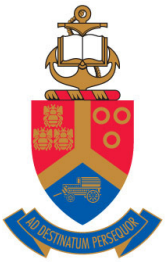

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Media Wiki Research (Architecture)

Project: Figbook

Client: Figtory Animation

Team: Creativate

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Here's a link to GitHub.
`https://github.com/SpheMalo/COS-301-Main-Project.git`

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Contents

1 About The Architecture

1.1 Based on PHP

MediaWiki is based on and has a backend written in PHP. Since PHP is open source and a widely used popular standard, MediaWiki has no problem finding developers to contribute to it's growth.

1.2 Security is a Priority

According to Wikipedia, "Because MediaWiki is the platform for high-profile sites such as Wikipedia, core developers and code reviewers have enforced strict security rules. To make it easier to write secure code, MediaWiki gives developers wrappers around HTML output and database queries to handle escaping. To sanitize user input, one uses the WebRequest class, which analyzes data passed in the URL or via a POSTed form. It removes "magic quotes" slashes, strips illegal input characters and normalizes Unicode sequences. Cross-site request forgery (CSRF) is avoided by using tokens, and cross-site scripting (XSS) by validating inputs and escaping outputs, usually with PHP's htmlspecialchars() function. MediaWiki also provides (and uses) an XHTML sanitizer with the Sanitizer class, and database functions that prevent SQL injection"

1.3 DBMS

MediaWiki makes use (by default) of mySQL, but other DBMSes (such as PostgreSQL, Oracle, and SQLite) have community-supported implementations. A system administrator can choose a DBMS while installing MediaWiki, and MediaWiki provides both a database abstraction and a query abstraction layer that simplify database access for developers.

1.4 MediaWiki's Markup Language - "WikiText"

MediaWiki makes use of a parser to consume the user-generated content. The content, as well as all the external links it references needs to parsed, and then generated into HTML to be displayed on the website. This means that a user would need to familiarize themselves with this markup syntax in order to generate a wiki.

1.5 Customizing and extending MediaWiki

MediaWiki provides ways to modify/extend the software at different levels of access.
Administrators can install extensions and skins, and configure the wiki's separate helper programs (e.g. for image thumbnailing and TeX rendering) and global settings.
Wiki sysops (sometimes called "administrators" too) can edit site-wide gadgets, JavaScript and CSS settings.
Any registered user can customize their own experience and interface using their preferences (for existing settings, skins and gadgets) or make their own modifications (using their personal JS and CSS pages).

1.6 Has an Available API

Client programs can use the API to login, get data, and post changes. The API supports thin web-based JavaScript clients and end-user applications. Almost anything that can be done via the

web interface can basically be done through the API. Client libraries implementing the MediaWiki API are available in many languages, including Python and .NET.

2 Advantages

2.1 Scalability

MediaWiki has been designed with scalability in mind for high-usage, high-profile sites that are prone to vandalism, spam, and other attacks. Wikipedia, the world's largest wiki with over 4 million pages, is powered by MediaWiki. This stands as proof of the scalability of the platform.

2.2 Customisable

With the extensions and skins that users have at their disposal, it is possible to mold your wiki into any design you wish. This allows users more options as to the look and feel of their wiki

3 Disadvantages

3.1 Complexity

MediaWiki is complex to set up and maintain. You have to install and configure MediaWiki (including installing and configuring whatever extensions you want).
At least **twice a year**, a new MediaWiki version comes out. If you want to continue borrowing new content from Wikipedia, you will sometimes have to upgrade MediaWiki and its extensions and/or install new extensions that Wikimedia has introduced.

3.2 Inconsistent quality of documentation

MediaWiki's documentation is still a work in progress that depends primarily on volunteer efforts; it arguably is not in a very good state yet.

3.3 "Wikitext"

A hybrid of the two above mentioned disadvantages, the syntax for the MediaWiki's markup language is complicated and poorly documented. It can't be represented as a formal grammar using BNF or EBNF, and is only compatible with the MediaWiki parser. Since it wasn't documented from its inception, there exists no formal spec to refer to about the full description of the markup syntax. This makes for a very mean learning curve with no official documentation to help.