Static Site Generators –

An Introduction Using Pelican

GLUGOT & GLUG-Madurai

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Ways to Build Websites

- **Purpose built**
  - Usually supports/provides both client-side and server-side functionality.
  - Usually depends on a DB
  - Built from the scratch, usually (but not necessarily) on top some web framework
- **Content Management Systems**
  - Usually supports/provides both client-side and servide-side functionality
  - Heavily depends on DB to store config and some data
  - Most of the common UI/backend comes built-in. Customisations via plugins and hooks possible
  - Examples: Drupal, Joomla, Wordpress, etc.
- **Static Site Generators**
  - No server-side functionality and doesn’t require a DB. Just HTML + CSS usually
  - Content written in a light-weight markup language like Markdown or ReST

Common Usecases

- **Purpose built**
  - Custom purposes with mostly dynamic behaviour
  - Request/Response handling supported by a framework, but business logic custom implemented
  - Examples: tcenet, e-commerce sites etc.
- **Content Management Systems**
  - Mix of static/dynamic content
  - Majority of dynamic behaviour comes built-in
  - Examples: Informational websites (like a college/school website), News sites, blogs
- **Static sites**
  - Static only. Includes text, images and links to files
  - Implemented via transpiling a markup language into HTML
  - Examples: blogs, personal pages, etc.

Static Site Generators

- **Workflow**
  - Content written in a markup language like ReST/Markdown/AsciiDoc
  - A “site generator” tool converts the content into HTML
  - Optionally (and usually) applies “theme” for look and feel
  - Result is a single folder with HTML+CSS – the very basic building blocks of the web
- **Advantages**
  - No special server components needed
  - Very easy to create and maintain
  - Since there is no dynamic/server-side code, highly secure

Examples

- The “site generator” is usually a command line tool, implemented in any of the several common languages
- Popular ones are
  - Hugo, implemented in Go
  - Pelican & Nikola, implemented in Python
  - Octopress & Jekyll, implemented in Ruby
  - Gatsby implemented in JS

Pelican

- Pelican is a popual site generator implemented in Python
- Used for GLUGOT & GLUG-Madurai web sites
- Supports ReST natively and several other formats supported via plugins
- Wide range of free/open source themes available to choose a “Look & Feel”

Pelican - Demo

- Run the following commands

```
$ python3 -m venv /tmp/pelicanenv/

$ source /tmp/pelicanenv/bin/activate

$ pip install “pelican[markdown]”

$ pelican-quickstart
```

Pelican in use

GLUGOT & GLUG-Madurai site demo