representative graphic – though that part is strictly optional; it's much better to have a logo that just states the wiki name than no logo at all.

MediaWiki wikis do have a default logo, which is a grayed-out MediaWiki sunflower logo with the words “Set \$wgLogo to the URL path to your own logo image” over it. As the instructions say, all you need to do is set a new value for `$wgLogo` in your `LocalSettings.php` file. The logo image can be located either within the MediaWiki directory, or at some arbitrary URL. By default, it's located at `/skins/common/images/wiki.png` – you shouldn't replace that file with your logo image, because then you run the risk of it being overwritten when you update the MediaWiki code.



## Changing the URL structure

By default, MediaWiki URLs appear in a format like:

```
mywiki.com/mediawiki/index.php?title=Main_Page
```

However, the preferred format is something more like:

```
mywiki.com/wiki/Main_Page
```

This is the format that Wikipedia and other Wikimedia sites use. The “wiki” directory can have any name, though “wiki” makes sense for obvious reasons.

There are various approaches to changing the URL format, based primarily on whether you have root access on the server on which the wiki resides. You can see all the steps required for the various approaches here:

```
https://www.mediawiki.org/wiki/Manual:Short\_URL
```

We’ll just note that there are some cases when users want to have a URL structure that looks simply like:

```
mywiki.com/Main_Page
```

It’s certainly a clean-looking URL, but this is not recommended, because, among other reasons, it means that your server can’t have helper files like robots.txt and favicon.ico. You can see a longer discussion of this approach here:

```
https://www.mediawiki.org/wiki/Manual:Wiki\_in\_site\_root\_directory
```

Finally, you can also change the name of the start page, which by default is (in English) “Main Page”, by changing the contents of the page “MediaWiki:mainpage”. This is an example of interface text editable via the wiki, of which there are hundreds of examples – see page 101 for a complete description.

## Updating MediaWiki

As new versions of MediaWiki come out, you’re generally advised to keep updating to the latest version – there are always bug fixes, interface improvements, and interesting new features. It’s generally pretty easy to update, though it depends on whether you’re using Git or not. If you are, you can just run a “git pull” in the directory housing your MediaWiki code. Then, you’ll need to call the script “update.php”, located in MediaWiki’s /maintenance directory – it goes through the database and adds or modifies database tables to fit the new DB schema for this version. update.php tends to work very well – it even works when upgrading from extremely old versions.

If you’re downloading the new MediaWiki version as a package, instead of via Git, then you’ll need to move the /images directory, the /extensions directory (or at least parts of it), and LocalSettings.php into this new directory, and rename both it and the old MediaWiki directory so that the wiki URL will now point to this one. As before, you’ll need to call update.php.

And if you’re using any extensions besides the ones that come pre-bundled with MediaWiki, then you might have to get the latest versions of those as well. Extensions that don’t work with a certain MediaWiki version tend

to break pretty easily when you try them out, so it should be fairly straightforward to see if any extensions need updating.

# Chapter 3

## Editing in MediaWiki

### Tabs

In MediaWiki, nearly all page-specific actions are accessible through what are usually tabs, though it depends on the skin: in some cases the “tabs” are just links displayed on the side, and in the case of Vector, the default skin, some of the tab actions are dropdown links, viewable alongside the main tabs. The exact set of tabs/dropdown actions/etc. one sees depends on the type of page it is, the permissions one has, and the extensions installed. Figure 3.1 shows the (nearly) standard view of tabs and dropdown actions that an administrator would see, for a regular page in MediaWiki, with the Vector skin (along with the search interface alongside it).

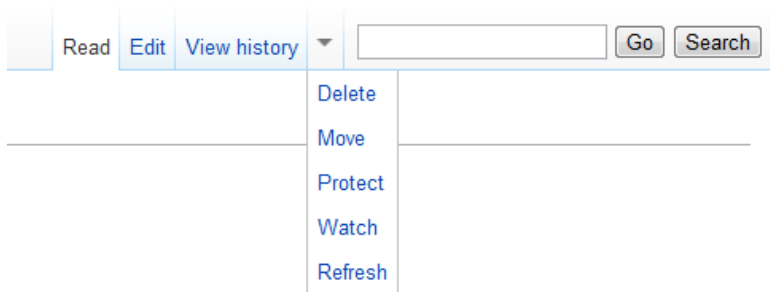


Figure 3.1: Row of tabs in the Vector skin

The “Edit” tab shows up as “View source” instead, if the user isn’t allowed to edit the page, in Vector and most other skins.

We’ll cover most of these actions in this chapter. The one feature that makes this different from the standard view an administrator would have is the “Refresh” action, which is defined by the Semantic MediaWiki extension – you can read about that on page 119.

## Creating and editing pages

In MediaWiki, every page's URL is also its title; there are no URLs that simply look like `"?id=123456"`, of the type that appear in many other content-management systems. That's important, because it means that the creation and renaming of pages can be done in a transparent way, open to all users.

The way to create a new page, and edit an existing page, are basically the same: in both cases, you first have to go to that page. How do you get to a page? Interestingly, for both existing pages and pages that don't exist yet, there are the same three ways to do it:

- Type in the page name in the URL
- Search on that page name, and then either arrive at the page (for existing pages), or follow the link to create it in the search results (for pages that don't exist)
- Follow a link to that page.

A link to a nonexistent page is usually called a "red link". By default, they're red, which easily distinguishes them from links to pages that exist, which are usually blue. The actual MediaWiki term for them, for what it's worth, is "broken link" (though "redlink" is also used, in URLs). Broken/red links are useful for indicating that a page that doesn't exist yet should be created. With Semantic Forms (an extension we'll get to later), you can actually have red-linked pages created automatically in certain cases – but most of the time, this has to be done manually.

## Page names

For the most part, page names can contain any Unicode character. The following characters, however, are not allowed in page names:

```
# < > [ ] | { }
```

The underscore character, `_`, could be added to that list as well, since underscores are simply treated the same as spaces.

By default, page names always start with an uppercase letter: if a page name gets typed in that starts with a lowercase letter, it will simply get capitalized by the system. This can be changed, however, by adding the following to `LocalSettings.php`:

```
$wgCapitalLinks = false;
```

Page names are restricted to 255 bytes, which, depending on the character set being used, can be as many as 255 characters or as few as 63 characters. Standard Latin characters are one byte each, while most other languages' characters are represented using two or three bytes, and some archaic languages, mathematical symbols, etc. take four bytes.

## Editing mode

Once you're at a page, you will see a slightly different interface depending on whether you're allowed to edit it. If you can't edit the page, there will most likely be a tab named "View source", that lets you view the source wikitext of the page (if you're interested in doing that). If you can edit the page, on the other hand, that same tab will most likely be called "Edit" instead. In that case, to edit the page, you just have to click on the "Edit" tab, and start typing. For new pages, the tab is called "Create" instead of "Edit", and there's usually an explanatory message on the page that includes a link to that tab, but otherwise it's the same. In both cases, you end up at a URL that ends with "action=edit", which indicates that you're now in editing mode.

For existing pages, you can most likely also click "Edit" on any page section – usually, every section header will have a link that looks like "[Edit]" near it. This is quite useful – if you have a small change you want to make, it's always better to only edit the section in which it appears, because there's less text to deal with.

The edit page consists of, essentially, one big text area, plus some helper inputs at the bottom, including, most notably, the "Save page" button. The text of the page, or section, being edited goes in the big text area; it's meant to be written in a syntax called wikitext, which is simpler than HTML but which can also include a lot of scripting-like functionality; this is covered in all of Chapter 4. There are various toolbars and utilities that can be used with editing. By default, the top of the text area has a toolbar that looks like Figure 3.2.



Figure 3.2: Standard MediaWiki editing toolbar

You can also use an extension called WikiEditor (we'll cover extensions later), which provides a nicer toolbar, with support for special characters (symbols, and non-Latin characters), and other features. Figure 3.3 shows what it looks like, with the "Advanced" option selected.

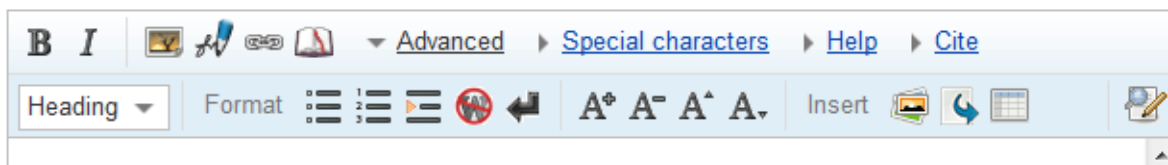


Figure 3.3: WikiEditor extension editing toolbar

You can read more about it here:

<https://www.mediawiki.org/wiki/Extension:WikiEditor>

There are some extensions that support intuitive, WYSIWYG-style editing, although they all have flaws at the moment; see page 82 for more discussion of these (and a full explanation of "WYSIWYG").

There's also the Semantic Forms extension, which lets you provide a form for editing, in addition to or instead of the standard edit page; this extension is covered in depth in Chapter 17.

Here is what the bottom of the edit page looks like, below the main input for the text:

Summary:

Watch this page

[Cancel](#) | [Editing help \(opens in new window\)](#)

In the "Summary" field, the user is supposed to summarize their changes in the current edit; this is very useful when looking at the page history later. Clicking "Watch this page" adds this page to the user's watchlist (which we'll get to later in this chapter). "Save page" of course saves the page. "Show preview" shows what the page will look like if it's saved in its current state, while leaving the edit form underneath the preview, so that the user can keep editing. "Show changes" shows the differences between the current text and the saved page, again with the edit form placed at the bottom. It's generally a good idea to hit both of these before saving a page, to make sure that everything looks alright, and that nothing was deleted, or added, accidentally.

"Cancel" and "Editing help" are simply links. "Cancel" takes the user back to the regular page, while "Editing help" brings the user to the page "Help:Editing", which by default is blank. The latter is a somewhat silly feature – it means that every wiki needs to maintain its own editing help page. The best course of action is to simply put in a link on the local page Help:Editing to the following URL:

<https://www.mediawiki.org/wiki/Help:Editing>

## Page history

The next feature available for every content page in MediaWiki is the history page. You can reach it by adding "action=history" to a page's URL query string, and, as with the edit page, it's available in most skins via a tab, and in some skins as a sidebar link. In English, the tab is called "History" or "View history", depending on the skin.

The history page doesn't usually get much attention, although it is, in a sense, the heart of MediaWiki, because being able to see the page history is what lets wikis function like wikis. Because you can always see the entire set of changes, you can open up editing of your content to any group of people, no matter how large, without fear that important data will be lost.

Here are a few rows from the history page for the article "Paul Broca", on the English-language Wikipedia:

- [\(cur | prev\)](#) 🕒 00:27, 14 February 2012 [98.81.26.55 \(talk\)](#) . . (26,275 bytes) **(+6)** . . (→*Personal life: The term bachelor's degree is a common noun, and it is not capitalized. Likewise for master's degree. Only the abbreviations are capitalized.*) [\(undo\)](#)
- [\(cur | prev\)](#) 🕒 19:55, 9 February 2012 [Kilom691 \(talk | contribs\)](#) . . (26,269 bytes) **(0)** . . (*ref modified*) [\(undo\)](#)

Every row represents a single edit to the page, and all edits are stored permanently. (In MediaWiki nomenclature, an edit is also known as a "revision". It's rarely called a "version"; that word is generally reserved for

software.) Each row holds important information and links:

- “cur” and “prev” links, and radio buttons, for showing differences (as described in the next section, “Page diffs”)
- the date and time in which the edit was made (configured for the current user’s time zone), which link to a page showing that revision
- the name of the user who made the edit, or the person’s IP address if the edit wasn’t made by a logged-in user
- additional links to the user’s talk page and list of contributions
- sometimes, the character “m” (in English), to indicate that the person who made this edit considered it a “minor edit”
- the number of bytes in the page in this revision (for Roman letters, the number of bytes is usually equal to the number of characters, although for other languages, like Chinese, there are often three bytes per character)
- the user’s own summary of the edit
- an “undo” link, for all but the earliest row (covered in the upcoming section, “Undoing”).

Clicking on the date/time brings you to the page for that specific revision – each one has its own permanent URL. Going to the URL for a specific edit shows you the contents of the page at that time, in addition to some information at the top about that revision:

## Paint suppliers

Revision as of 21:20, June 17, 2012 by AAnderson ([Talk](#) | [contribs](#))  
([diff](#)) ← [Older revision](#) | [Latest revision \(diff\)](#) | [Newer revision](#) → ([diff](#))

Administrators will also see links for “block” and “rollback” within the rows of the history page. These are both covered in the upcoming section, “Blocking and rollbacks”.

## Page diffs

The elements at the beginning of each row – “cur” and “prev” links (in English), and the two columns of radio buttons – are used to compare between revisions. Clicking on the “prev” link shows you the change made in this revision, while the “cur” link shows the differences between this revision and the current one. The sets of radio buttons, meanwhile, allow for precise comparison of any two revisions – the first column is meant to select an older revision, and the second column a newer revision (the JavaScript ensures that you can’t select a row in the second column older than the one in the first column). Clicking on “Compare selected revisions” will display all the differences between the two revisions.

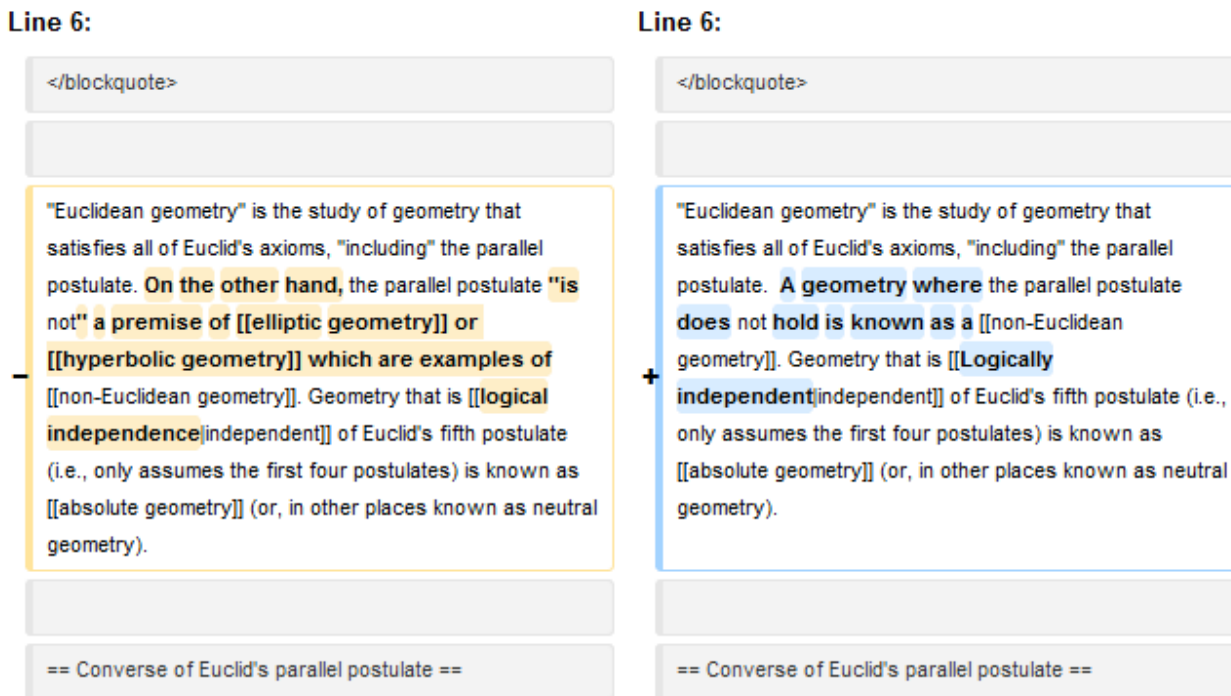


Figure 3.4: A page diff from the English Wikipedia

Figure 3.4 shows an example of one such display, from an edit made on November 21, 2011 to the article “Parallel postulate” on the English-language Wikipedia.

Colors and bolding are used to show differences. The algorithm used to determine the differences is MediaWiki’s own, and it’s fairly good, though not perfect. When one or more blocks of text are rearranged on the page, for example, the change is often shown as more dramatic than it actually is: it can be displayed as a massive deletion and addition of text, instead of a simple rearrangement.

## Undoing

The “undo” link, after the edit summary, allows any user to undo that one change. An “undo” link also appears in any page showing the difference between two revisions. Not every difference can be automatically undone, though, and thus not every “undo” link will work, whether it’s between a large number of revisions or just two adjacent ones. Clicking on an “undo” link that can’t be performed by the system will lead to the error message, “The edit could not be undone due to conflicting intermediate edits.”

MediaWiki decides whether or not a change can be undone based on whether the undo would affect any of the edits that have been done since the more recent of the two revisions. The more edits that have been done since the later revision, the smaller the chance that this change can be automatically undone. Conversely, a difference involving the current revision can always be automatically undone, whether it’s back to the previous revision or to any revision before that.



If you can't undo a change automatically, you'll have to do it manually, which, for large pages, can be a painful process. In that case, using a text editor can usually make the task easier than editing the text directly within a web page.

## Blocking and rollbacks

If you're an administrator, there are a few more links that you'll see on every row in the history page. Next to every username or IP address there will also be a "block" link, to block that person (see page 66). And, in the top row, near the "undo" link, there will also be a "rollback" link. This is a useful link, which automatically undoes the last edit to the page, as well as any edits made by that same user directly preceding the last one; there's no need to go through a second screen. It's especially useful for dealing with vandalism, when you know without a doubt that a certain user's changes are malicious and should all be undone. It should be used with caution in other circumstances, though: if, for instance, you just want to undo the last change you made to a page, if you hit "rollback" you may be surprised to see that more than one of your edits has been reverted, potentially going all the way back to the first revision of the page. (Though it should be noted that the change done by the rollback is simply recorded as another edit, so the rollback can itself easily be undone.)

## Deleting revisions

What if a person puts slanderous text, or reveals secret information, like someone's phone number, on a wiki page? Of course, you can revert the edit, but that bad text will remain accessible to anyone who views the page history, and, if it's a public wiki, it could even get linked to from elsewhere. That's a bad outcome, but thankfully there's a way for administrators to hide certain revisions altogether. In `LocalSettings.php`, you can add the following line:

```
$wgGroupPermissions['sysop']['deleterevision'] = true;
```

This will give the 'deleterevision' permission to all administrators. (We'll get to user groups and user permissions in the next chapter.) You can give this permission to other user groups, although having this exact line is the easiest approach.

If you add this line, any administrator who's logged in will see another checkbox on each row, and another button above the rows, reading (in English) "Show/hide selected revisions". Selecting any number of checkboxes, and clicking the button, will bring you to a page reading "Delete/undelete revisions". Contrary to its name, this page does not actually delete anything, but rather hides certain revisions (though, as we'll see later, regular page deletions don't actually delete any content either). The interface is slightly more complex if more than one revision has been selected. Figure 3.5 shows the interface for one revision, and Figure 3.6 shows it for more than one.

As you can see, in either case, there are three things that can be hidden: the text of the revision (the most important of the three), the revision summary, and the user who made the revision. Once a revision is hidden, neither administrators nor other users will be able to see the hidden elements of that revision; though they'll still

Set visibility restrictions

Hide revision text

Hide edit summary

Hide editor's username/IP address

Reason:

Other/additional reason:

Figure 3.5: “Show/hide selected revisions” interface for one revision

Set visibility restrictions

(do not change)	No	Yes	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hide revision text
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hide edit summary
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hide editor's username/IP address

Reason:

Other/additional reason:

Figure 3.6: “Show/hide selected revisions” interface for more than one revision

be able to see that the revision happened. If all three of the above elements are hidden, here’s how that row in the page history will look:

• [\(cur | prev\)](#)  [01:57, June 18, 2012](#) *(username removed)*

The most recent revision cannot be hidden; the inclusion of a checkbox on that row appears to just be a mistake in MediaWiki. Once elements of a revision are hidden, that same interface can be used to unhide any of them. Because this feature is so useful, we recommend enabling it for any wiki, public or private.

## Moving pages

Moving a page, in MediaWiki parlance, just means renaming it. The ability to move a page is set by the ‘move’ permission, which by default is open to everyone in the ‘users’ group, i.e. all logged-in users.

To move a page, click on the tab or dropdown action labeled “Move”. You will then see an interface like this one:

**Warning!** This can be a drastic and unexpected change for a popular page; please be sure you understand the consequences of this before proceeding.

Move page

Move page: **Ernie E. Edwards**

To new title:

Reason:

Watch source page and target page

You can choose to either have a redirect from the old page, or not; it's recommended to have one, so that links to the old page name will still work. If there are no links, though, then it doesn't matter.

Moving a page to a title that already exists is effectively the same as deleting the other page; that's why only people with the 'delete' permission, usually administrators, are allowed to do it.

If you have a large batch of pages that all need to be renamed in the same way, the Replace Text extension (page 122) may be helpful.

## Deleting pages

By default, administrators can delete any page (except for special pages). On a regular page, among the list of tabs, or dropdown actions, an administrator should see one that says "Delete". Clicking on it will bring you to an interface for deleting the page in question. A page, once deleted, can't be viewed by anyone; but by default it can be restored by any administrator, with all its revisions intact; so in that sense, no content is ever truly deleted.

Deletion and undeletion ability are governed by the 'delete' and 'undelete' permission types, respectively. So, for instance, to allow a user group to only undelete pages, you could add something like this to LocalSettings.php:

```
$wgGroupPermissions['articlesavers']['undelete'] = true;
```

Deletions definitely make sense for the case of pages created by spammers or vandals, since such pages are simply noise. And in the case of Wikipedia, deletions make a certain amount of sense because they give a sense of finality to a community decision to get rid of a certain page. (Though such decisions are sometimes overturned.) But for regular pages on regular wikis, where the contents were just considered unnecessary for some reason, blanking a page (i.e., removing its contents and hitting "save") is often a better strategy.

The advantages of blanking are that anyone can do it, anyone can undo it, and anyone can see what the old contents were, at any time. It's a much less severe way of accomplishing the same goal.

There's a clever extension, PureWikiDeletion, that displays links to blank pages as red, which solves the last part of letting blank pages mimic deleted pages. You can view it here:

<https://www.mediawiki.org/wiki/Extension:PureWikiDeletion>

## Edit conflicts

Edit conflicts are less common than people who don't edit wikis may think, but they do happen. An edit conflict occurs when person A saves a page while person B is still in the middle of editing that same page. When person B goes to save the page, MediaWiki will prevent the save from happening. Instead, Person B will get an error message indicating that there was an edit conflict, and they will see an interface showing both their version of the page and the latest version. At that point the user will have to manually merge their changes into the latest version.

Edit conflicts are another reason why it's a good idea to edit a section of the page, instead of the entire page – if you edit one section, and it's not the section where someone else made their change, then there's a good chance that your edit can go through without a conflict.