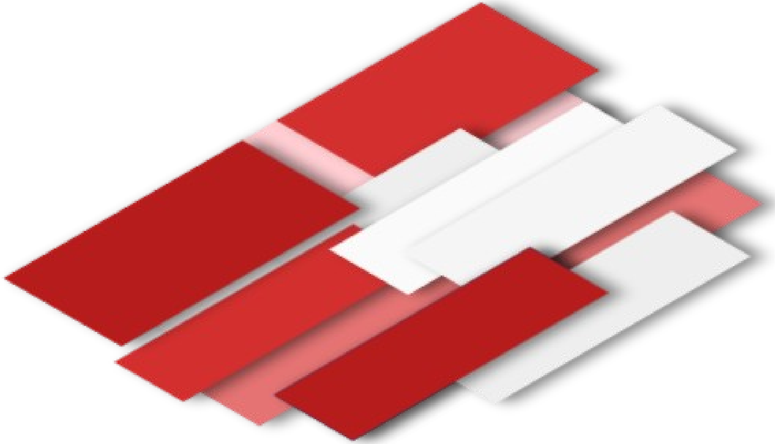
Static Site Generator

Introduction to SSG for beginner

for Personal Educational Purpose.



Jakarta, Indonesia
11 October, 2020

About Epsi

Yet, another underachiever.
But hey, I have my own blog.

About This Material

After watching this, you will understand:

How SSG can be utilized
to make a fully mature website
without the burden of complicated backend.

This material is not really comprehensive.
I still have so much to learn.

What is Static Site Generator?

What is SSG?

SSG short abbreviation

Static Sites Generator.

Static Sites

Just plain HTML + CSS + JS.

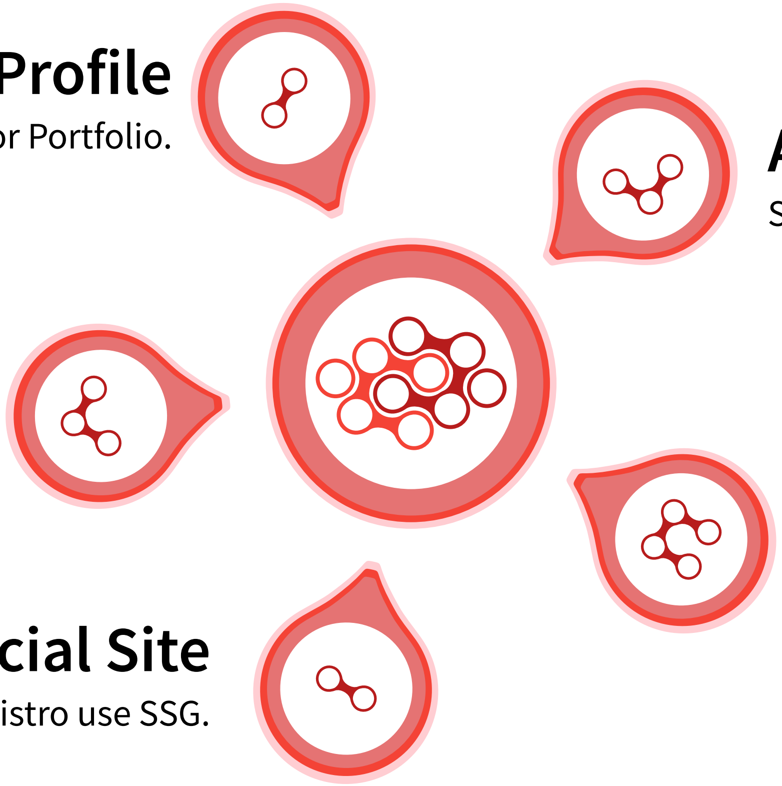
Static

No dynamic server (backend).

Generated

Built once, on every change.
Put on server.
Serve as many request as needed.

What is SSG good for?



Company Profile

or Portfolio.

Any Static Sites

Such as CSS Tricks.

Personal Blog

Just like mine.

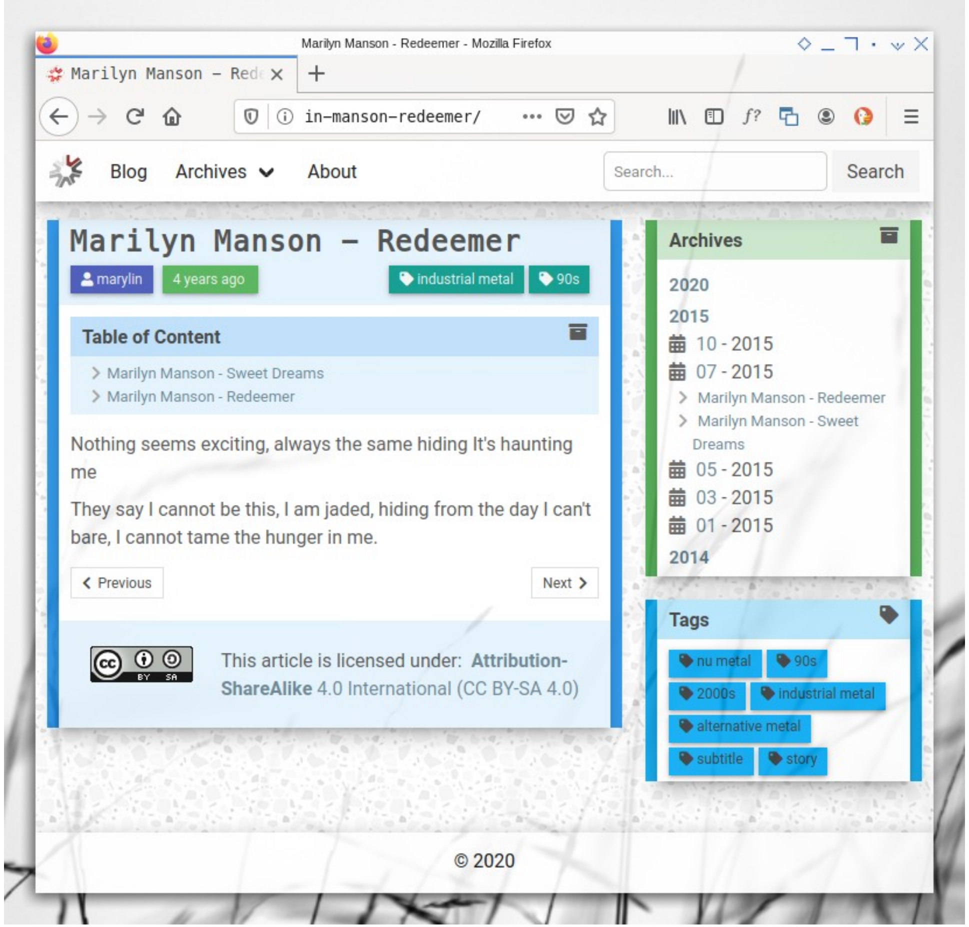
JAM Stack

Dynamic sites utilizing javascript. Modern Web Era, in contrast with LAMP stack.

Official Site

Many Linux Distro use SSG.

Blog Preview



Marilyn Manson – Redeemer

marylin 4 years ago industrial metal 90s

Table of Content

- Marilyn Manson - Sweet Dreams
- Marilyn Manson - Redeemer

Nothing seems exciting, always the same hiding It's haunting me

They say I cannot be this, I am jaded, hiding from the day I can't bare, I cannot tame the hunger in me.

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Archives

2020
2015
10 - 2015
07 - 2015
- Marilyn Manson - Redeemer
- Marilyn Manson - Sweet Dreams

05 - 2015
03 - 2015
01 - 2015
2014

Tags

nu metal, 90s, 2000s, industrial metal, alternative metal, subtitle, story

© 2020

What case is not?

Non tech savvy end user

should use blogger, or wordpress instead.

Startup

With a lot of infrastructure.

Dynamic website

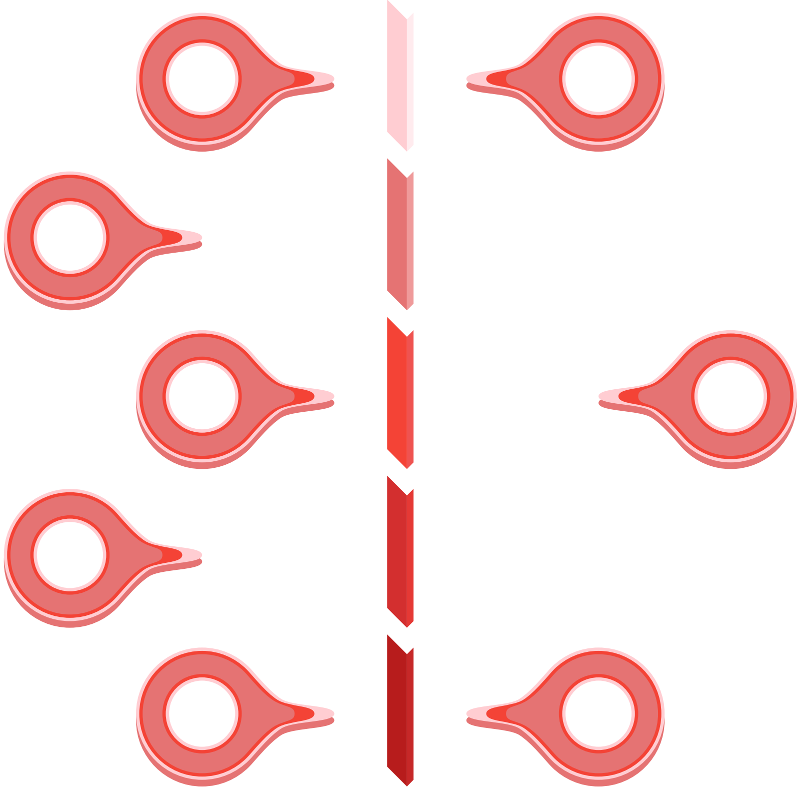
Anything that require login.

Walk your dog, or feed your cat

You still have to do it yourself.

Which Generator?

Conventional	Modern
Jekyll	Gatsby
Hugo	
Hexo	Nuxt
11ty	
Pelican	Next



Why Static Site Generator?

Why Static Sites?

Markdown

More on Writing Content.

No complex backend

Focus on frontend: Great theme.

Local Copy

Own Your Own Site.

Git-able

Cheap.
Free Hosting = murah meriah.

Tech Savvy

1st

Embrace modern technology

SPA, JAM stack, serverless, CI/CD.

2nd

OS Agnostic (simpler ecosystem)

No racial issue between, Windows, Mac and Linux/BSD user.

3rd

Many Option of SSG Choices

Jekyll, Hugo, Hexo, Pelican, Gatsby, 11ty.

4th

Easier to migrate content between generator

After all, it is just markdown.

5th

Easier to port tailor made custom theme

No scary language feature.

6th

Way cooler web developer

Over traditional CMS

Other Technical Performance

Fast

No server side processing.

Less Security Issue

SQL Injection and Vulnerablities.

Cacheable

Can be cached reliably,
and served as CDN.

No scaling issue

It is all just static html and assets.

User Tasks

Simplified User Tasks

Only consist of this two tasks

1) **Design Theme and Layout**

2) **Writing Content, then Deploy**

No complex backend setting.

It means, more focus on the content.

Especially, with 3rd party theme.

Caveat!

Even with a ready to use theme,
you still need customization
to suit your needs.

Install

Some are easy to install.
Some are harder for non tech-savvy.

Depend on the choice of SSG.

Own Your Own Site

You can have it all locally.

Writing content in your favorite text editor.

No upload image.

Edit image directly in your notebook.

No need to dump database.

In short:

More control

Theming

Split HTML Task

Theme

Structure (Layout, and Skeleton)

Markdown Engine

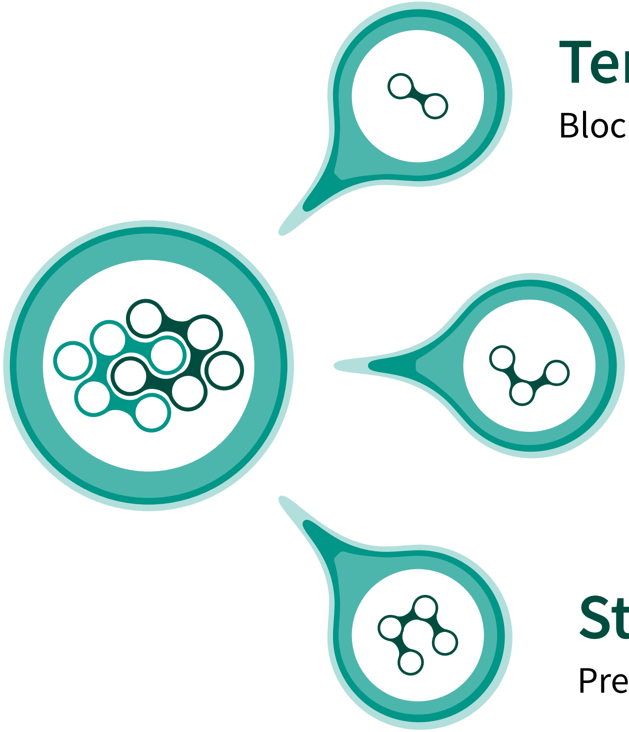
Formatting

In short:

Clear division

between these two tasks.

Theme Making



Template Engine

Block and Basic Coding.

HTML Skeleton

Layout Structure.

Stylesheet

Presenting Nice Looks.

Template Engine

liquid, chroma, ejs, nunjucks, jinja2, etc...

Block Building

Basic Language

Variable, Loop, Conditional.

Specific Feature

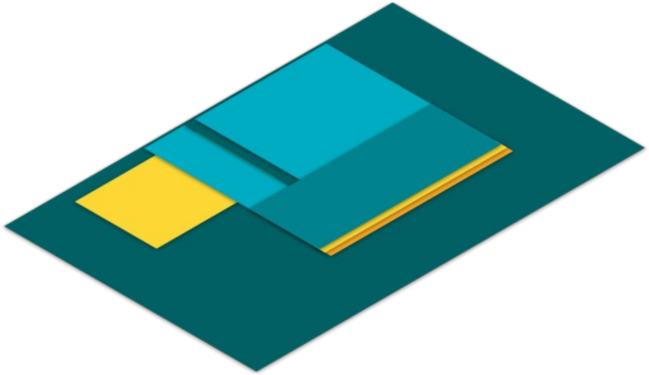
Pipeline.

Static Data Files

from yaml, or toml, or json.

Stylesheet

You might also need to understand CSS Tools



[CSS Frameworks and CSS Tools]

Yet Another Presentation.

Main Configuration

Contain:

Global Stuff

Inside a Page

Frontmatter:

Per-page configuration

Content:

Markdown or HTML

Free Tutorials

Step by Step Examples?

Eleventy (11ty) Article Series

[Eleventy Overview]
(Nunjucks + Bulma MD)

Jekyll Article Series

[Jekyll Overview]
(Liquid + No Stylesheet)

Hugo Article Series

[Hugo Summary]
(Template + Bulma)

[Hugo Summary]
(Template + Bootstrap)

Hexo Article Series

[Hexo Overview] (EJS + Bulma)

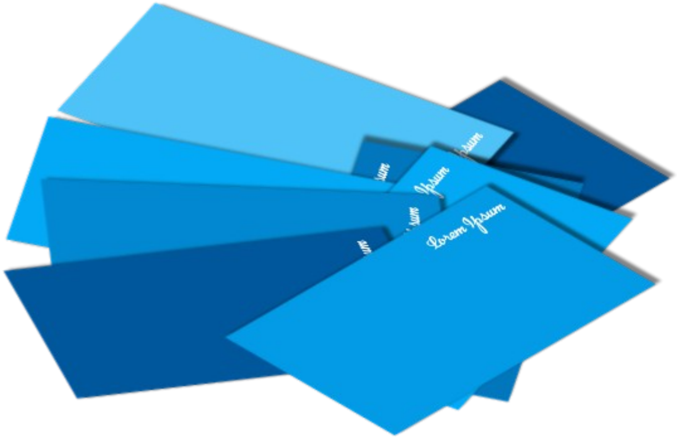
Custom

Make your own case,
and share!

More examples on Repository (11ty, Jekyll, Pelican).

Markdown

Why Markdown?



More on Writing Content!

Issue with HTML Content

Time spent, on doing formatting

Wasted time = Less creativity.

Easily get lost, of concentration in writing

Dammit, my article is sucks!

Reformatting

Whenever design changes.

Error prone

Dad, I forget to close the tag again.

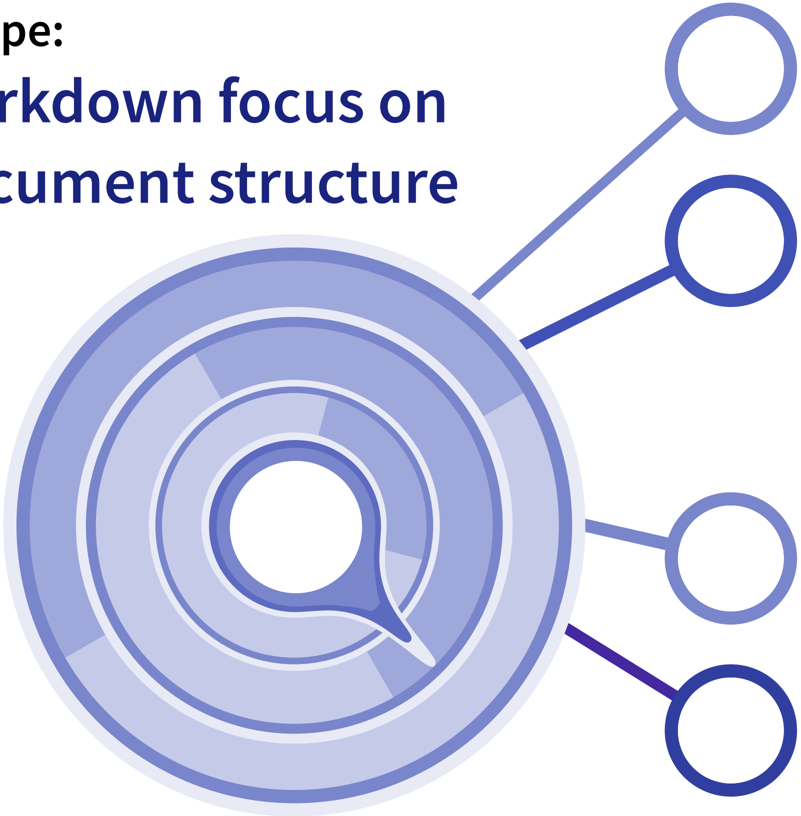
In short:

Markup focus on document formatting

Markdown Content

Recipe:

Markdown focus on document structure



Easier to write content

Plain Text = Painless Text

Taking care of

HTML formatting by Markdown engine

Significantly reduce formatting time while writing content.
Consistent formatting, by not doing manually.

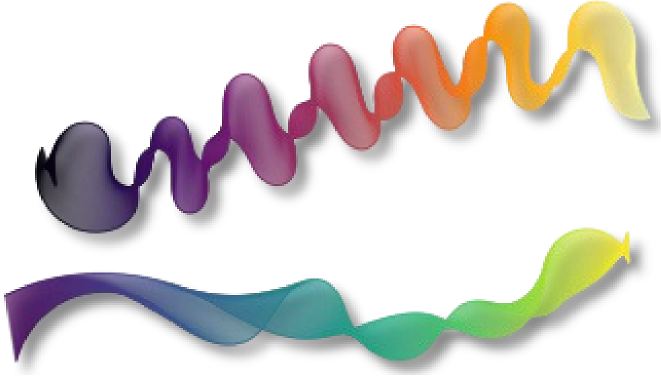
Inline Code

Parsed, auto format with nice color

Text editor is sufficient

No need for sophisticated tools

Markdown Engine



Implementation may vary

Each static site,
have their own markdown engine.

Be aware of slight difference.

HTML Content

When you need special formatting

HTML Page:

Such as landing page content.

Embedded Content:

in Markdown Page

Such as nice looks table of content.

Repository

Track Changes

Use Git!

Friendly neighbourhood backup platform.

No weird file naming

`My-revision-content .rev1.final.revagain.txt`

Time travelling

is possible

OMG. I deleted my great idea last month!

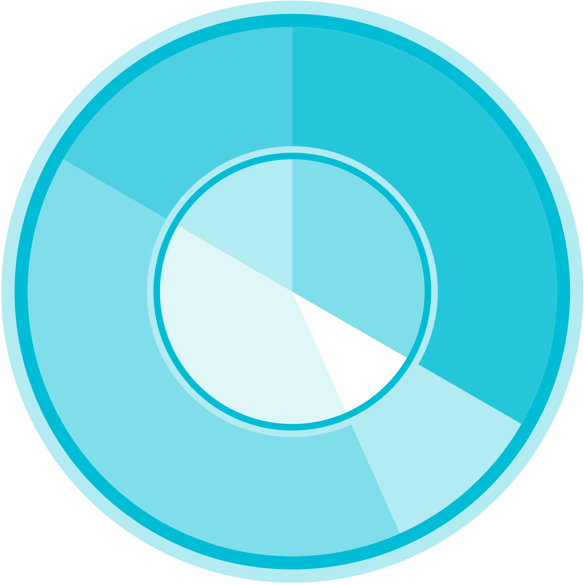
Multiple branch

while making themes enhancement

branch: Master, development, bootstrapv4, bulma

Deploy!

Deploying Choices



Simple setup for CI/CD

Or a complex one if you wish.

Repository and Host

Gitlab, Github, Bitbucket

3rd Party CI/CD

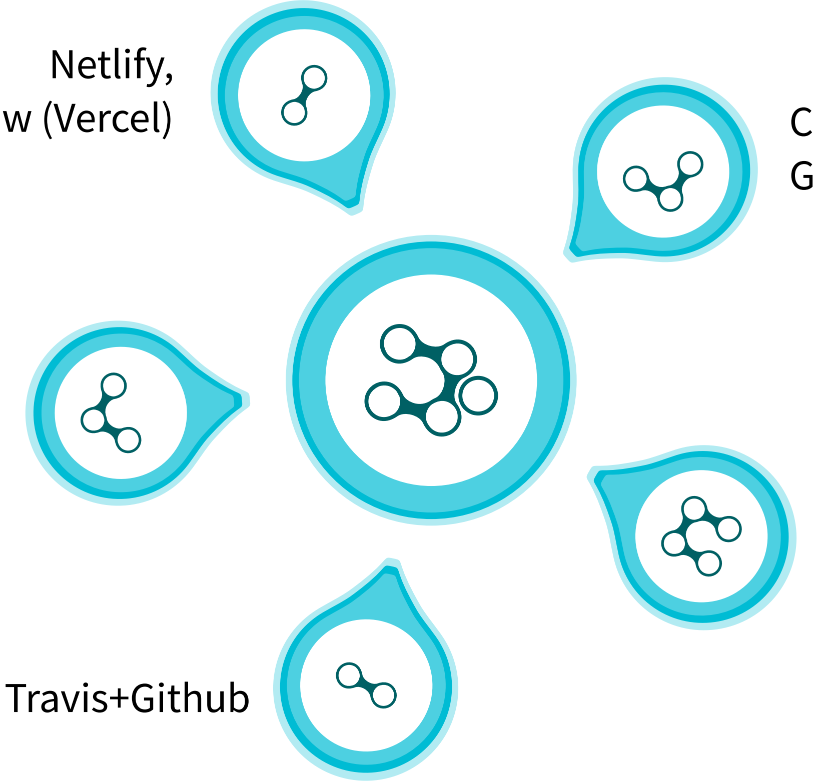
Travis, Circle-CI, Pipelines, Gitlab-CI

Host and CI/CD

Netlify, Vercel, Firebase

Configuration Examples

[CI/CD - Deploy Overview]



Netlify,
Zeit Now (Vercel)

CircleCI:
Github, Bitbucket

Manual Git:
Refspec, Worktree

Github Workflows
(Actions)

Travis+Github

Repositories

Repositories that can directly utilize any SSG.

Repositories that require 3rd party.

github.io

gitlab.io

bitbucket.io

Issues!

Issues with Static Site?

No commenting system

Except embedded

No internal search

Local build time

For site with many articles, or theme design with poor logic.

Again, Free Tutorials?

Step by Step Examples?

Revisited in Repository Fashioned

Jekyll Repository

[Jekyll + Liquid + Bulma MD]

Pelican Repository

[Pelican + Jinja2 + Bulma MD]

Eleventy Repository

[11ty + Nunjucks + Materialize]

[11ty + Nunjucks + Bulma MD]

Hugo Repository

[Hugo + Template + Bulma MD]

[Hugo + Template + Bootstrap]

Hexo Repository

[Hexo + EJS + Bulma]

In Need of a Technical Material?

1st

Eleventy

[Yet Another Presentation]

2nd

Jekyll

[Yet Another Presentation]

3rd

Hexo

[Yet Another Presentation]

Summary

Summary?

Along with local communities.

Static Site Generator:

[Hugo], [Jekyll], Pelican,
[Eleventy (11ty)], [Hexo], [Gatsby].

Text:

Markdown, reStructured Text.

Template Engine:

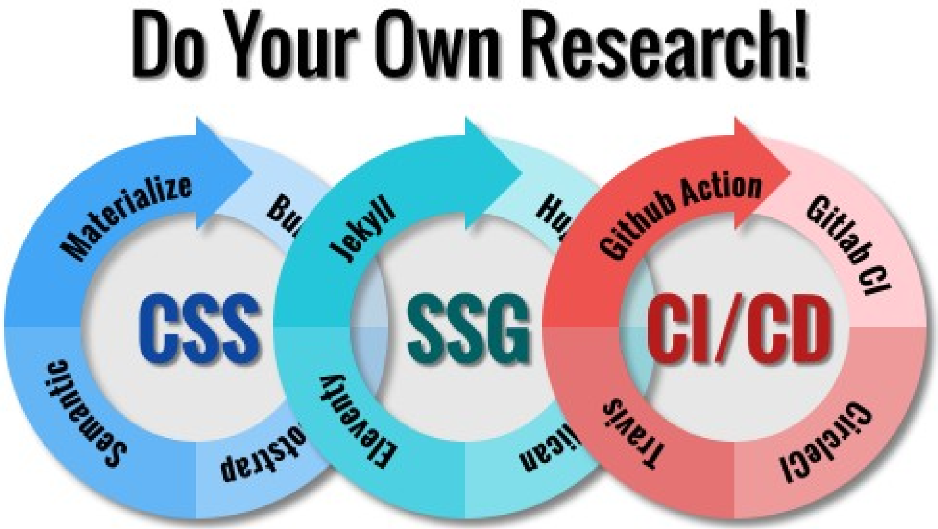
Nunjucks, Jinja2, EJS, Liquid.
Local Community: [JAMstackID].

Deploy:

CVS: Git, Mercurial: [@freekelasgithub].
Repository: Gitlab, Github, Bitbucket.
CI/CD: Travis, Circle-CI: [IDDevOps].
Static Host: Netlify, Render, Zeit Now.

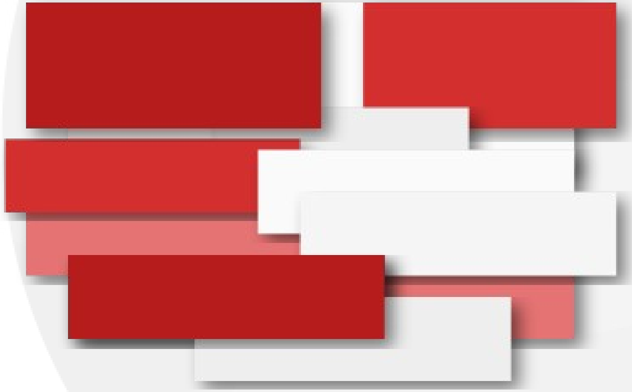
Looking for the right tools?

A real world example require complete stack.



[Practical Blog Development Cycle]

Learning The Hard Way.



What is Next?

Leverage to JAM stack!

[staticgen.com]

[@JAMstackID]

Questions?

Don’t be shy!

The End

Thank You for Your Time.