## Characteristics

Ward Cunningham and co-author [Bo Leuf](http://en.wikipedia.org/wiki/Bo_Leuf), in their book [*The Wiki Way: Quick Collaboration on the Web*](http://en.wikipedia.org/wiki/The_Wiki_Way), described the essence of the Wiki concept as follows:

* A wiki invites all users to edit any page or to create new pages within the wiki Web site, using only a [plain-vanilla](http://en.wikipedia.org/wiki/Vanilla_software) Web browser without any extra [add-ons](http://en.wikipedia.org/wiki/Browser_extension).
* Wiki promotes meaningful topic associations between different pages by making page link creation almost intuitively easy and showing whether an intended target page exists or not.
* A wiki is not a carefully crafted site for casual visitors. Instead, it seeks to involve the visitor in an ongoing process of creation and collaboration that constantly changes the Web site landscape.

A wiki enables communities to write documents collaboratively, using a simple markup language and a web browser. A single page in a wiki website is referred to as a "wiki page", while the entire collection of pages, which are usually well interconnected by [hyperlinks](http://en.wikipedia.org/wiki/Hyperlink), is "the wiki". A wiki is essentially a database for creating, browsing, and searching through information. A wiki allows for non-linear, evolving, complex and networked text, argument and interaction.[[6]](http://en.wikipedia.org/wiki/Wiki#cite_note-Legal-5)

A defining characteristic of wiki technology is the ease with which pages can be created and updated. Generally, there is no review before modifications are accepted. Many wikis are open to alteration by the general public without requiring them to register [user](http://en.wikipedia.org/wiki/User_%28computing%29) accounts. Many edits can be made in real-time and appear almost instantly online. This can facilitate abuse of the system. Private wiki servers require [user authentication](http://en.wikipedia.org/wiki/Authentication) to edit pages, and sometimes even to read them.

[Maged N. Kamel Boulos](http://en.wikipedia.org/wiki/Maged_N._Kamel_Boulos), Cito Maramba and [Steve Wheeler](http://en.wikipedia.org/wiki/Steve_Wheeler) write that it is the "openness of wikis that gives rise to the concept of 'Darwikinism', which is a concept that describes the '[socially Darwinian](http://en.wikipedia.org/wiki/Socially_Darwinian) process' that wiki pages are subject to. Basically, because of the openness of wikis and the rapidity with which wiki pages can be edited, the pages undergo a [natural selection](http://en.wikipedia.org/wiki/Natural_selection) process like that which nature subjects to living organisms. 'Unfit' sentences and sections are ruthlessly culled, edited and replaced if they are not considered 'fit', which hopefully results in the evolution of a higher quality and more relevant page. Whilst such openness may invite 'vandalism' and the posting of untrue information, this same openness also makes it possible to rapidly correct or restore a 'quality' wiki page."[[7]](http://en.wikipedia.org/wiki/Wiki#cite_note-BMC-6)

### Editing wiki pages

There are many different ways in which wikis have users edit the content. Ordinarily, the structure and formatting of wiki pages are specified with a simplified markup language, sometimes known as [wikitext](http://en.wikipedia.org/wiki/Wikitext) (for example, starting a line of text with an [asterisk](http://en.wikipedia.org/wiki/Asterisk) often sets up a [bulleted list](http://en.wikipedia.org/wiki/Bullet_%28typography%29)). The style and syntax of wikitexts can vary greatly among wiki implementations, some of which also allow [HTML](http://en.wikipedia.org/wiki/HTML) tags. Designers of wikis often take this approach because HTML, with its many cryptic tags, is not very legible, making it hard to edit. Wikis therefore favour plain-text editing, with fewer and simpler conventions than HTML, for indicating style and structure. Although limiting access to HTML and [Cascading Style Sheets](http://en.wikipedia.org/wiki/Cascading_Style_Sheets) (CSS) of wikis limits user ability to alter the structure and formatting of wiki content, there are some benefits. Limited access to CSS promotes consistency in the look and feel, and having [JavaScript](http://en.wikipedia.org/wiki/JavaScript) disabled prevents a user from implementing code that may limit access for other users.

Increasingly, wikis are making [WYSIWYG](http://en.wikipedia.org/wiki/WYSIWYG) editing available to users, usually by means of [JavaScript](http://en.wikipedia.org/wiki/JavaScript) or an [ActiveX](http://en.wikipedia.org/wiki/ActiveX) control that translates graphically entered formatting instructions into the corresponding [HTML tags](http://en.wikipedia.org/wiki/HTML_element) or wikitext. In those implementations, the markup of a newly edited, marked-up version of the page is generated and submitted to the server [transparently](http://en.wikipedia.org/wiki/Transparency_%28human-computer_interaction%29), shielding the user from this technical detail. However, WYSIWYG controls do not always provide all of the features available in wikitext, and some users prefer not to use a WYSIWYG editor. Hence, many of these sites offer some means to edit the wikitext directly.

Most wikis keep a record of changes made to wiki pages; often, every version of the page is stored. This means that authors can revert to an older version of the page, should it be necessary because a mistake has been made or the page has been vandalized. Many implementations, like [MediaWiki](http://en.wikipedia.org/wiki/MediaWiki), allow users to supply an *edit summary* when they edit a page; this is a short piece of text summarising the changes. It is not inserted into the article, but is stored along with that revision of the page, allowing users to explain what has been done and why; this is similar to a log message when making changes to a [revision-control](http://en.wikipedia.org/wiki/Revision_control) system.

### Navigation

Within the text of most pages there are usually a large number of [hypertext](http://en.wikipedia.org/wiki/Hypertext) links to other pages. This form of non-linear navigation is more "native" to wiki than structured/formalized navigation schemes. That said, users can also create any number of index or table-of-contents pages, with hierarchical categorization or whatever form of organization they like. These may be challenging to maintain by hand, as multiple authors create and delete pages in an ad hoc manner. Wikis generally provide one or more ways to categorize or tag pages to support the maintenance of such index pages.

Most wikis have a backlink feature, which displays all pages that link to a given page.

It is typical in a wiki to create links to pages that do not yet exist, as a way to invite others to share what they know about a subject new to the wiki.

### Linking and creating pages

Links are created using a specific syntax, the so-called "link pattern" (also see [CURIE](http://en.wikipedia.org/wiki/CURIE)). Originally, most wikis used [CamelCase](http://en.wikipedia.org/wiki/CamelCase) to name pages and create links. These are produced by capitalizing words in a phrase and removing the spaces between them (the word "CamelCase" is itself an example). While CamelCase makes linking very easy, it also leads to links which are written in a form that deviates from the standard spelling. To link to a page with a single-word title, one must abnormally capitalize one of the letters in the word (e.g. "WiKi" instead of "Wiki"). CamelCase-based wikis are instantly recognizable because they have many links with names such as "TableOfContents" and "BeginnerQuestions." It is possible for a wiki to render the visible anchor for such links "pretty" by reinserting spaces, and possibly also reverting to lower case. However, this reprocessing of the link to improve the readability of the anchor is limited by the loss of capitalization information caused by CamelCase reversal. For example, "RichardWagner" should be rendered as "Richard Wagner," whereas "PopularMusic" should be rendered as "popular music". There is no easy way to determine which [capital letters](http://en.wikipedia.org/wiki/Capital_letter) should remain capitalized. As a result, many wikis now have "free linking" using brackets, and some disable CamelCase by default.

### Searching

Most wikis offer at least a title [search](http://en.wikipedia.org/wiki/Search_algorithm), and sometimes a [full-text search](http://en.wikipedia.org/wiki/Full_text_search). The scalability of the search depends on whether the wiki engine uses a database. Some wikis, such as [PmWiki](http://en.wikipedia.org/wiki/PmWiki), use [flat files](http://en.wikipedia.org/wiki/Flat_file).[[8]](http://en.wikipedia.org/wiki/Wiki#cite_note-Augar-7) MediaWiki's first versions used flat files, but it was rewritten by [Lee Daniel Crocker](http://en.wikipedia.org/wiki/Lee_Daniel_Crocker) in the early 2000s to be a database application. Indexed database access is necessary for high speed searches on large wikis. Alternatively, external [search engines](http://en.wikipedia.org/wiki/Web_search_engine) such as [Google Search](http://en.wikipedia.org/wiki/Google_Search) can sometimes be used on wikis with limited searching functions in order to obtain more precise results. However, a search engine's indexes can be very out of date (days, weeks or months) for many websites.