Some Terminology

- MediaWiki - wiki software
- Wikipedia - an online encyclopedia that uses MediaWiki software
- Wikimedia - a foundation which manages the Wikipedia and MediaWiki projects, among others
What's a Wiki?

• Web software for collaborative editing
• The first wiki site, WikiWikiWeb, established at c2.com in 1995
• “Wiki” means “quick” in Hawaiian
• Not a general-purpose CMS or blog
• Goals are:
  – Easy and quick to create/revise pages
  – Easily handle editing by multiple people
  – Low barrier to entry for participation
What is MediaWiki?

- Software created specifically for Wikipedia
- First stable release (1.1) in 2003
- Goals are:
  - Easy and quick to create/revise pages
  - Easily handle editing by multiple people
  - Low barrier to entry for participation
  - Scalability
  - Handling of multimedia
  - Facility for metadiscussion
Demo 1

- The basic unit of management is a page
- Show how to make an edit
- Show page history and diff
Why choose MediaWiki?

• Pros
  – Very actively maintained
  – Because of use in Wikipedia, more people are familiar with markup language
  – Many extensions and skins available
  – System requirements are easily met

• Cons
  – More heavyweight than most other wikis
  – Size and complexity create large attack surface (though security record is good)
  – Optimized for Wikipedia use case
Demo 2

- Markup - special language, (mostly) not HTML
- Page sections, table of contents
  - == First-level heading ==
  - === Second-level heading ===
  - Editing individual sections
- Text appearance
  - '''Italic''' (these are two single quotes)
  - ''''Bold''' (three single quotes)
  - Monospace: in a block, precede with a space; inline, <tt>monospace text</tt>
Demo 2

• Bullet lists
  – * Bullet point
  – * Second bullet point
  – ** Sub-point

• Numbered lists
  – # Point 1
  – # Point 2
  – ## First sub-point under 2
  – # Point 3
Demo 2

- [[Page Name]] - internal wiki link
- [[Page Name | different link text]]
- [http://example.net/foo link text] - external link

- Interwiki links
  - [[wikipedia:Main Page | Wikipedia]]
  - [[rfc:5321 | Simple Mail Transfer Protocol]]
Adding a Page

- Create an internal link to page first
- It will be shown in red to indicate no such page exists
- This is also a way to request a page you think someone else should create
- Following a red link will edit a new page
Edits

- Wikis are intended to be edited frequently
- Page history link on each page
- Recent changes page covers entire wiki
  - Atom feed allows easily monitoring changes
- Easy to revert changes or make further edits
- Changes while logged in are associated with your username; anonymous edits identified by IP address
Images/Files

- Upload Files link allows uploading (logged-in users only)
- Just like a wiki page, updates can be made and all versions are kept
- Size and/or file type restrictions may be in place
- Display (embed) an image on a page: `[[File:Foo.png]]`
- Link to a file's page: `[[:File:Foo.png]]`
- Link to the file itself: `[[Media:Foo.png]]`
Categories

- Convenient way to group pages
- Adding `[[Category:Foo]]` anywhere in a page (though at the bottom is best) puts it in the Foo category
- A page can belong to any number of categories; these will be displayed in the footer
- Link to a category page using `[[Category:Foo]]`
Protecting Pages

- In general, strong access controls are contrary to the wiki philosophy
- Reverting vandalism when it occurs is preferred
- However, individual pages can be protected so that only certain groups can edit them
- The ConfirmEdit extension can be used to force anonymous users to complete a CAPTCHA to make edits or create a new account
Talk Pages

- Used for discussion *about* the content of a page
- Heavily used in Wikipedia; in fact, discussion is required there if multiple people edit a page to say different things ("edit wars")
- Less useful for wikis where editors know each other or communicate by other means
MediaWiki Administration

• Only users in the Sysop group can
  – Protect and unprotect pages
  – Delete and undelete pages
  – Block and unblock users/IP addresses
System Requirements

• Web server
  – Pretty much anything: Apache, Nginx, IIS, etc.

• PHP 5.3.3+
  – Required extensions: pcre, session, json, database interface (mysqli, pgsql, or sqlite3)
  – Optional extensions: intl, curl

• Database
  – MySQL 5.0.2+/MariaDB 5.1+ - best supported
  – PostgreSQL 9.0+ - supported since 2006
  – SQLite 3.6+ - supported since 2011, useful on shared web hosting w/o database server
System Requirements

• External programs (optional)
  – ImageMagick or GD to make image thumbnails
  – TeX to render mathematical formulas
  – Some way to send e-mail - can be a local mailserver, or a remote SMTP server

• Shell access to server is useful for running installation and maintenance scripts
Versions

- **Long Term Support (LTS)**
  - Each major release has a three-year lifetime
  - One-year overlap between releases

- **Non-LTS**
  - Each major release has a one-year lifetime
  - Six-month overlap between releases

- Database schema changes between major releases; upgrade script provided
Extensions

- Add new functionality
- Quality can be variable; some are officially maintained, others... not so much
- Switching to a new major MediaWiki version may break extensions that haven't been updated
- Skins (themes) are similar, though they change the wiki's appearance rather than its functionality
Anti-spam Measures

- Any unprotected wiki attracts spambots
  - Even though all external links have `rel=nofollow` by default
- The ConfirmEdit extension is included (but not enabled) in base install; allows requiring a CAPTCHA for certain actions
  - ReCAPTCHA supported, but effectiveness varies
  - Question and answer CAPTCHA works well for us
Installing

- Some distributions package, but are not necessarily up to date
- Download tarball from https://releases.wikimedia.org/mediawiki/ and unpack
- Configure web server
- Visit http://example.net/path/to/mediawiki/
- Edit LocalSettings.php
Minor Updates

- Subscribe to announce mailing list
  https://lists.wikimedia.org/mailman/listinfo/mediawiki-announce

- Option 1: Download patch file(s) & uncompress
  - cd /path/to/mediawiki
  - patch -p1 --dry-run
    </path/to/patchfile.patch
  - patch -p1 </path/to/patchfile.patch

- Option 2: Download full tarball
  - Unpack, copy over LocalSettings.php, images, extensions, skins