AN OVERVIEW OF FRONT END COMPONENT INTEGRATION METHODS IN DRUPAL

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http://bit.ly/component-int

BRIAN PERRY

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- Rocking the Chicago ‘burbs
- Lover of all things components…

  …and Nintendo

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twitter: bricomedy

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brianperryinteractive.com

bounteous

MOUNTAIN STATES HEALTH ALLIANCE

fitbit

vsp Vision care for life

zipcar

Allstate You're in good hands.

EyeMed VISION CARE

Centura Health

FEDERAL-MOGUL MOTORPARTS

P&G

CHS Community Health Systems

AON Hewitt

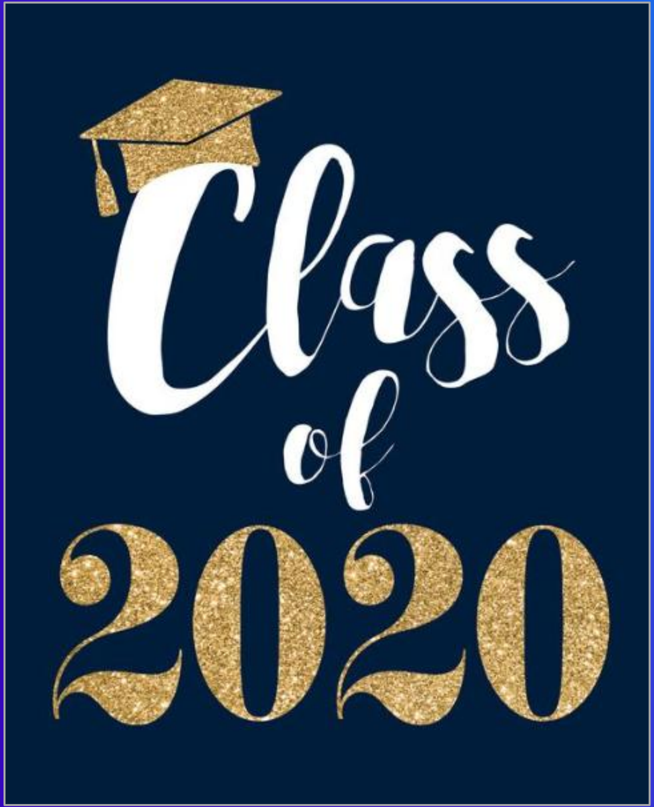
Wilson

spring

invaluable

YIKES!

2020, huh?

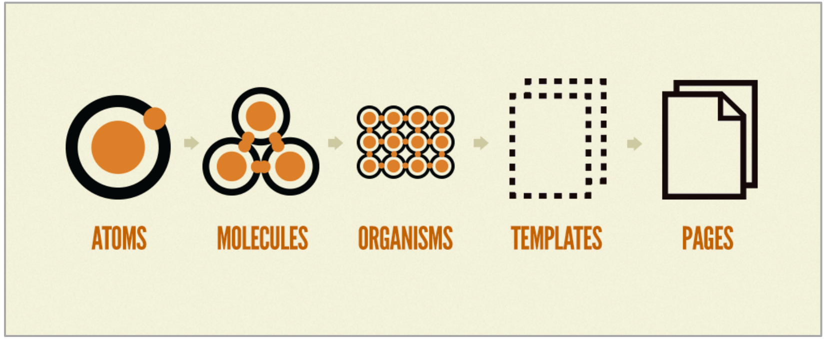


COMPONENTS!

COMPONENT BASED DEVELOPMENT

What is it?

- Creating modular and re-usable elements
- Building a design system, not a series of pages
- Can use a pattern library for documentation and prototyping
  - Tools like Pattern Lab and Storybook



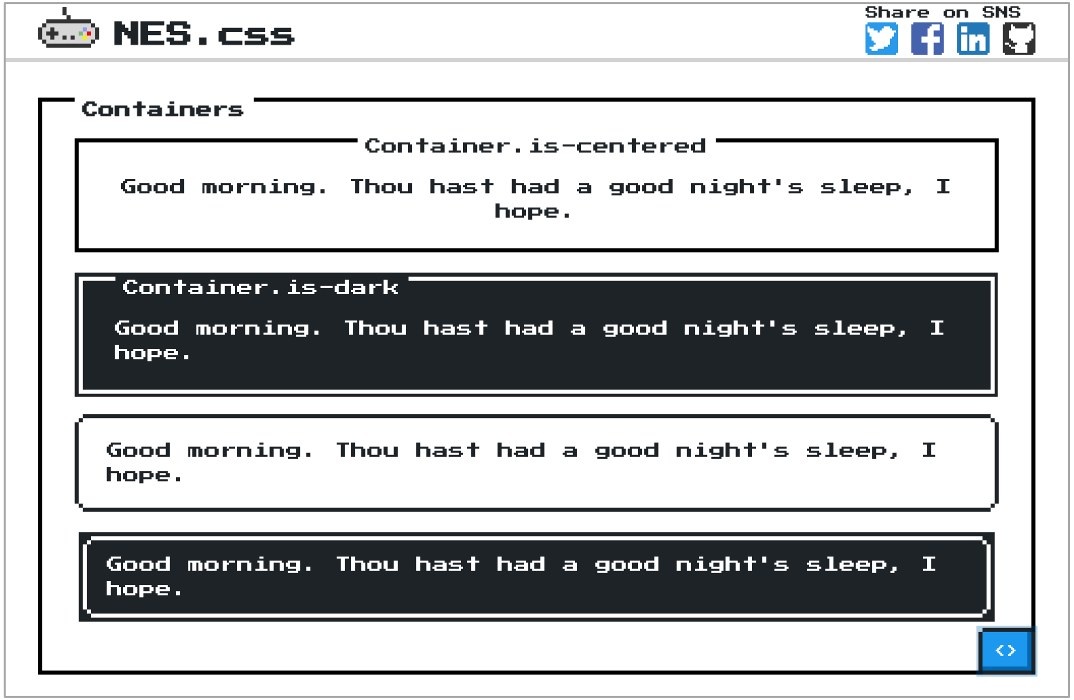
COMPONENT BASED THEMING

Why Take a component-based approach?

- Efficient re-use
  - Write once, use everywhere.
  - Within a single project and even across projects (beyond Drupal even)
- Well isolated chunks of code

- Decoupling front and back end development
  - Theming doesn't have to come last
- Living Style Guide / Pattern Library
  - Simplifies coordination between designers and developers / developers and developers.
  - Rapid prototyping
  - Design system source of truth

OUR EXAMPLE COMPONENT



NES.css

Share on SNS

Containers

Container.is-centered

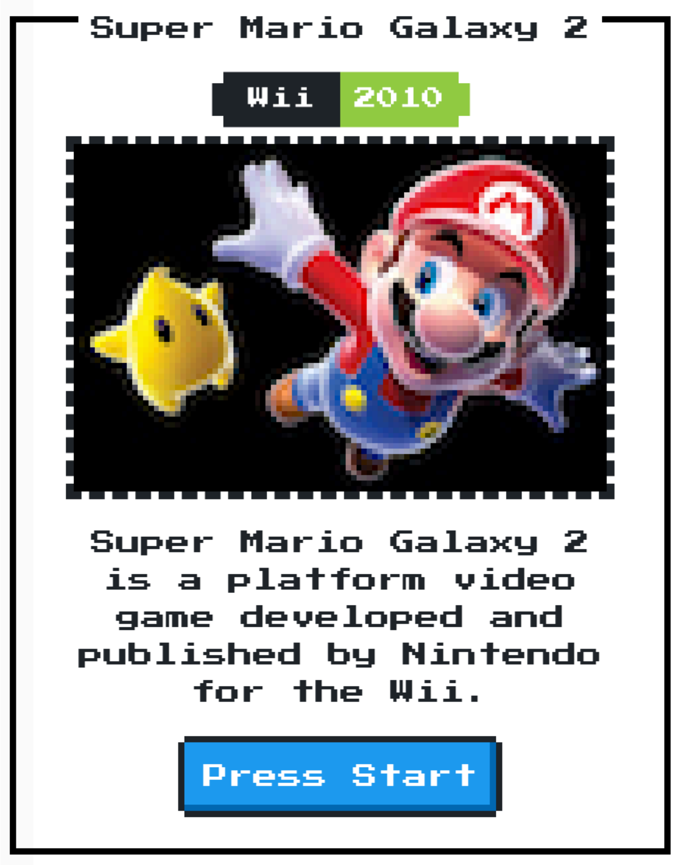
Good morning. Thou hast had a good night's sleep, I hope.

Container.is-dark

Good morning. Thou hast had a good night's sleep, I hope.

Good morning. Thou hast had a good night's sleep, I hope.

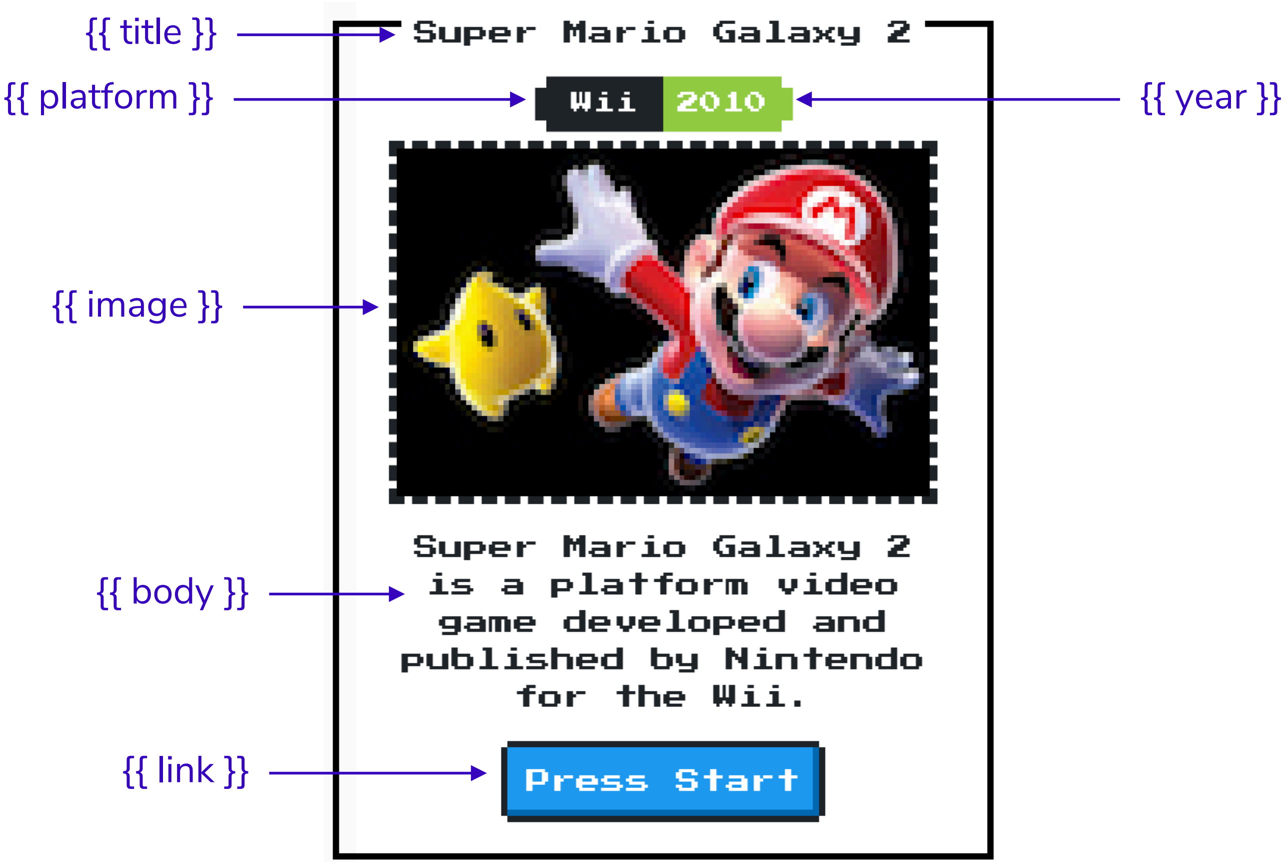
Good morning. Thou hast had a good night's sleep, I hope.



Super Mario Galaxy 2

Wii 2010

Super Mario Galaxy 2 is a platform video game developed and published by Nintendo for the Wii.



{{ title }}

{{ platform }}

{{ year }}

{{ image }}

{{ body }}

{{ link }}

Super Mario Galaxy 2

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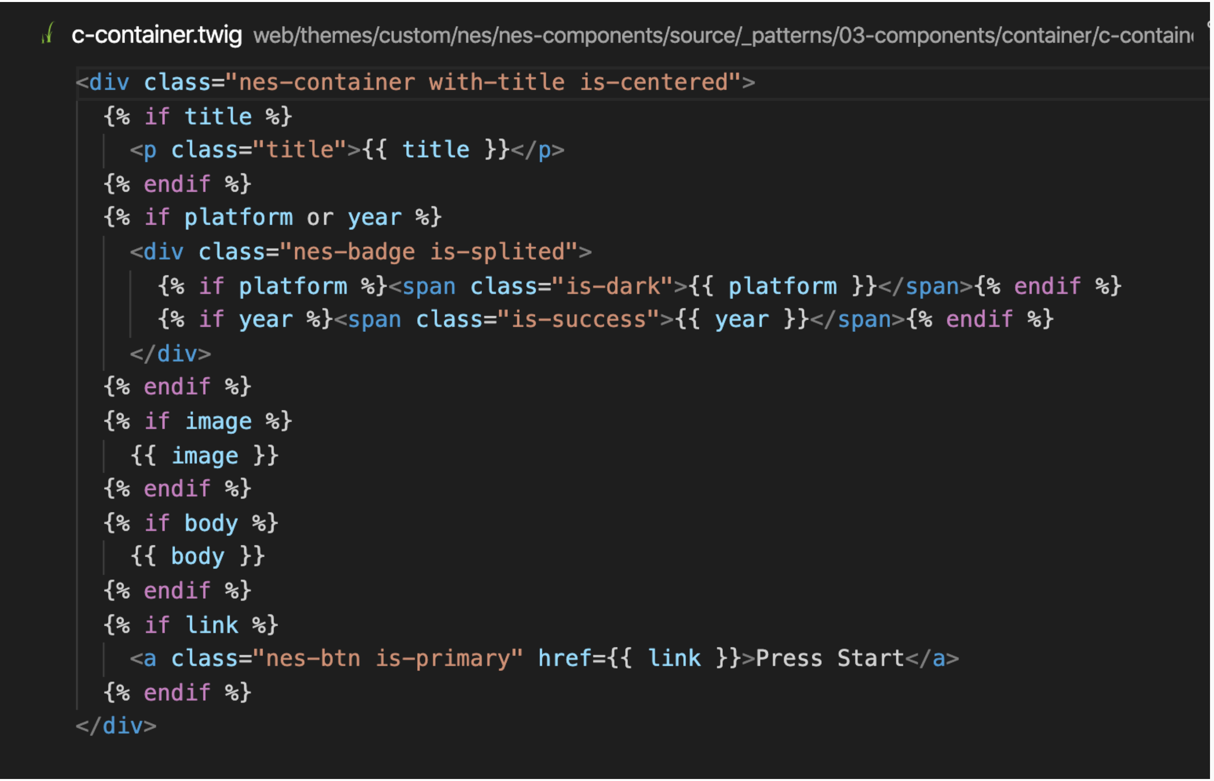
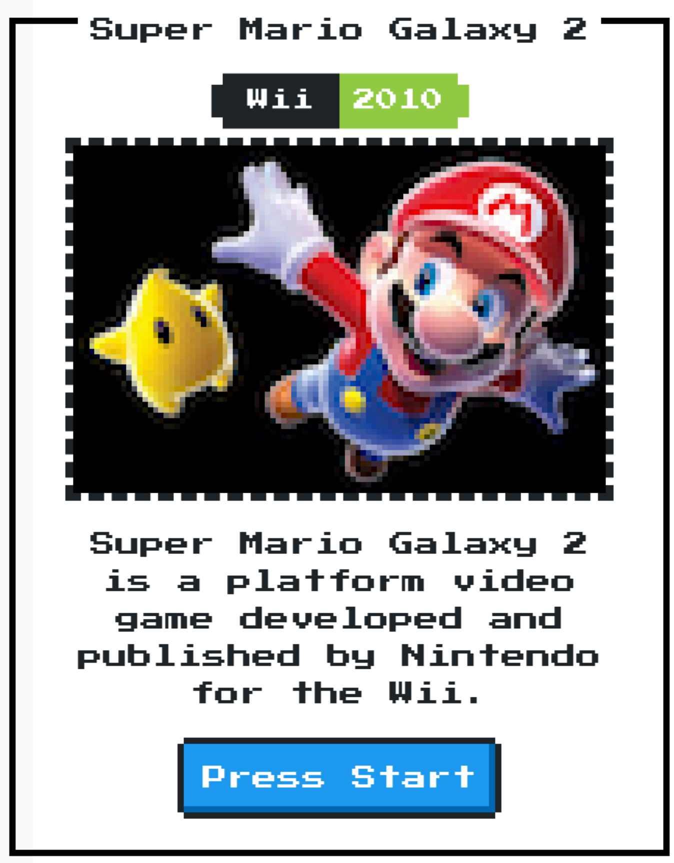
Press Start



c-container.twig web/themes/custom/nes/nes-components/source/_patterns/03-components/container/c-contain

```
<div class="nes-container with-title is-centered">
  {% if title %}
    <p class="title">{{ title }}</p>
  {% endif %}
  {% if platform or year %}
    <div class="nes-badge is-splited">
      {% if platform %}<span class="is-dark">{{ platform }}</span>{% endif %}
      {% if year %}<span class="is-success">{{ year }}</span>{% endif %}
    </div>
  {% endif %}
  {% if image %}
    {{ image }}
  {% endif %}
  {% if body %}
    {{ body }}
  {% endif %}
  {% if link %}
    <a class="nes-btn is-primary" href={{ link }}>Press Start</a>
  {% endif %}
</div>
```



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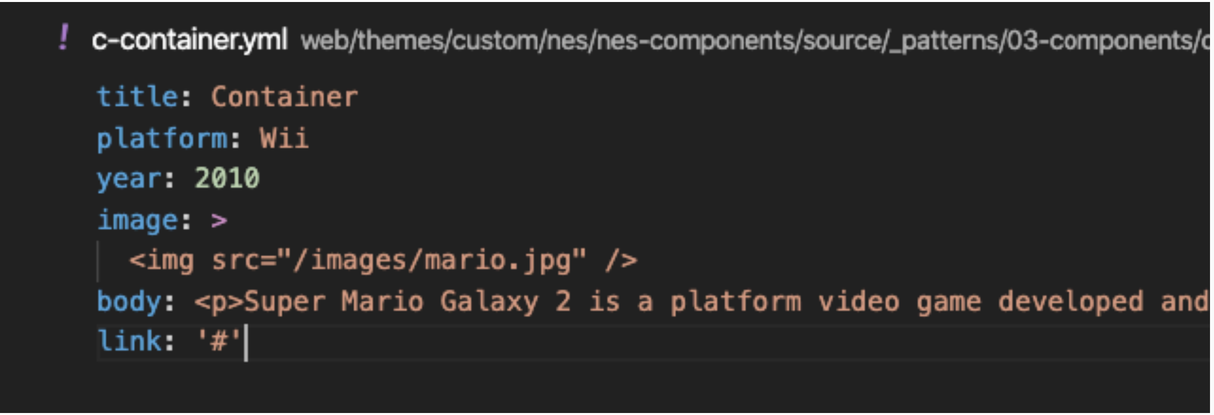
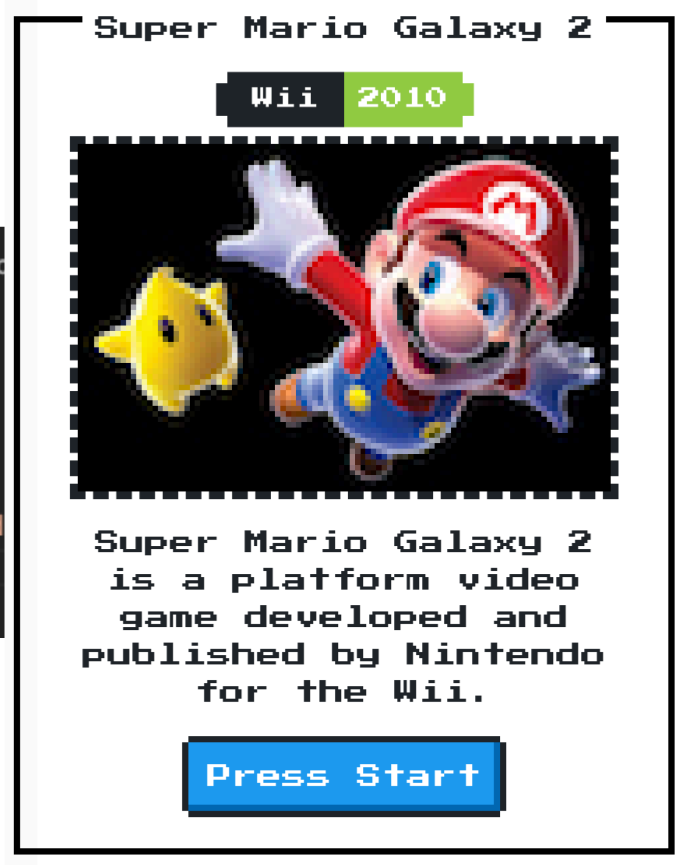


! c-container.yml web/themes/custom/nes/nes-components/source/_patterns/03-components/c

```yaml
title: Container
platform: Wii
year: 2010
image: >
  <img src="/images/mario.jpg" />
body: <p>Super Mario Galaxy 2 is a platform video game developed and
link: '#'
```



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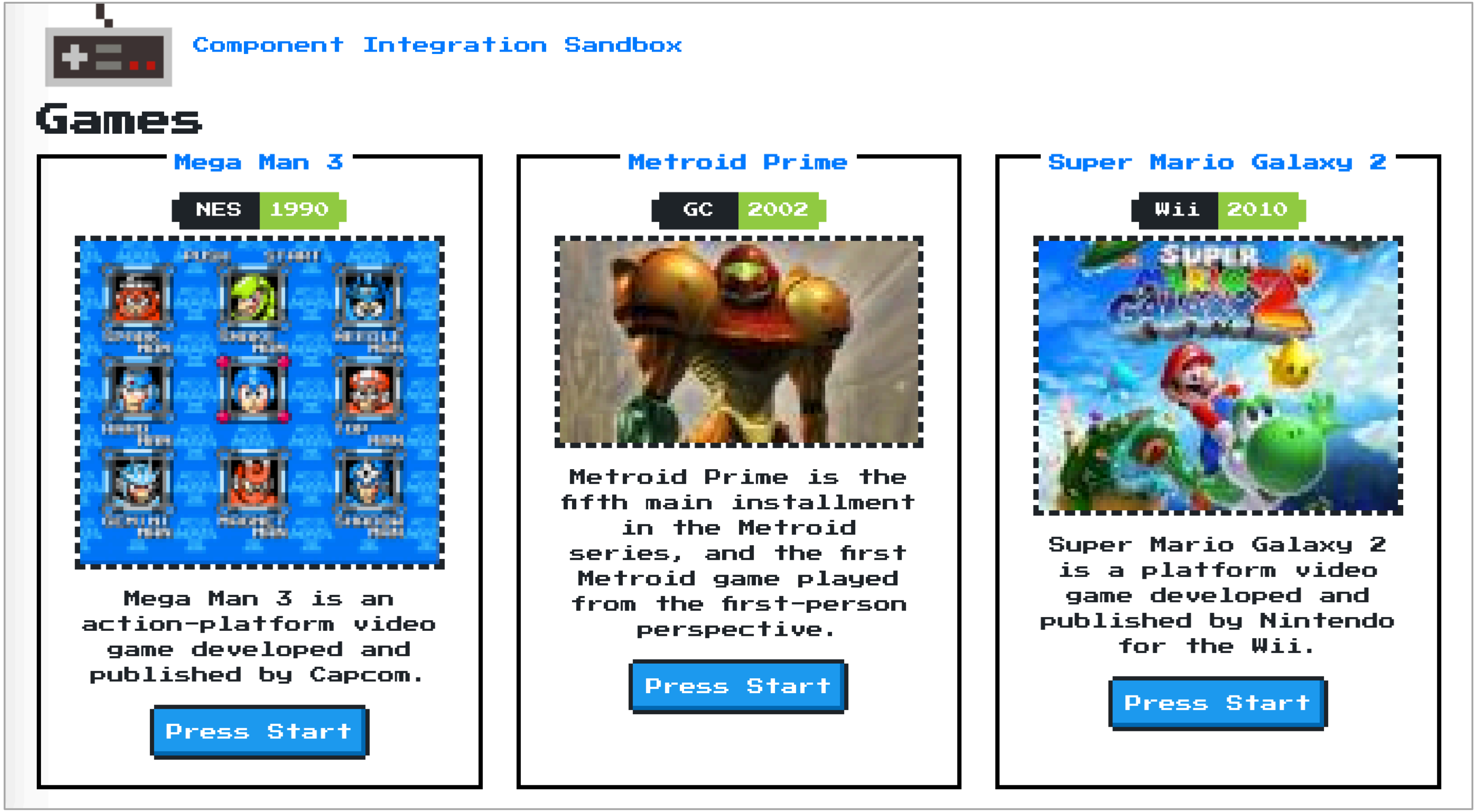
GRID LAYOUT



Component Integration Sandbox

Games

Mega Man 3

NES 1990

Mega Man 3 is an action-platform video game developed and published by Capcom.

Metroid Prime

GC 2002

Metroid Prime is the fifth main installment in the Metroid series, and the first Metroid game played from the first-person perspective.

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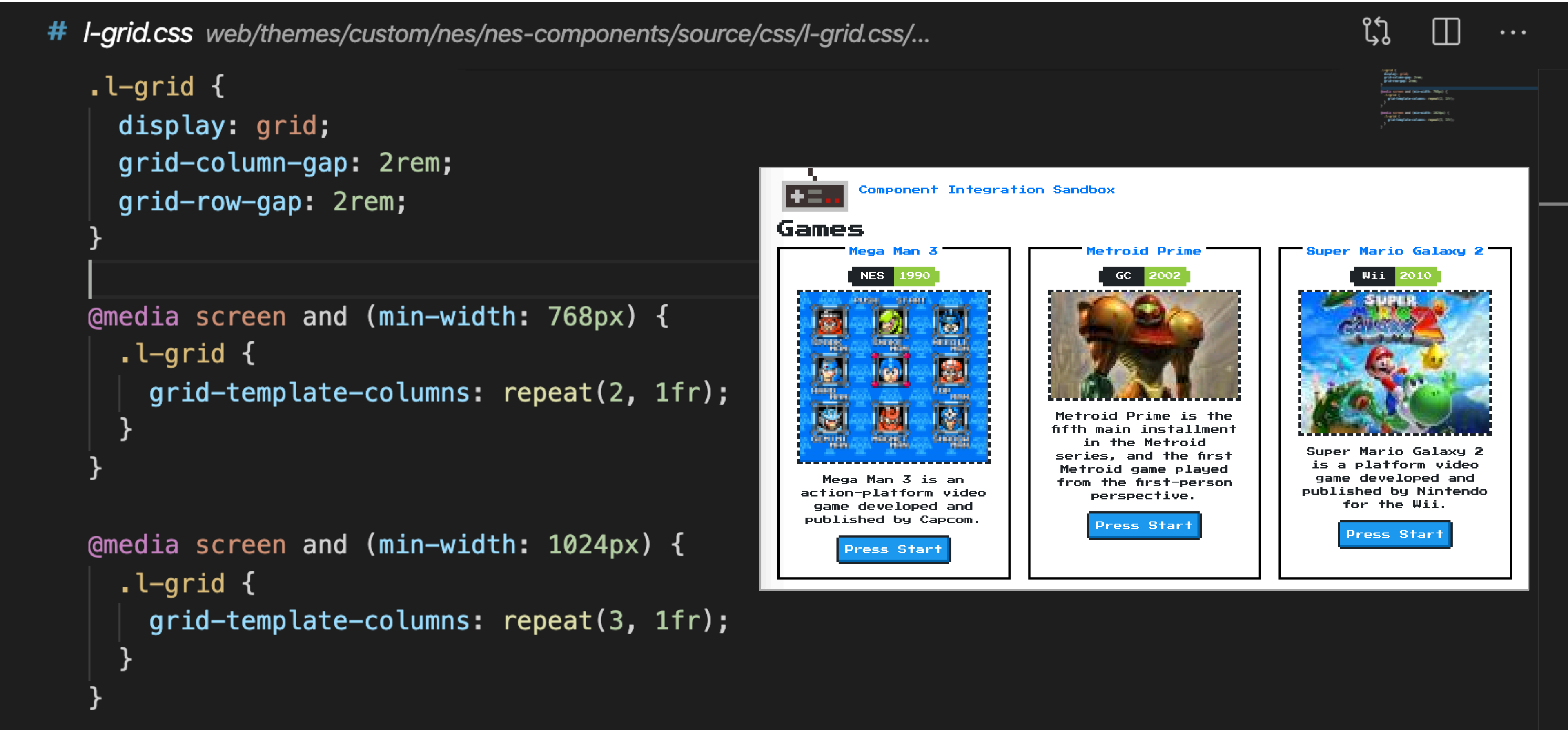

l-grid.css web/themes/custom/nes/nes-components/source/css/l-grid.css/...

```css
.l-grid {
  display: grid;
  grid-column-gap: 2rem;
  grid-row-gap: 2rem;
}

@media screen and (min-width: 768px) {
  .l-grid {
    grid-template-columns: repeat(2, 1fr);
  }
}

@media screen and (min-width: 1024px) {
  .l-grid {
    grid-template-columns: repeat(3, 1fr);
  }
}
```

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Press Start

COMPONENTS IN DRUPAL

WHERE DO MY COMPONENTS LIVE?

For the sake of this talk…

Standard Drupal Components

- Live in the default template directory
- May not require any additional effort to get data to display

Integrated Drupal Components

- Live somewhere other than the default templates directory
- Require some additional effort to get data to display
- For this talk, I don’t really care how your integrated components get into your theme.
  - Could live in your theme
  - Could be external dependency

STANDARD DRUPAL COMPONENTS

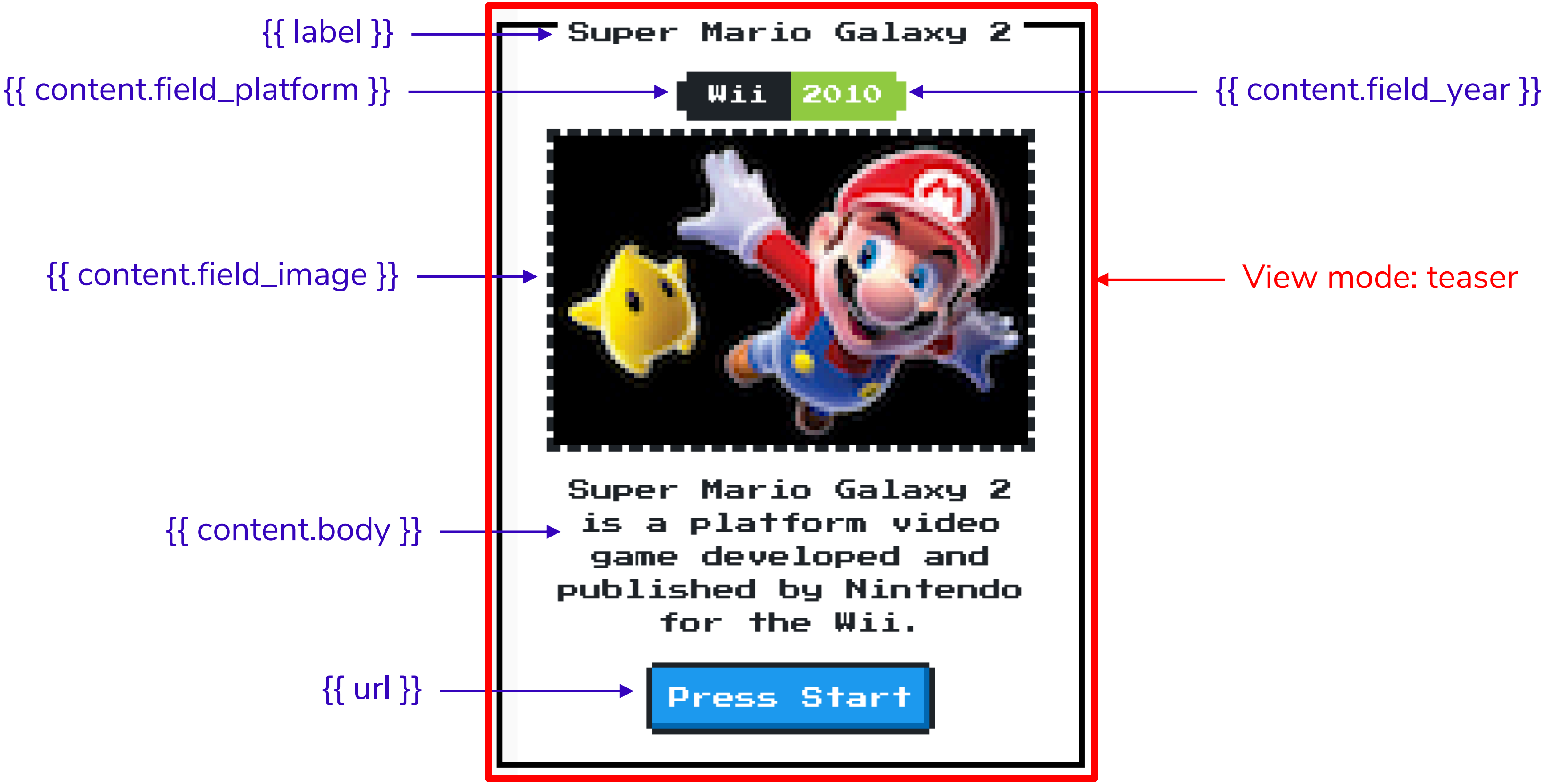
Building components that live in the traditional templates directory

STANDARD DRUPAL COMPONENTS

May be right for your team or project. No shame necessary.

- Build with Drupal (and only Drupal) in mind.
- Take advantage of things that can be re-used in Drupal
  - Display modes
  - Blocks
  - Paragraphs
  - Layouts
- Lose out on rapid prototyping advantages.

STANDARD DRUPAL COMPONENT



{{ label }}

Super Mario Galaxy 2

{{ content.field_platform }}

Wii 2010

{{ content.field_year }}

{{ content.field_image }}

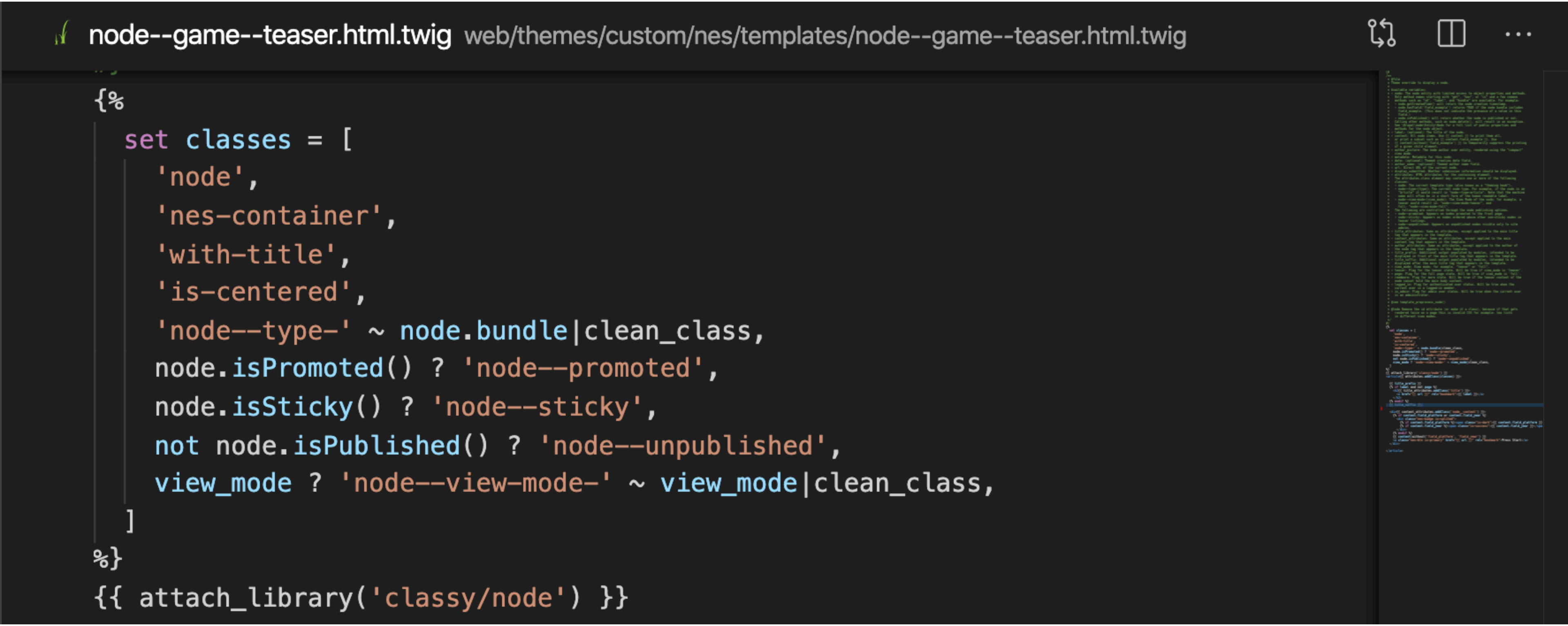
View mode: teaser

{{ content.body }}

Super Mario Galaxy 2 is a platform video game developed and published by Nintendo for the Wii.

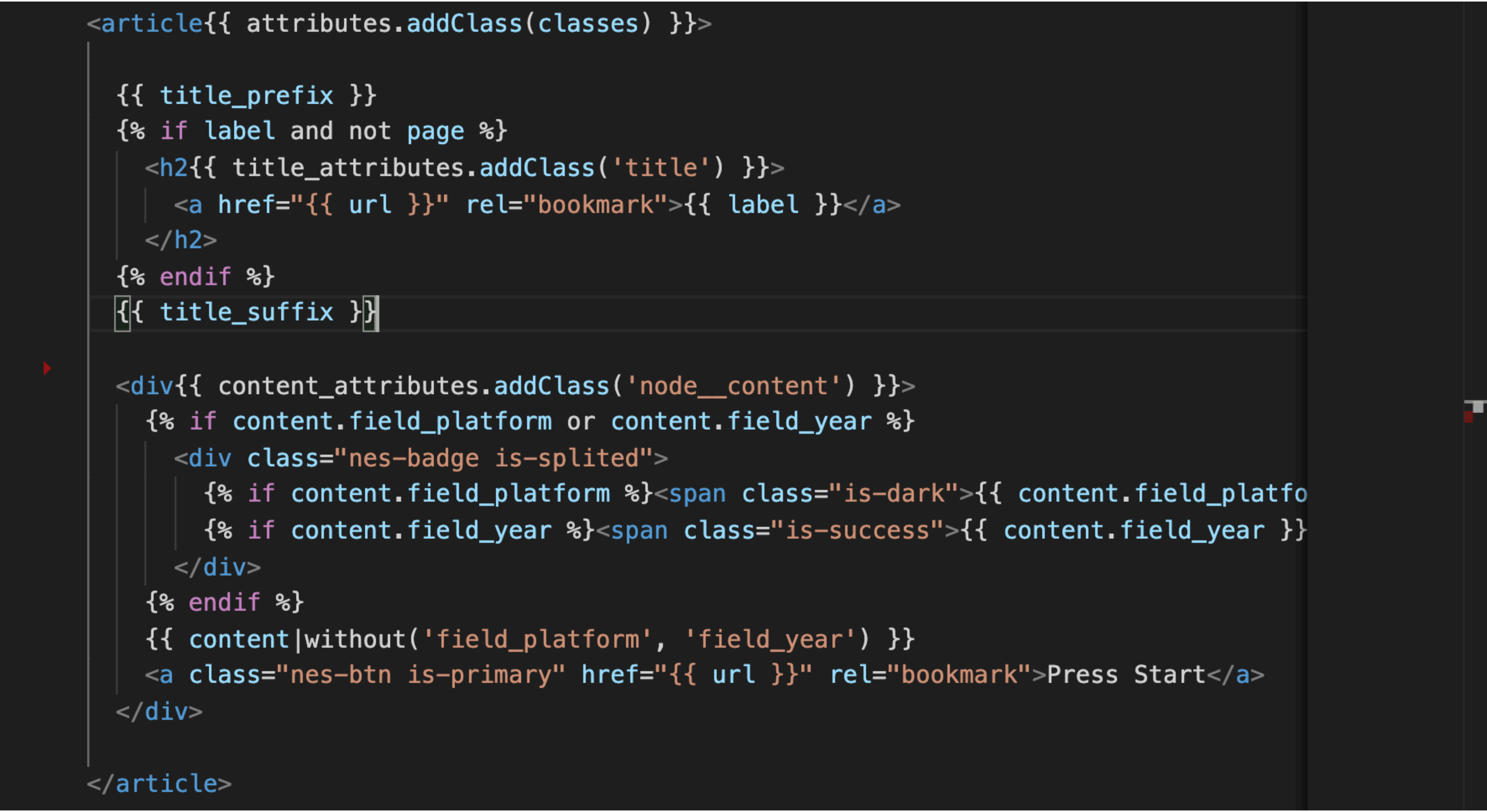
{{ url }}

Press Start



node--game--teaser.html.twig web/themes/custom/nes/templates/node--game--teaser.html.twig

```
{%
  set classes = [
    'node',
    'nes-container',
    'with-title',
    'is-centered',
    'node--type-' ~ node.bundle|clean_class,
    node.isPromoted() ? 'node--promoted',
    node.isSticky() ? 'node--sticky',
    not node.isPublished() ? 'node--unpublished',
    view_mode ? 'node--view-mode-' ~ view_mode|clean_class,
  ]
%}
{{ attach_library('classy/node') }}
```



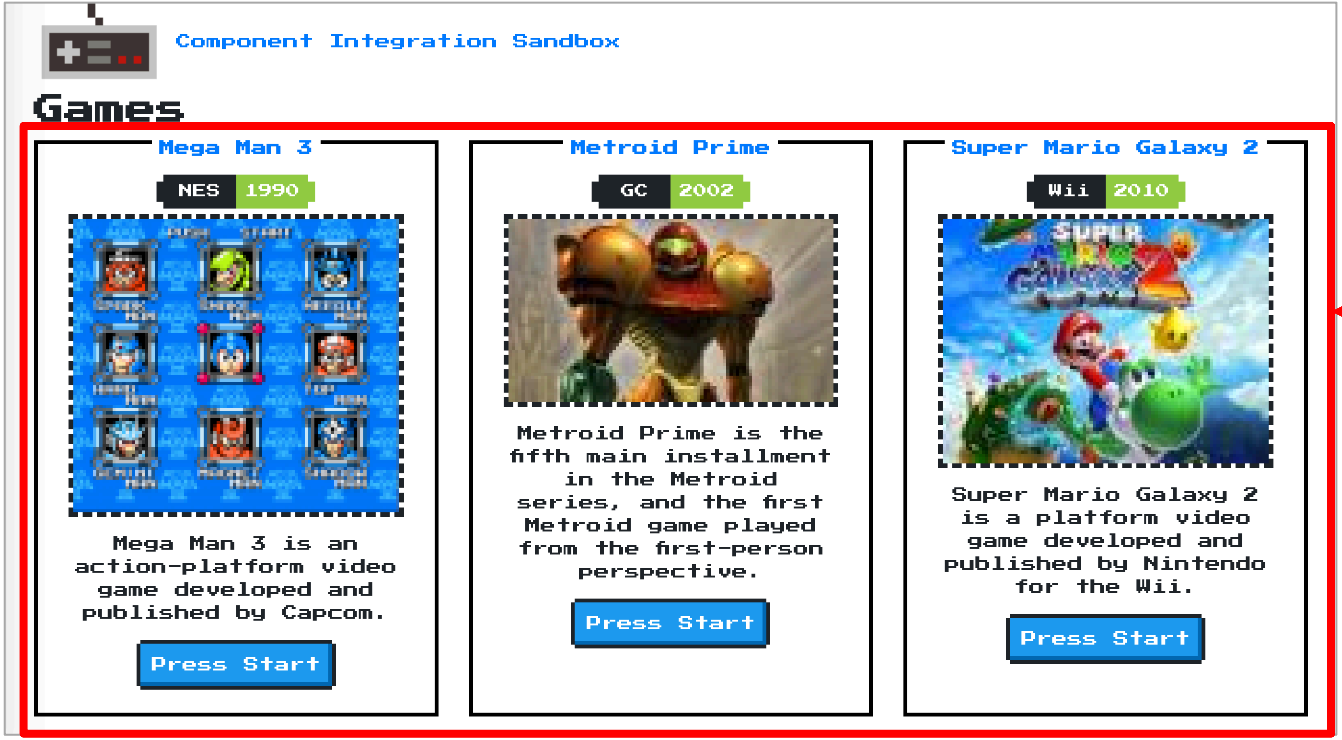
```
<article{{ attributes.addClass(classes) }}>

  {{ title_prefix }}
  {% if label and not page %}
    <h2{{ title_attributes.addClass('title') }}>
      <a href="{{ url }}" rel="bookmark">{{ label }}</a>
    </h2>
  {% endif %}
  {{ title_suffix }}

  <div{{ content_attributes.addClass('node__content') }}>
    {% if content.field_platform or content.field_year %}
      <div class="nes-badge is-splited">
        {% if content.field_platform %}<span class="is-dark">{{ content.field_platfo
        {% if content.field_year %}<span class="is-success">{{ content.field_year }}
      </div>
    {% endif %}
    {{ content|without('field_platform', 'field_year') }}
    <a class="nes-btn is-primary" href="{{ url }}" rel="bookmark">Press Start</a>
  </div>

</article>
```

GRID LAYOUT



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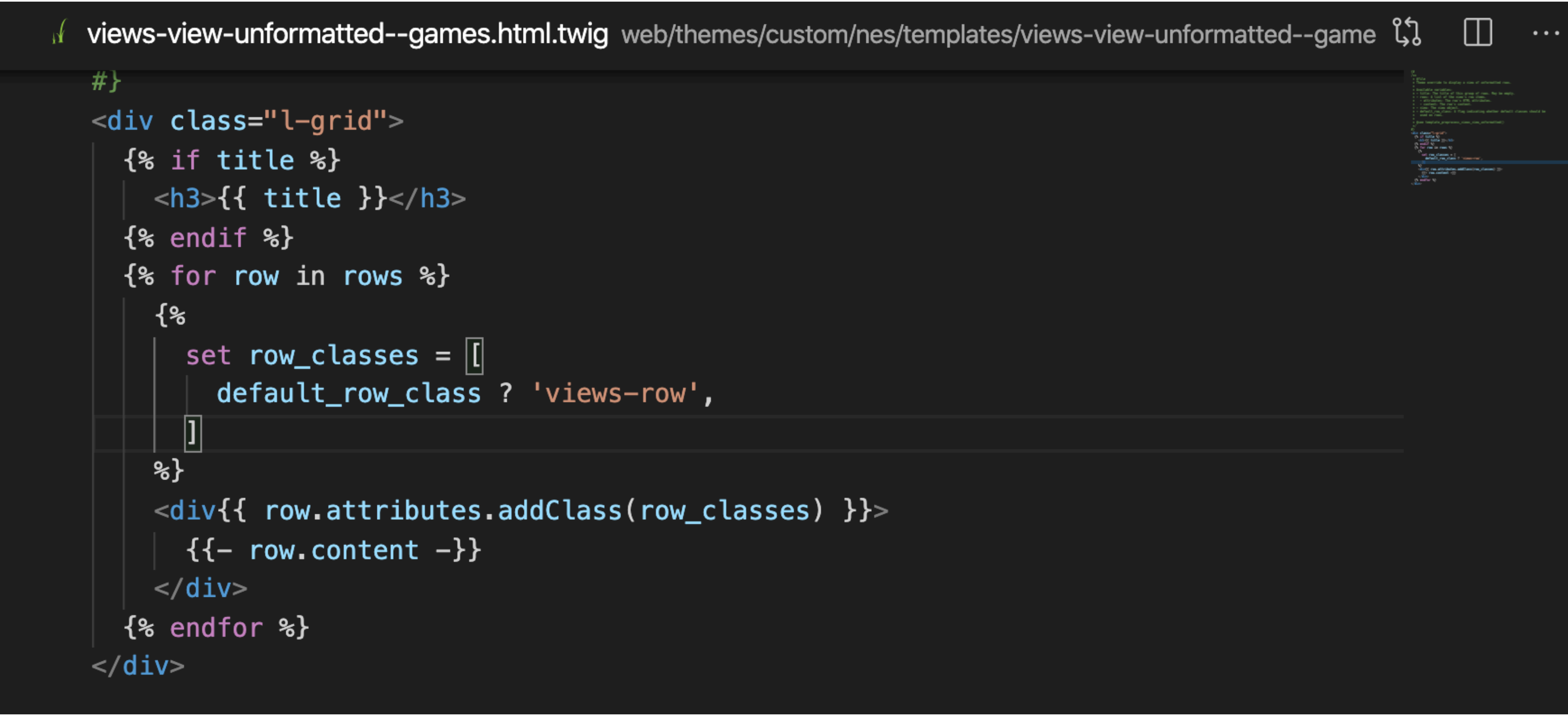
Press Start

View: Games



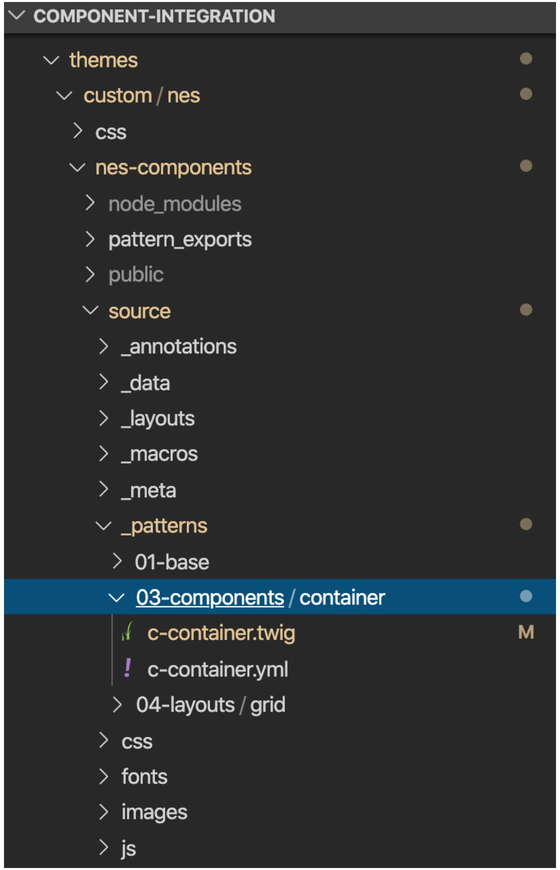
views-view-unformatted--games.html.twig web/themes/custom/nes/templates/views-view-unformatted--game

```
#}
<div class="l-grid">
  {% if title %}
    <h3>{{ title }}</h3>
  {% endif %}
  {% for row in rows %}
    {%
      set row_classes = [
        default_row_class ? 'views-row',
      ]
    %}
    <div{{ row.attributes.addClass(row_classes) }}>
      {{- row.content -}}
    </div>
  {% endfor %}
</div>
```

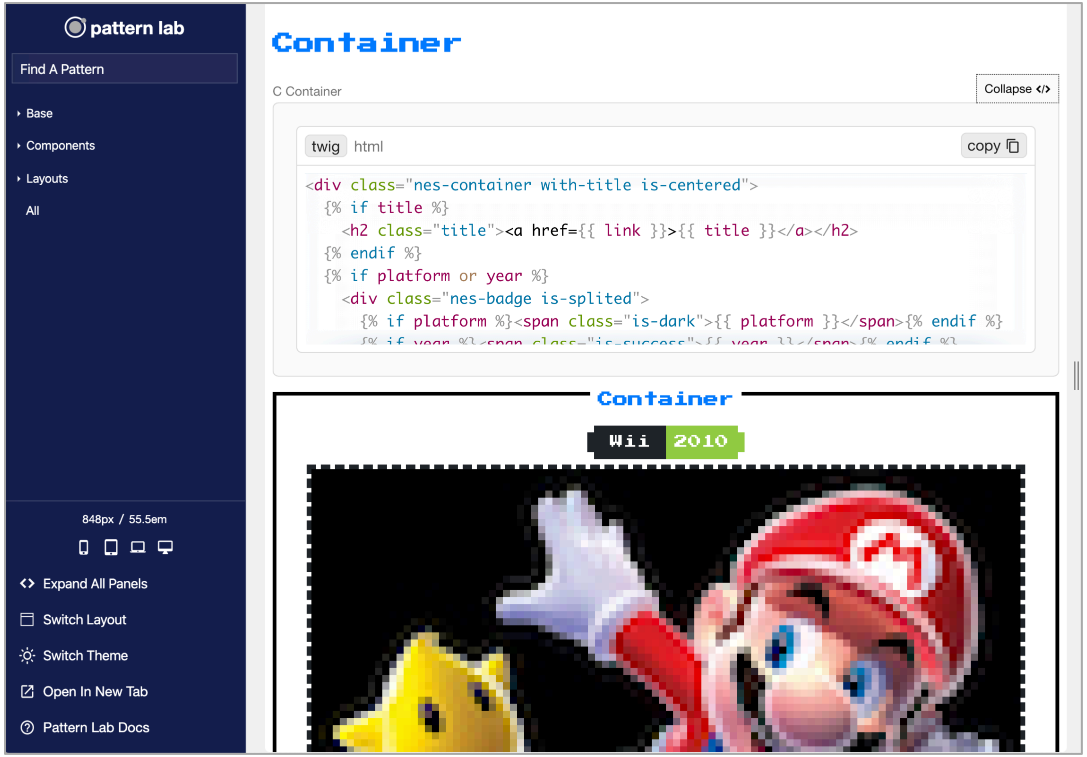
INTEGRATED DRUPAL COMPONENTS

Building components that live outside of the traditional templates directory

COMPONENT LIBRARY / PATTERN LAB



```
COMPONENT-INTEGRATION
  themes                              ●
    custom / nes                      ●
      css
      nes-components                  ●
        node_modules
        pattern_exports
        public
        source                        ●
          _annotations
          _data
          _layouts
          _macros
          _meta
          _patterns                   ●
            01-base
            03-components / container ●
              c-container.twig        M
              c-container.yml
            04-layouts / grid
          css
          fonts
          images
          js
```



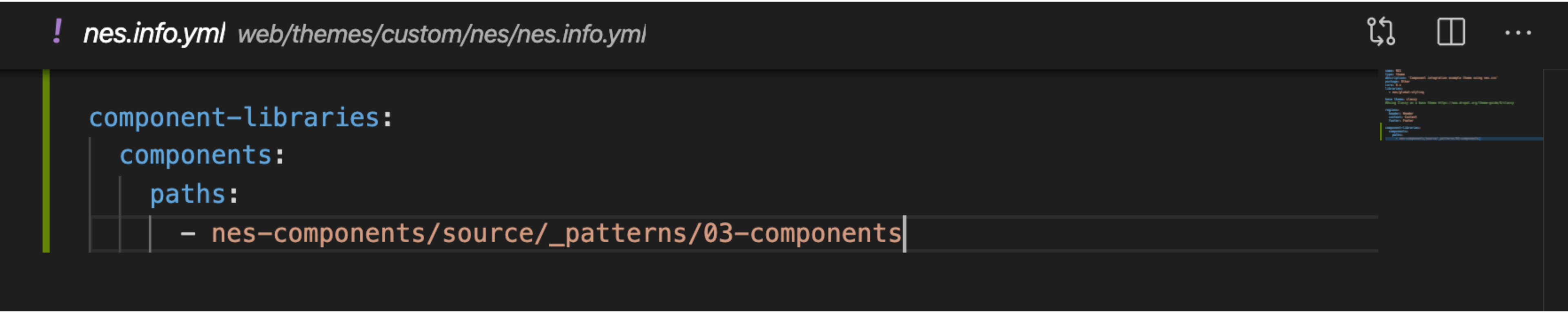
Container

C Container

```
<div class="nes-container with-title is-centered">
  {% if title %}
    <h2 class="title"><a href={{ link }}>{{ title }}</a></h2>
  {% endif %}
  {% if platform or year %}
    <div class="nes-badge is-splited">
      {% if platform %}<span class="is-dark">{{ platform }}</span>{% endif %}
      {% if year %}<span class="is-success">{{ year }}</span>{% endif %}
```

COMPONENTS MODULE

Creates Twig namespaces to access templates in non-standard locations



```
component-libraries:
  components:
    paths:
      - nes-components/source/_patterns/03-components
```

INTEGRATION APPROACHES

Primarily fall into two categories

Mapping Data In Code

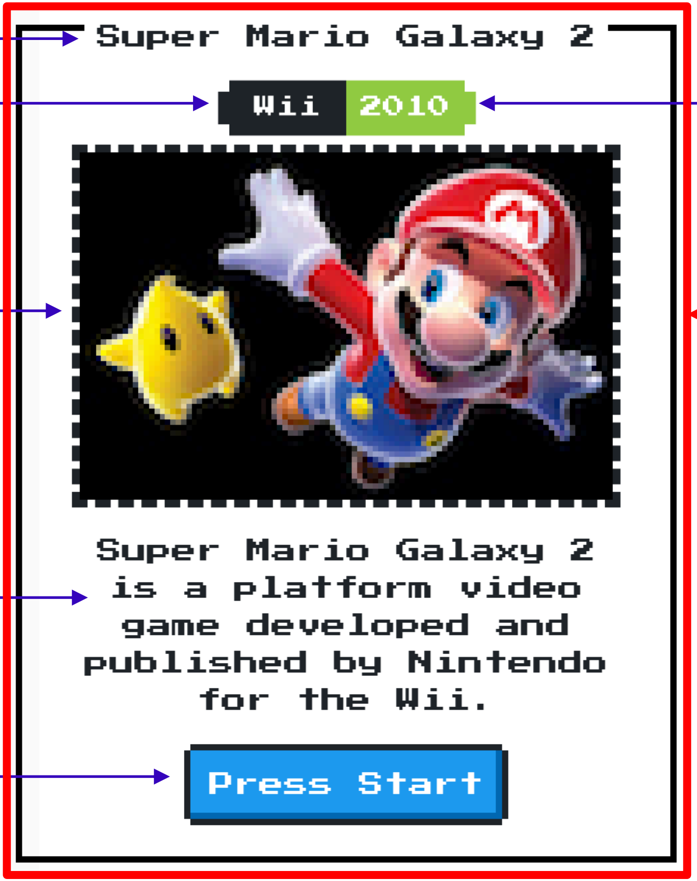
- Includes:
  - Mapping in Twig templates
  - Preprocessing
  - Themes and starter kits
- More likely to get out of sync with Drupal UI
- More likely to break things like caching, Drupal functionality, etc.

Mapping Data In Admin UI

- Includes:
  - UI Patterns
  - Layouts
- Less likely to disrupt Drupal functionality
- Potentially not as flexible

MAPPING DATA IN CODE

INTEGRATING IN CODE



Super Mario Galaxy 2

Wii 2010

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Press Start

{{ label }}

{{ content.field_platform }}

{{ content.field_year }}

{{ content.field_image }}

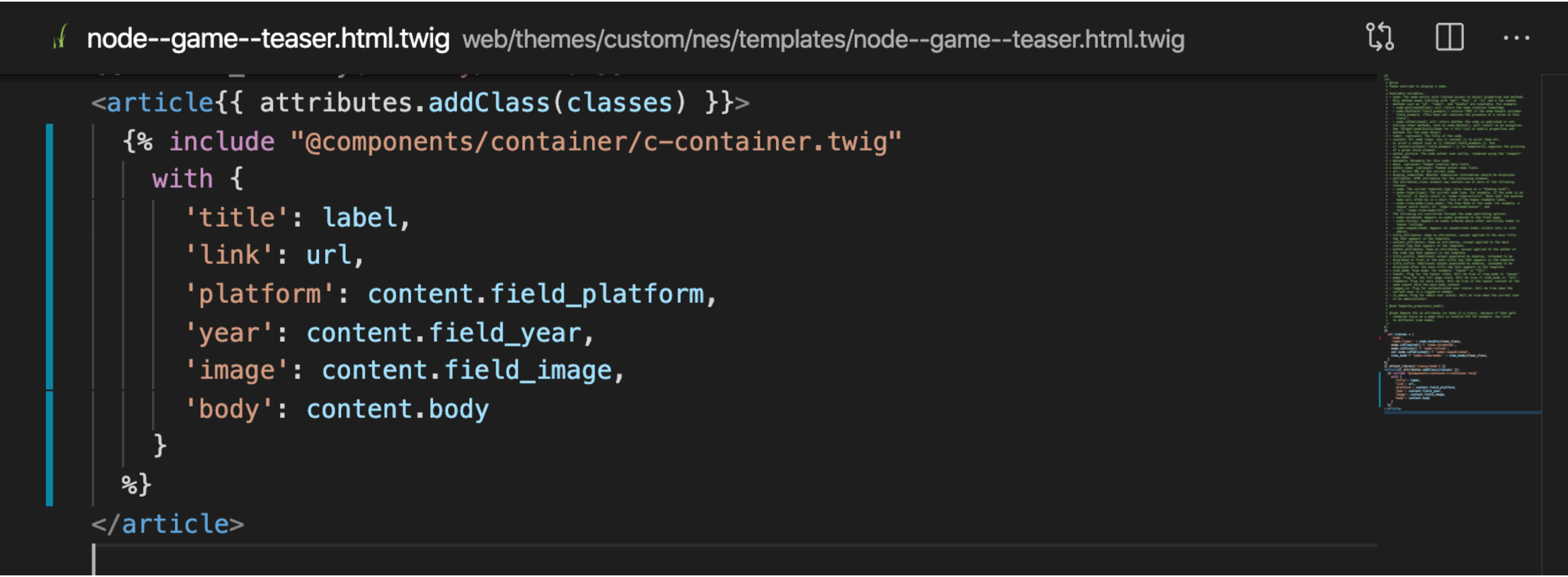
View mode: teaser

{{ content.body }}

{{ url }}

MAPPING IN TWIG PRESENTER TEMPLATE

Drupal template references template in component library

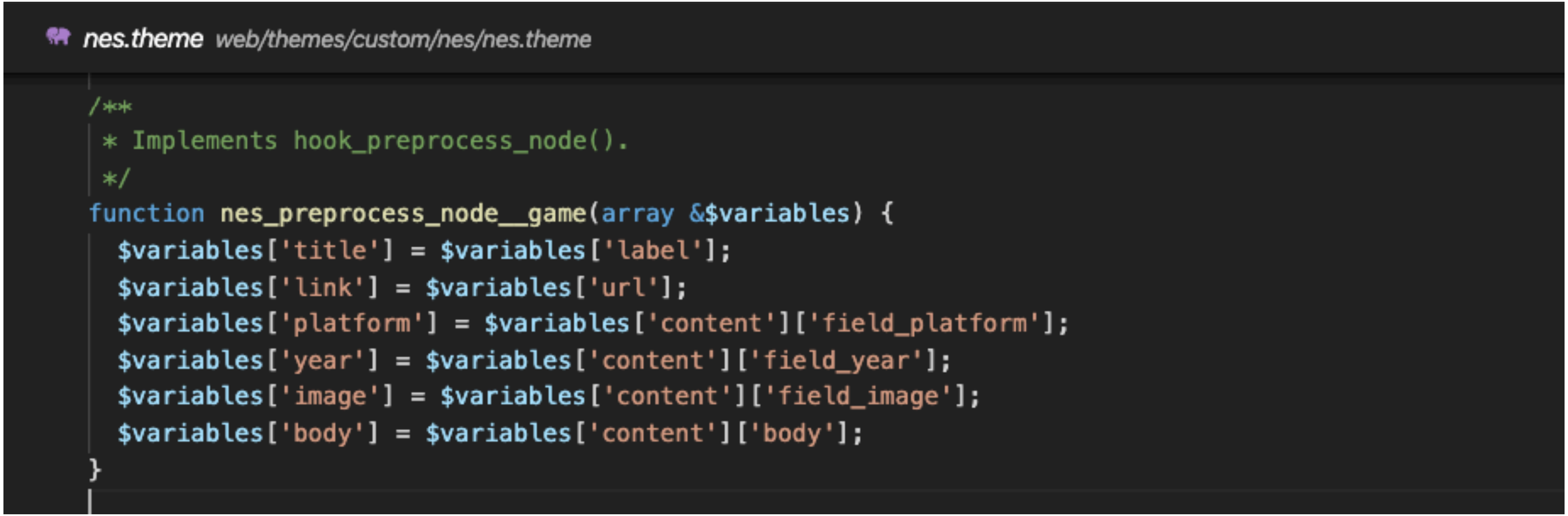


node--game--teaser.html.twig web/themes/custom/nes/templates/node--game--teaser.html.twig

```
<article{{ attributes.addClass(classes) }}>
  {% include "@components/container/c-container.twig"
    with {
      'title': label,
      'link': url,
      'platform': content.field_platform,
      'year': content.field_year,
      'image': content.field_image,
      'body': content.body
    }
  %}
</article>
```

DATA MAPPING IN PREPROCESS

Map in preprocess...

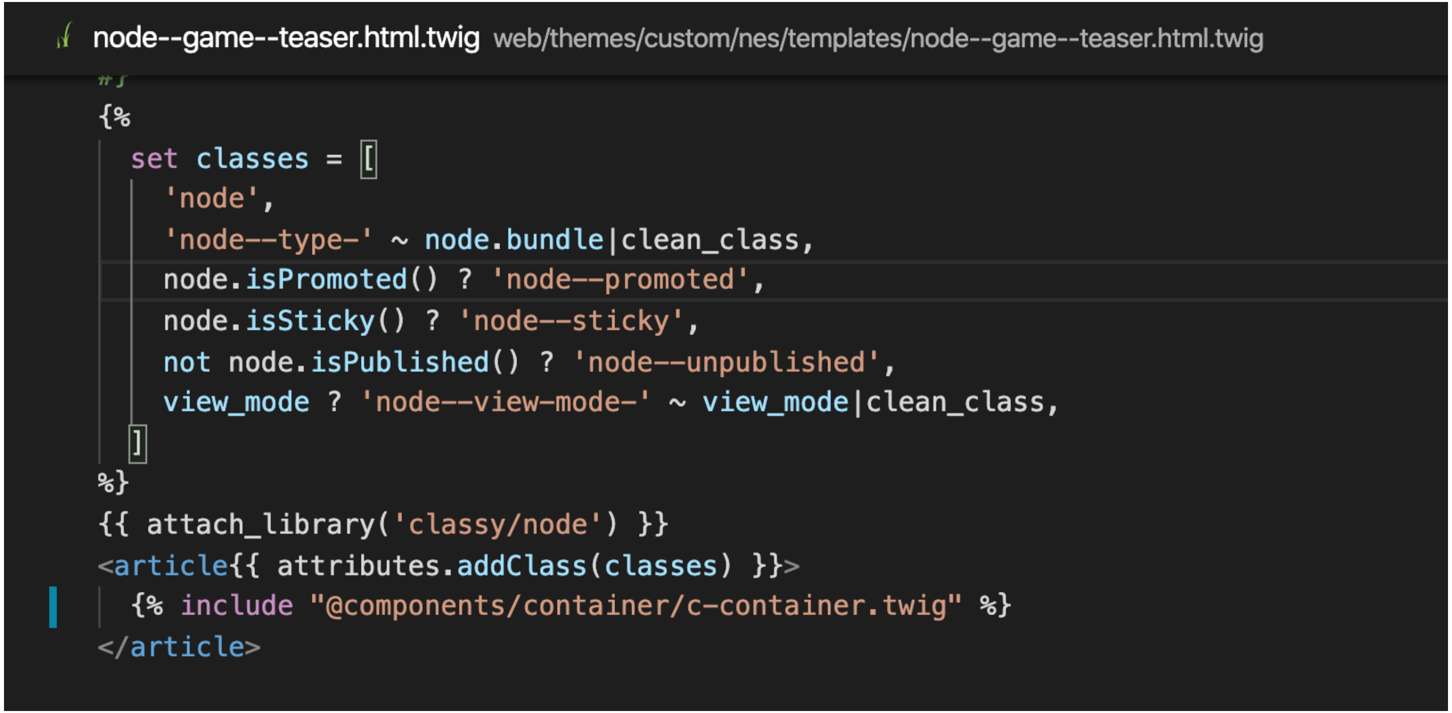


nes.theme web/themes/custom/nes/nes.theme

```php
/**
 * Implements hook_preprocess_node().
 */
function nes_preprocess_node__game(array &$variables) {
  $variables['title'] = $variables['label'];
  $variables['link'] = $variables['url'];
  $variables['platform'] = $variables['content']['field_platform'];
  $variables['year'] = $variables['content']['field_year'];
  $variables['image'] = $variables['content']['field_image'];
  $variables['body'] = $variables['content']['body'];
}
```

DATA MAPPING IN PREPROCESS

…and use simpler include in Twig presenter template



node--game--teaser.html.twig web/themes/custom/nes/templates/node--game--teaser.html.twig

```
#}
{%
  set classes = [
    'node',
    'node--type-' ~ node.bundle|clean_class,
    node.isPromoted() ? 'node--promoted',
    node.isSticky() ? 'node--sticky',
    not node.isPublished() ? 'node--unpublished',
    view_mode ? 'node--view-mode-' ~ view_mode|clean_class,
  ]
%}
{{ attach_library('classy/node') }}
<article{{ attributes.addClass(classes) }}>
  {% include "@components/container/c-container.twig" %}
</article>
```

bounteous

HELPER MODULES

Simplify Twig Mapping

Twig Field Value

- Get Partial data from field render arrays
  - field_label
  - field_value
  - field_raw
  - field_target_entity
- Map just the data you want
- May require additional caching considerations…

Twig Tweak

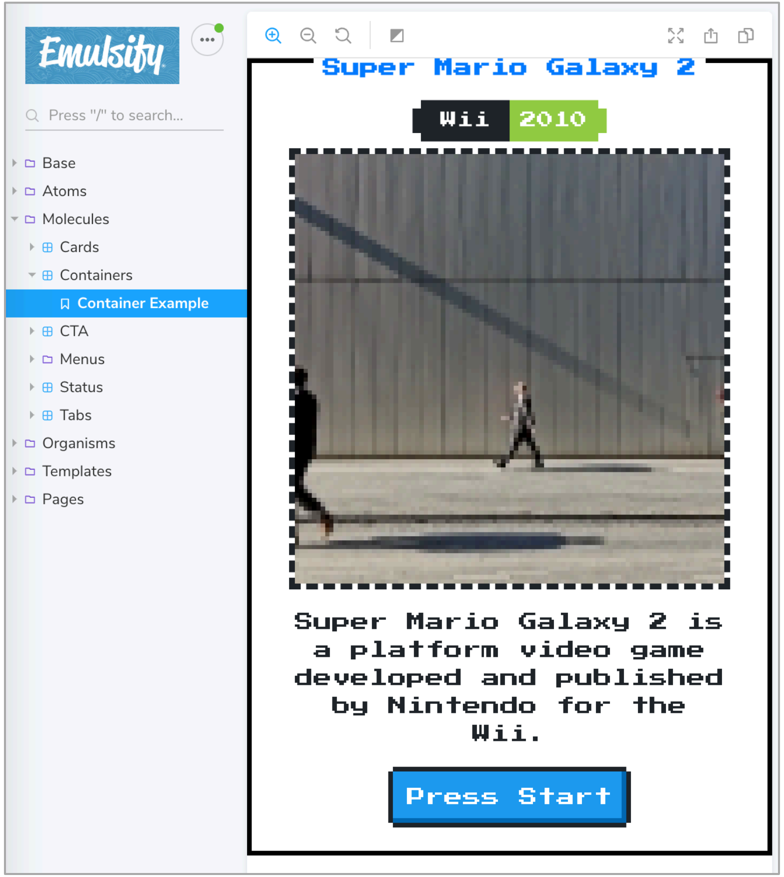
- Helpful twig functions and filters
  - Render views, blocks, regions, fields, entities and so on.
  - Render image with specific image style
  - Extract tokens from context

STARTER KITS AND THEMES

- Simplify set up and provide default tooling
- Some provide default components and helper functions
- Various levels of opinionated
- Examples:
    - Emulsify
    - Gesso
    - Shila
    - Particle

EMULSIFY DESIGN SYSTEM EXAMPLE

- Same presenter templates
- Different component location
- Different component library tool



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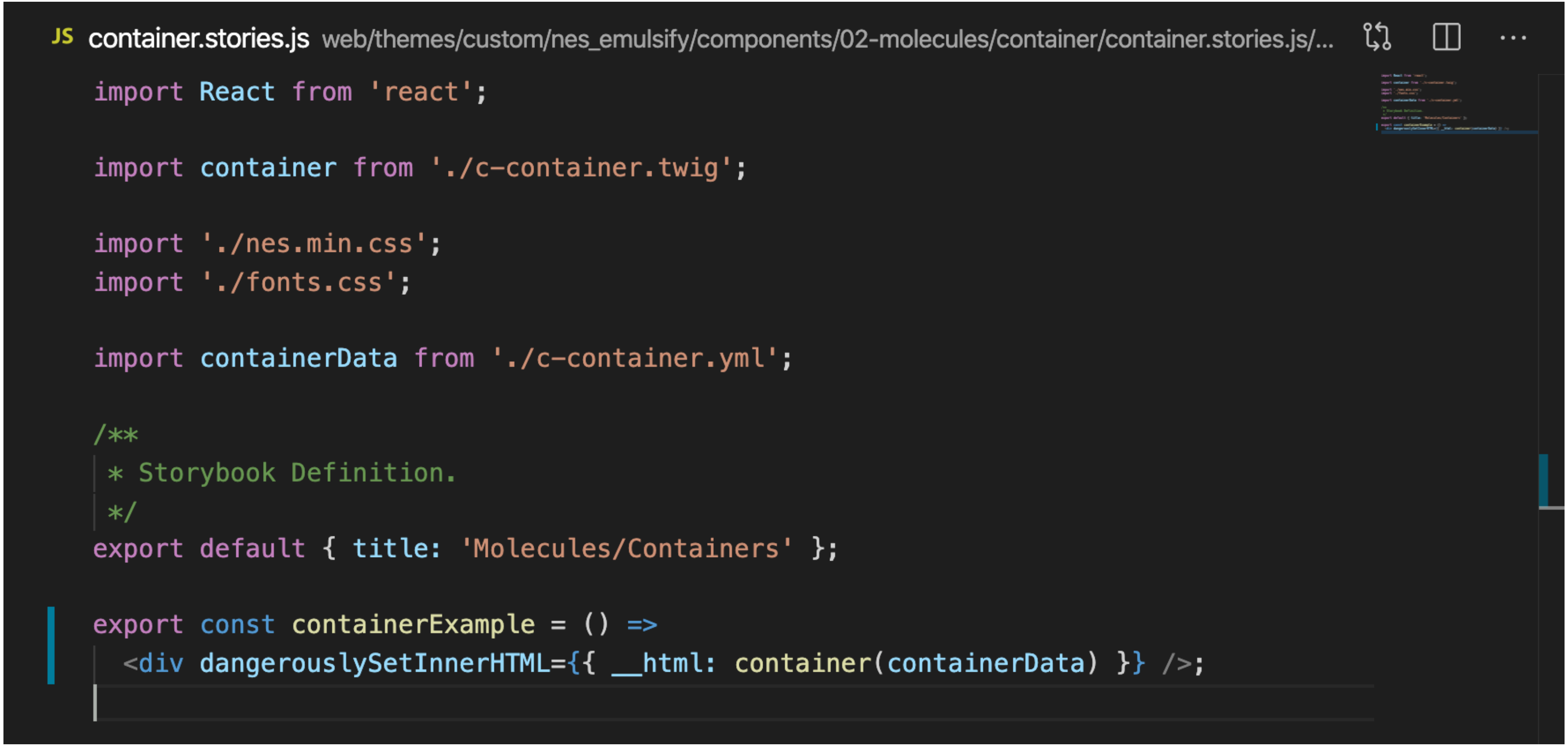
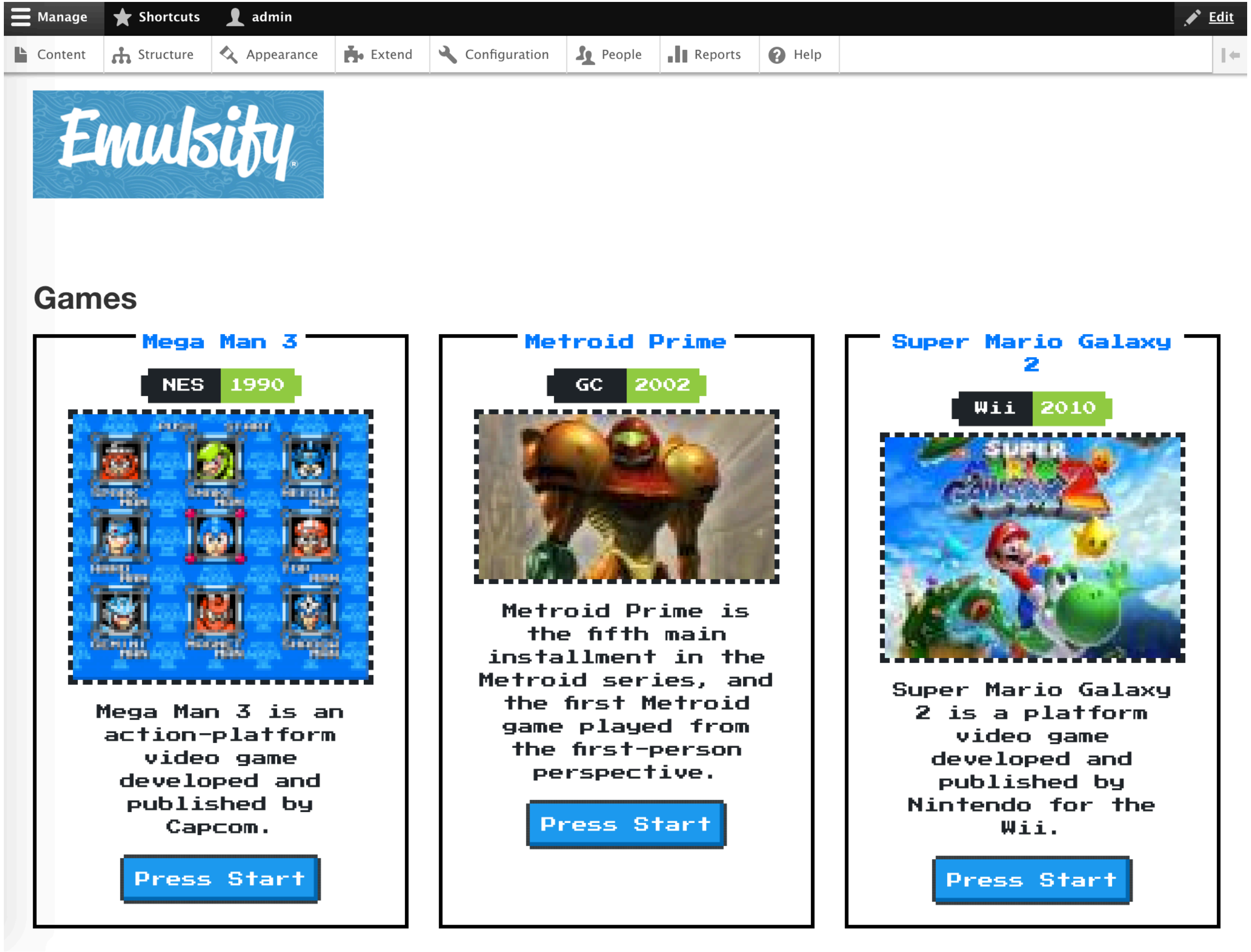

JS container.stories.js web/themes/custom/nes_emulsify/components/02-molecules/container/container.stories.js/...

```
import React from 'react';

import container from './c-container.twig';

import './nes.min.css';
import './fonts.css';

import containerData from './c-container.yml';

/**
 * Storybook Definition.
 */
export default { title: 'Molecules/Containers' };

export const containerExample = () =>
  <div dangerouslySetInnerHTML={{ __html: container(containerData) }} />;
```



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MAPPING DATA IN THE ADMIN UI

UI PATTERNS MODULE

Define and manage components in a way that Drupal understands

- Define UI Patterns as Drupal Plugins
- Use defined patterns with component friendly modules
  - Views, field groups, layout builder, display suite, paragraphs (requires field layout or display suite)
- Configure data mappings in the UI
- Optional Pattern Library page exposed in Drupal
- Also allows Drupal to:
  - Preprocess patterns
  - Render patterns programmatically

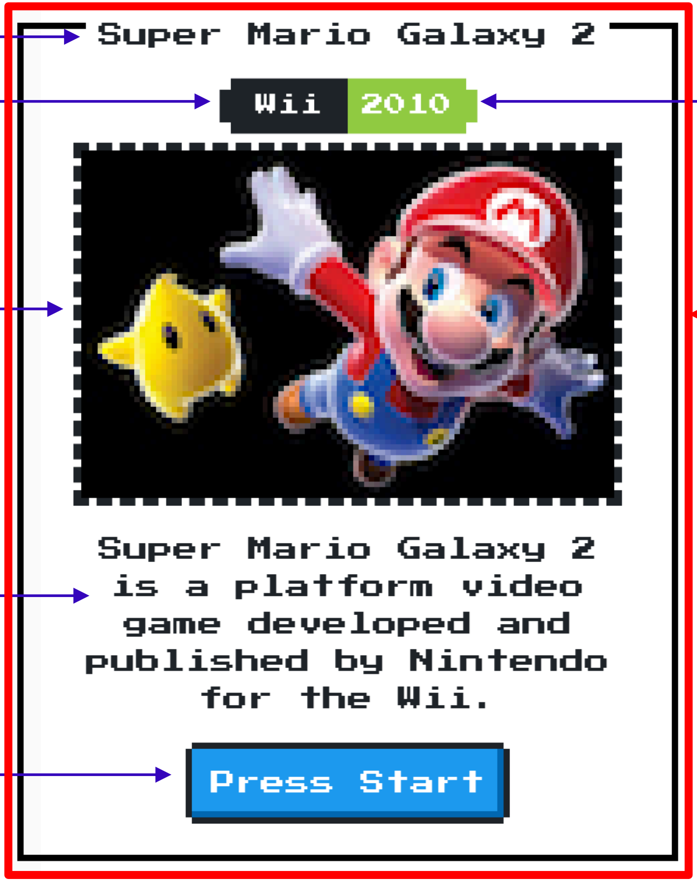
{{ title }}

{{ platform }}

{{ image }}

{{ body }}

{{ link }}

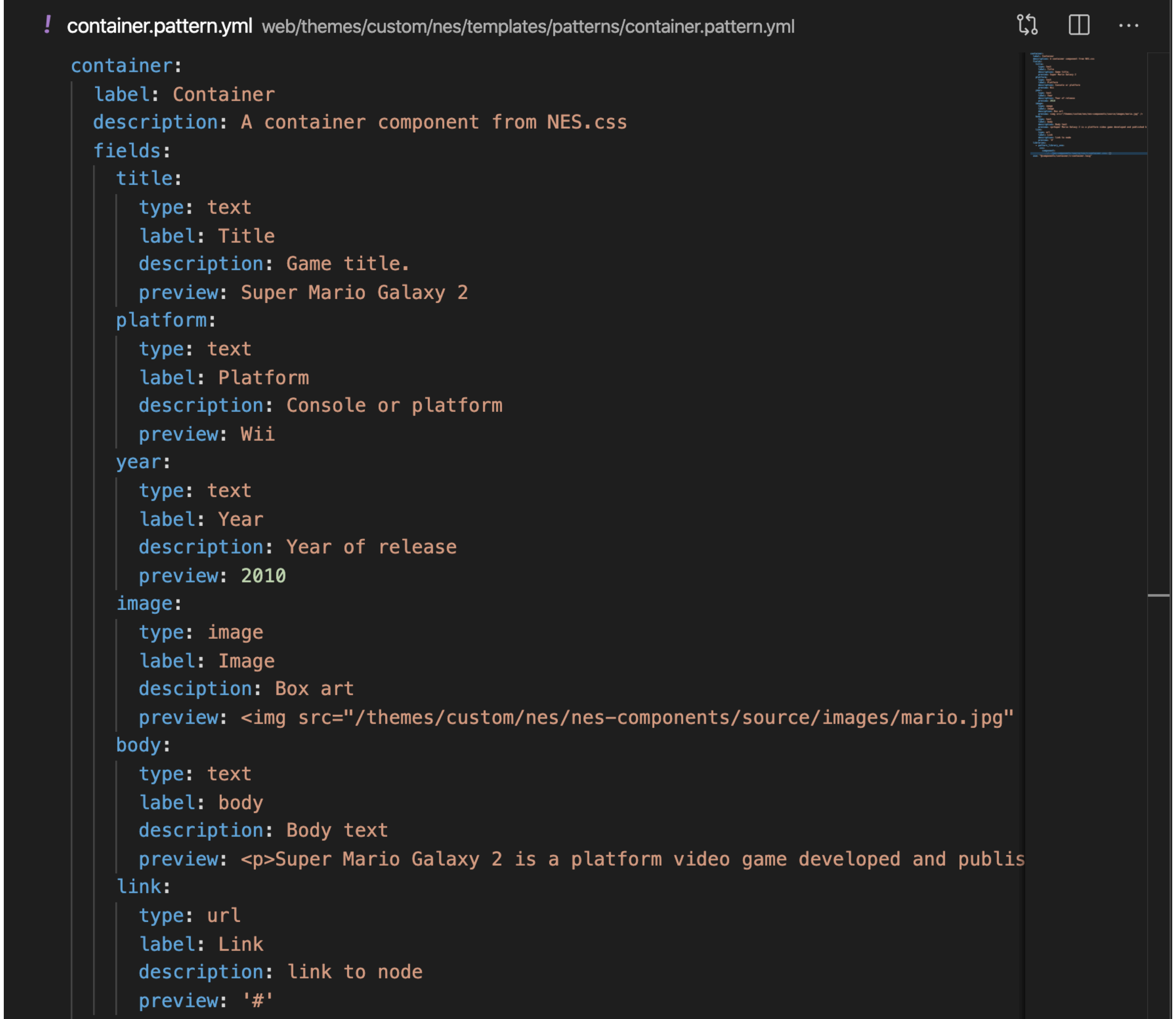


Super Mario Galaxy 2

Super Mario Galaxy 2 is a platform video game developed and published by Nintendo for the Wii.

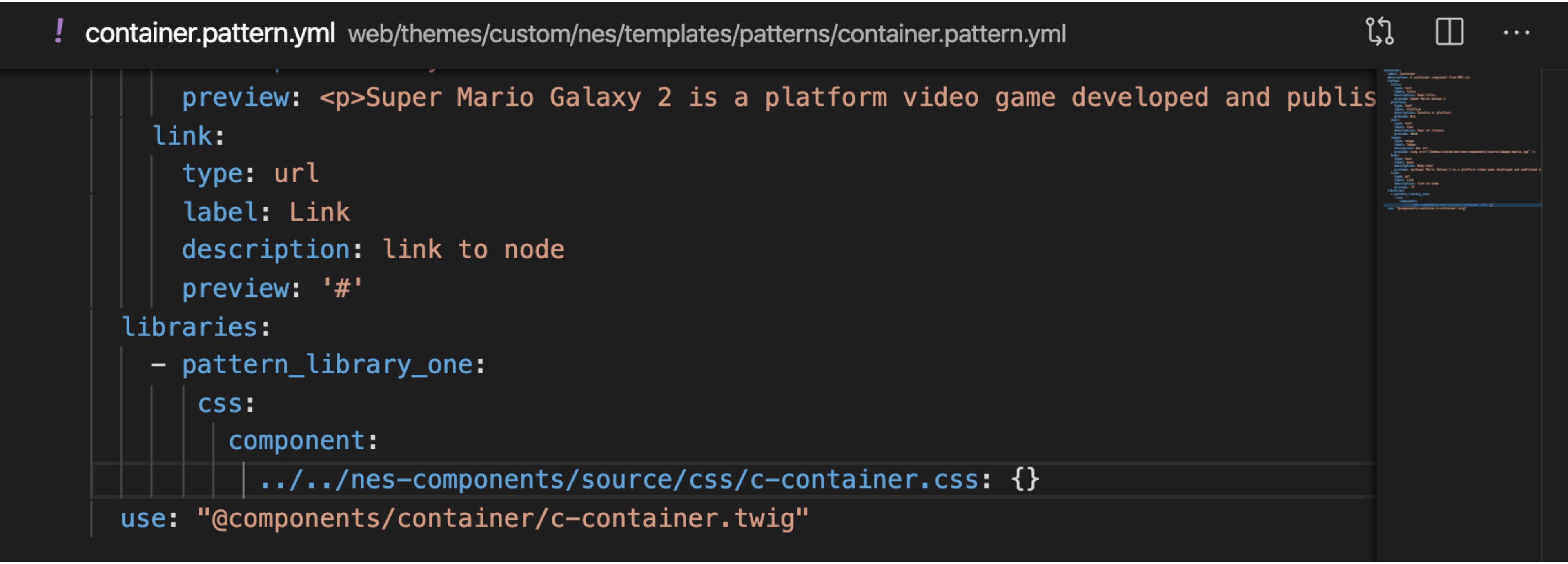
{{ year }}

Pattern: container

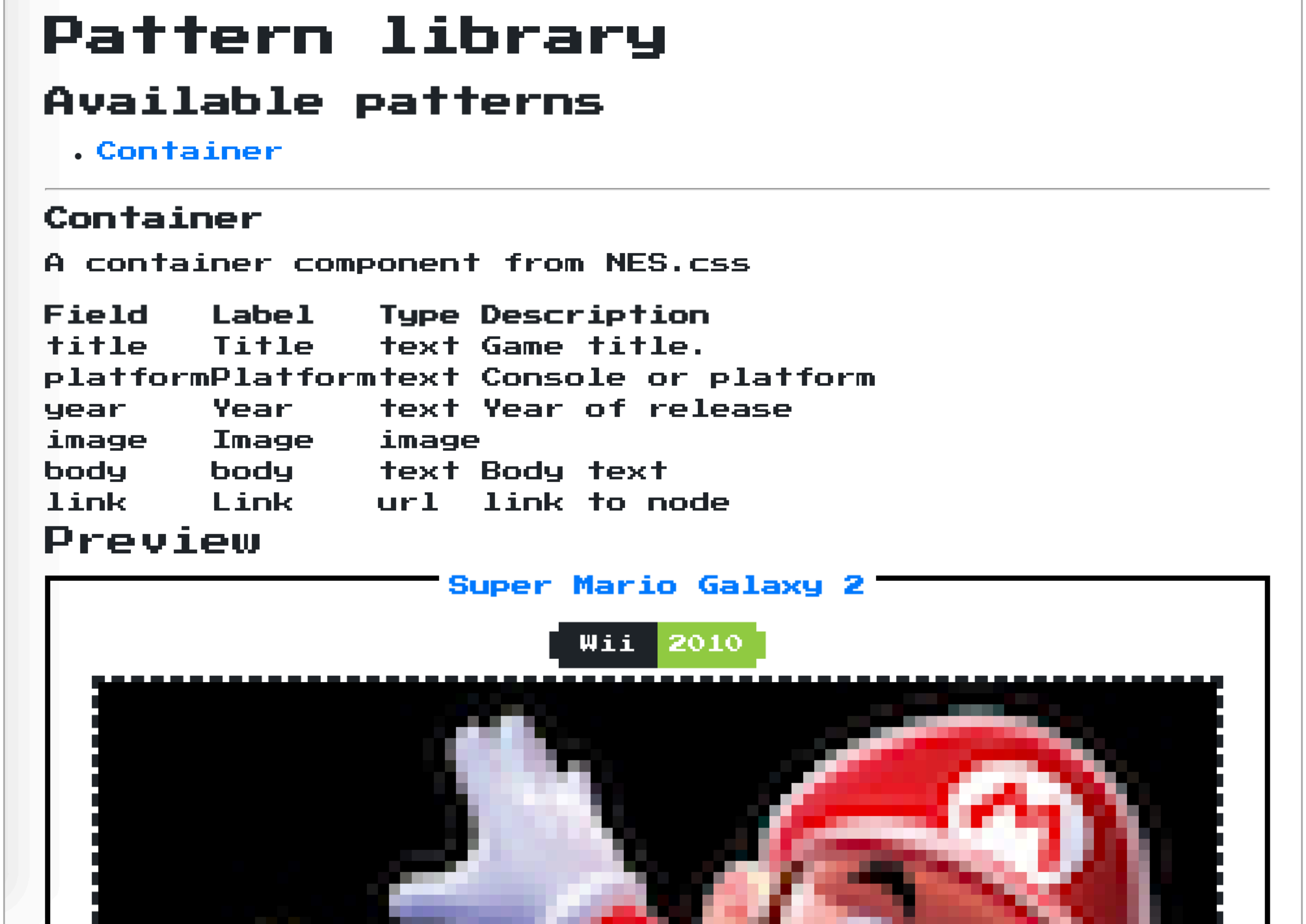


container.pattern.yml web/themes/custom/nes/templates/patterns/container.pattern.yml

```yaml
container:
  label: Container
  description: A container component from NES.css
  fields:
    title:
      type: text
      label: Title
      description: Game title.
      preview: Super Mario Galaxy 2
    platform:
      type: text
      label: Platform
      description: Console or platform
      preview: Wii
    year:
      type: text
      label: Year
      description: Year of release
      preview: 2010
    image:
      type: image
      label: Image
      desciption: Box art
      preview: <img src="/themes/custom/nes/nes-components/source/images/mario.jpg"
    body:
      type: text
      label: body
      description: Body text
      preview: <p>Super Mario Galaxy 2 is a platform video game developed and publis
    link:
      type: url
      label: Link
      description: link to node
      preview: '#'
```


container.pattern.yml web/themes/custom/nes/templates/patterns/container.pattern.yml

```
        preview: <p>Super Mario Galaxy 2 is a platform video game developed and publis
      link:
        type: url
        label: Link
        description: link to node
        preview: '#'
    libraries:
      - pattern_library_one:
         css:
           component:
             ../../nes-components/source/css/c-container.css: {}
    use: "@components/container/c-container.twig"
```



Pattern library

Available patterns

- Container

Container

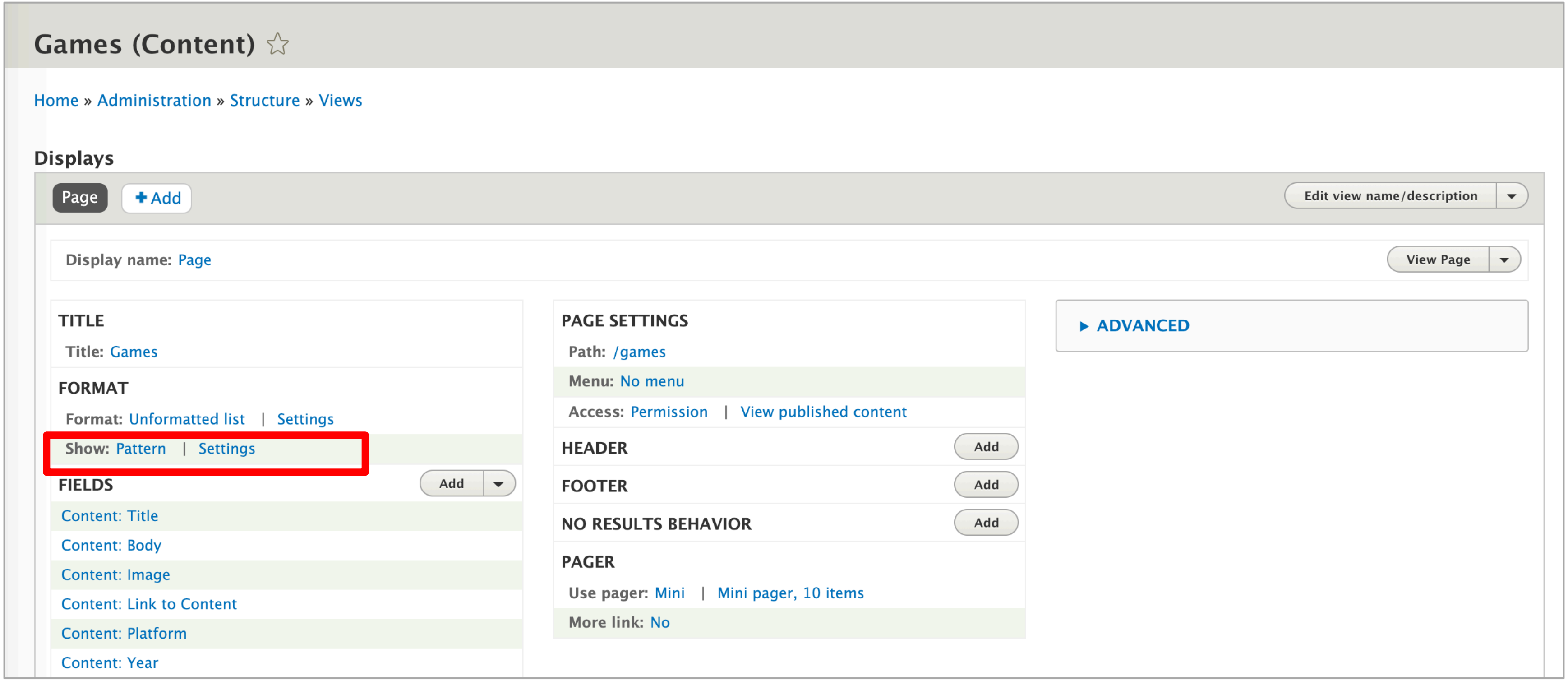
A container component from NES.css

Field	Label	Type	Description
title	Title	text	Game title.
platform	Platform	text	Console or platform
year	Year	text	Year of release
image	Image	image	
body	body	text	Body text
link	Link	url	link to node

Preview

Super Mario Galaxy 2

UI PATTERNS VIEWS



Games (Content) ☆

Home » Administration » Structure » Views

Displays

Display name: Page

TITLE

Title: Games

FORMAT

Format: Unformatted list | Settings

Show: Pattern | Settings

FIELDS

Content: Title

Content: Body

Content: Image

Content: Link to Content

Content: Platform

Content: Year

PAGE SETTINGS

Path: /games

Menu: No menu

Access: Permission | View published content

HEADER

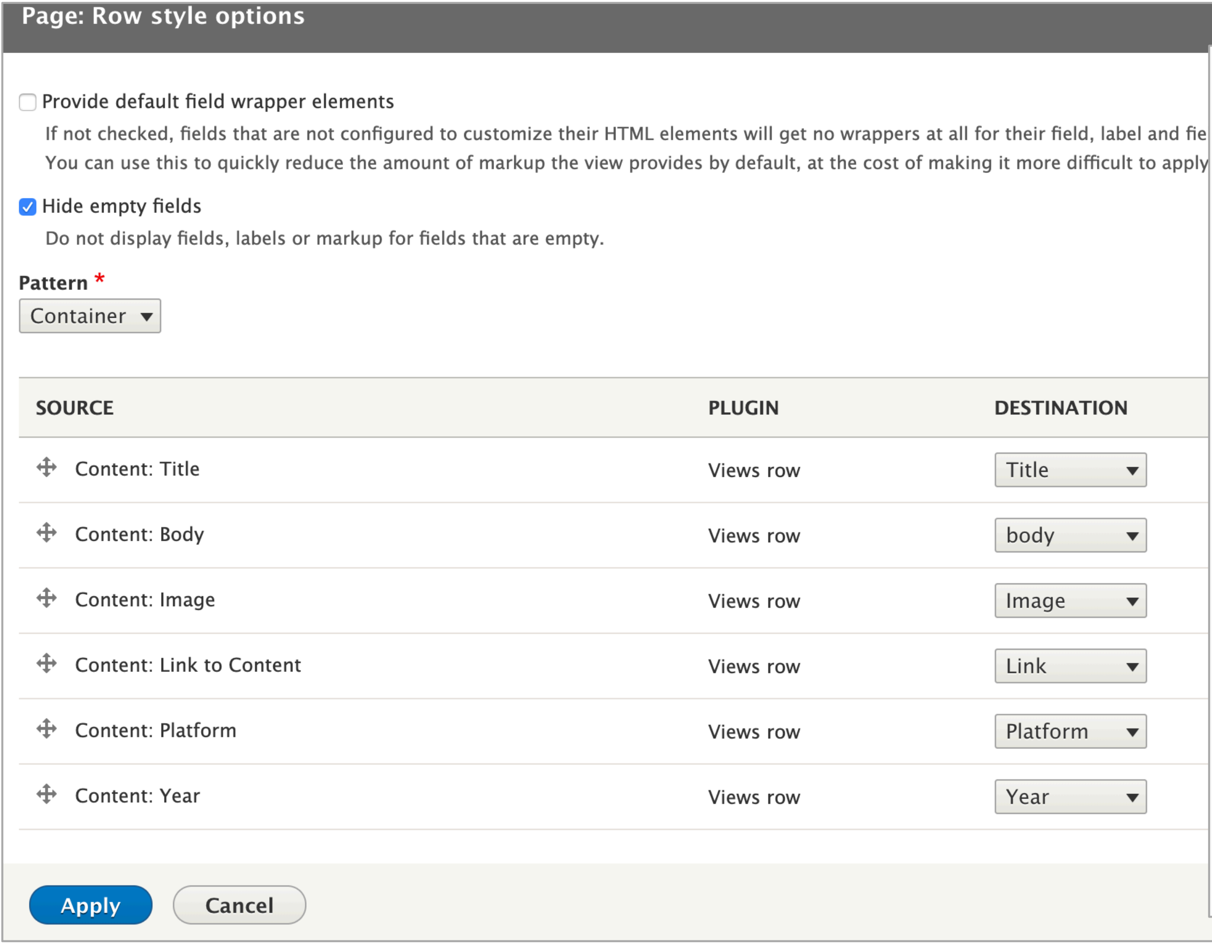
FOOTER

NO RESULTS BEHAVIOR

PAGER

Use pager: Mini | Mini pager, 10 items

More link: No



Page: Row style options ✕

□ Provide default field wrapper elements

If not checked, fields that are not configured to customize their HTML elements will get no wrappers at all for their field, label and fie
You can use this to quickly reduce the amount of markup the view provides by default, at the cost of making it more difficult to apply

☑ Hide empty fields

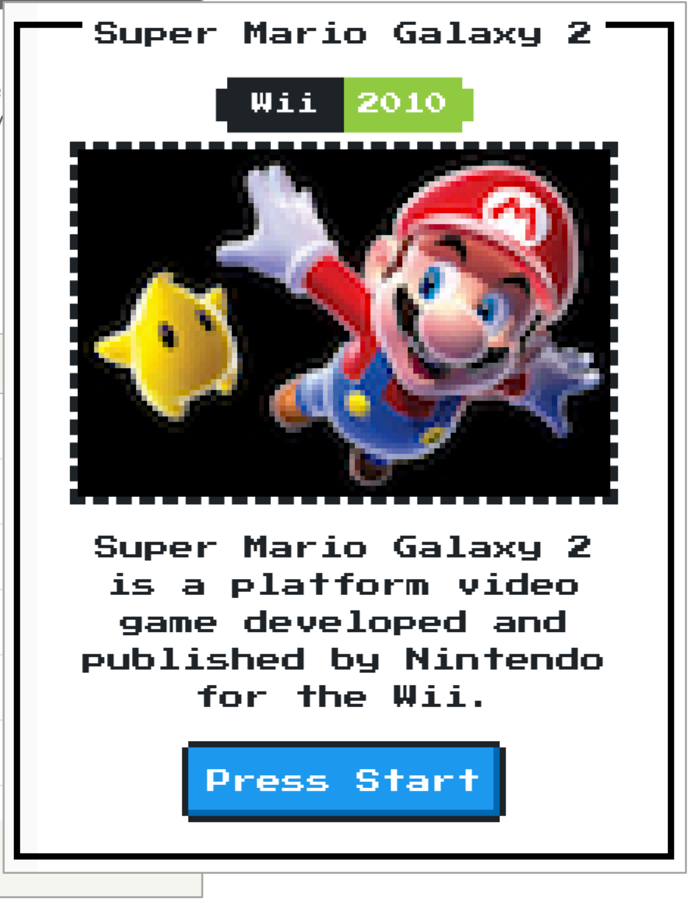
Do not display fields, labels or markup for fields that are empty.

Pattern *

Container ▾

SOURCE	PLUGIN	DESTINATION
✥ Content: Title	Views row	Title ▾
✥ Content: Body	Views row	body ▾
✥ Content: Image	Views row	Image ▾
✥ Content: Link to Content	Views row	Link ▾
✥ Content: Platform	Views row	Platform ▾
✥ Content: Year	Views row	Year ▾

Apply Cancel



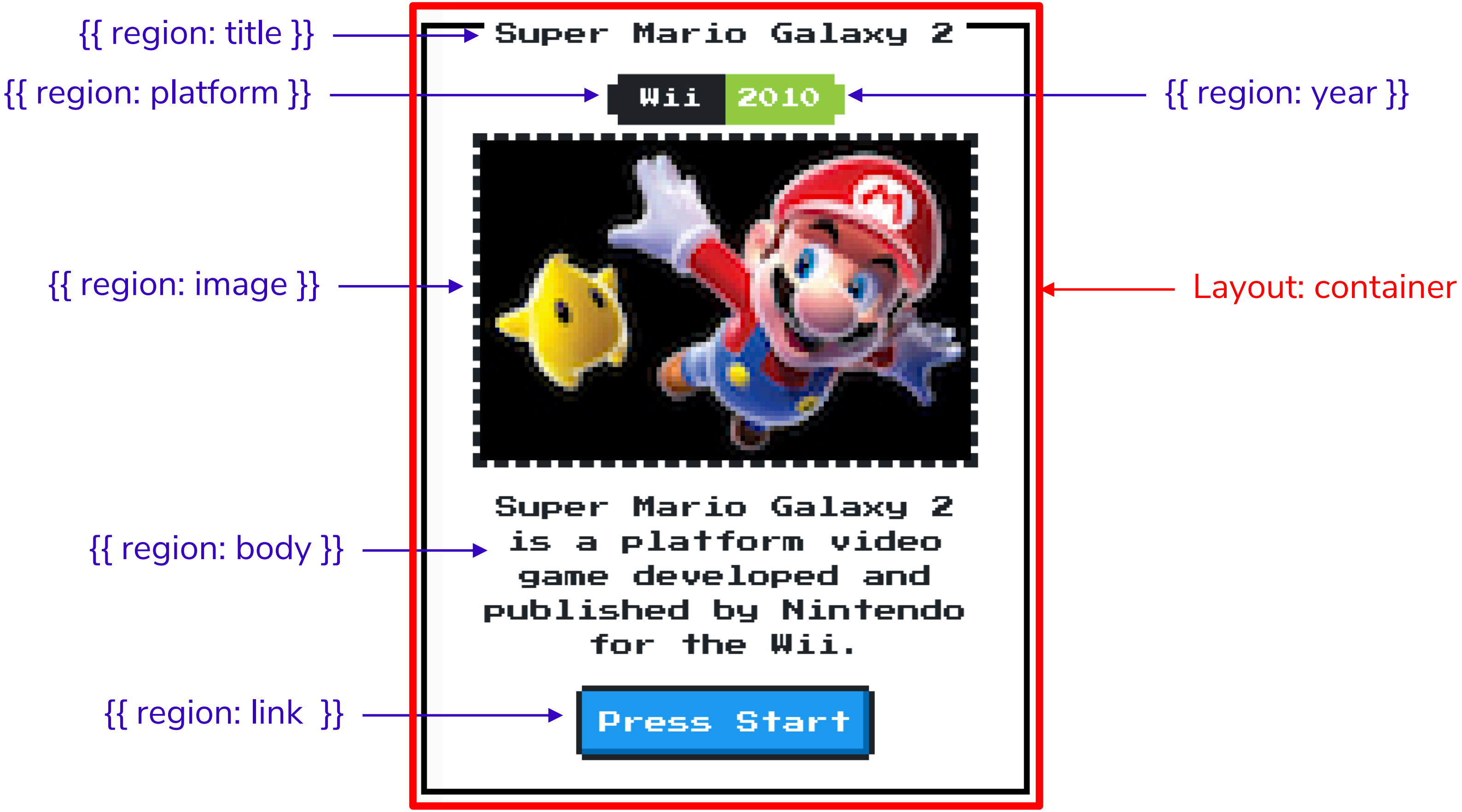
Super Mario Galaxy 2

Wii 2010

Super Mario Galaxy 2 is a platform video game developed and published by Nintendo for the Wii.

Press Start

LAYOUTS



{{ region: title }}

{{ region: platform }}

{{ region: year }}

{{ region: image }}

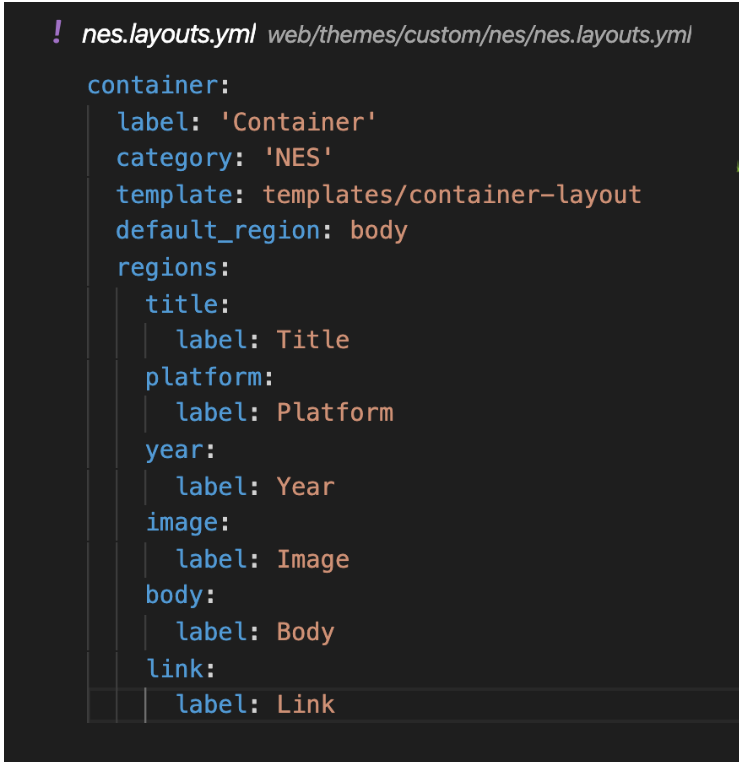
Layout: container

{{ region: body }}

{{ region: link }}

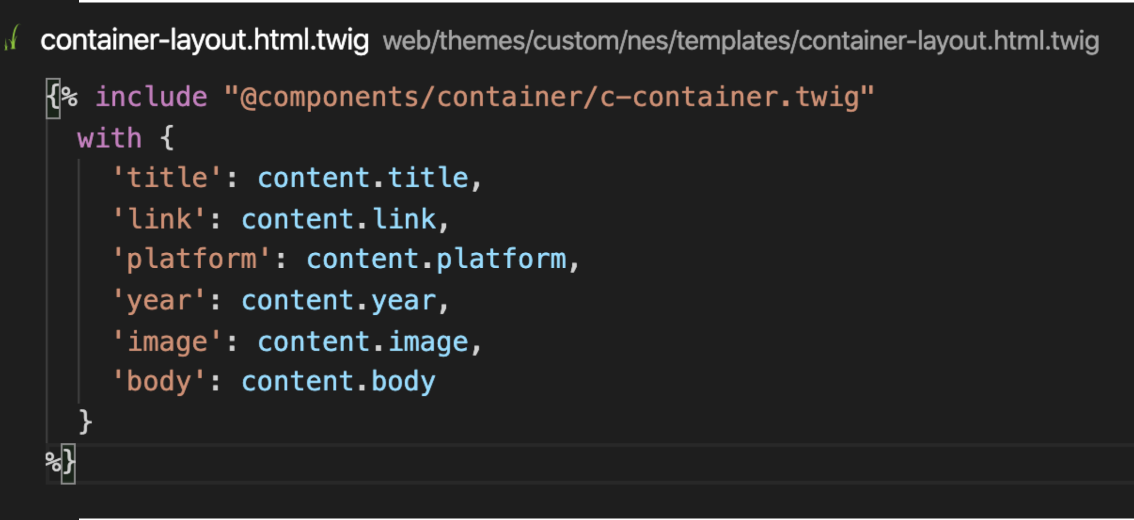
Super Mario Galaxy 2
Wii
2010
Super Mario Galaxy 2 is a platform video game developed and published by Nintendo for the Wii.
Press Start

LAYOUTS AND LAYOUT BUILDER



nes.layouts.yml *web/themes/custom/nes/nes.layouts.yml*

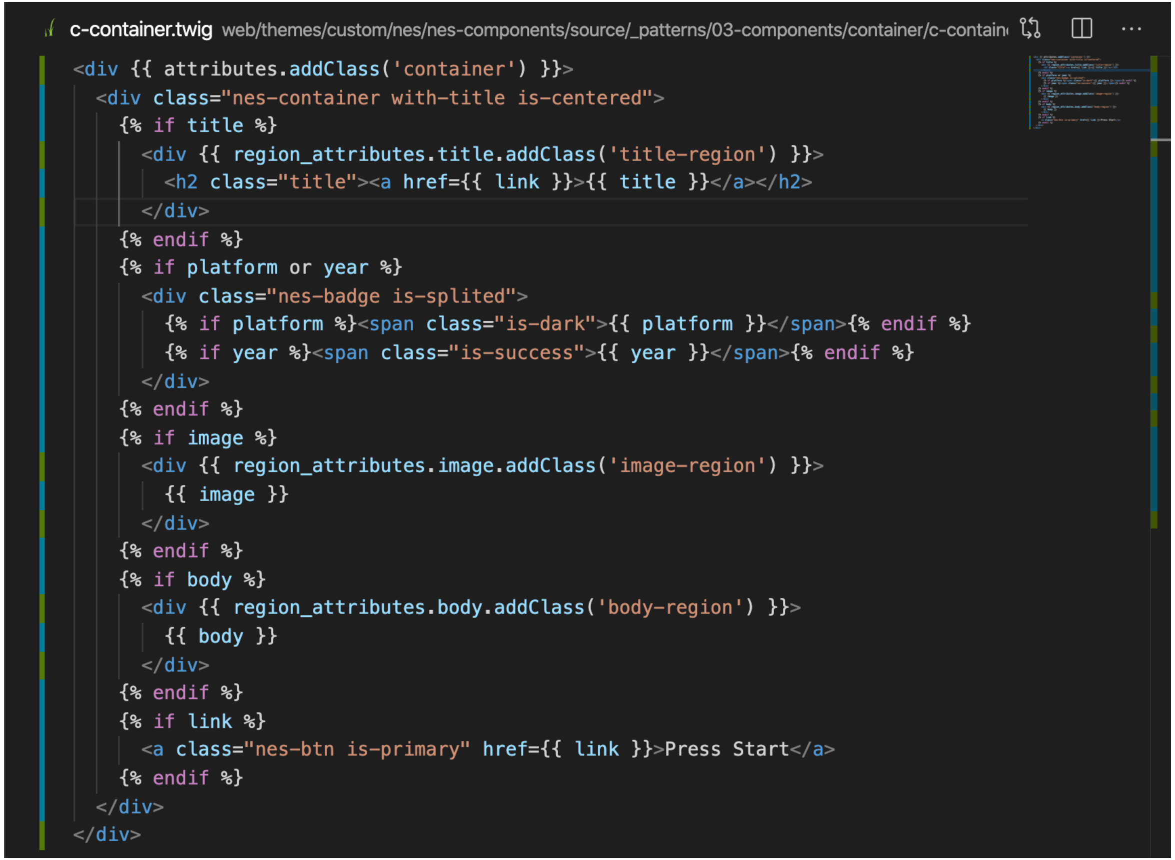
```yaml
container:
  label: 'Container'
  category: 'NES'
  template: templates/container-layout
  default_region: body
  regions:
    title:
      label: Title
    platform:
      label: Platform
    year:
      label: Year
    image:
      label: Image
    body:
      label: Body
    link:
      label: Link
```



container-layout.html.twig web/themes/custom/nes/templates/container-layout.html.twig

```twig
{% include "@components/container/c-container.twig"
  with {
    'title': content.title,
    'link': content.link,
    'platform': content.platform,
    'year': content.year,
    'image': content.image,
    'body': content.body
  }
%}
```

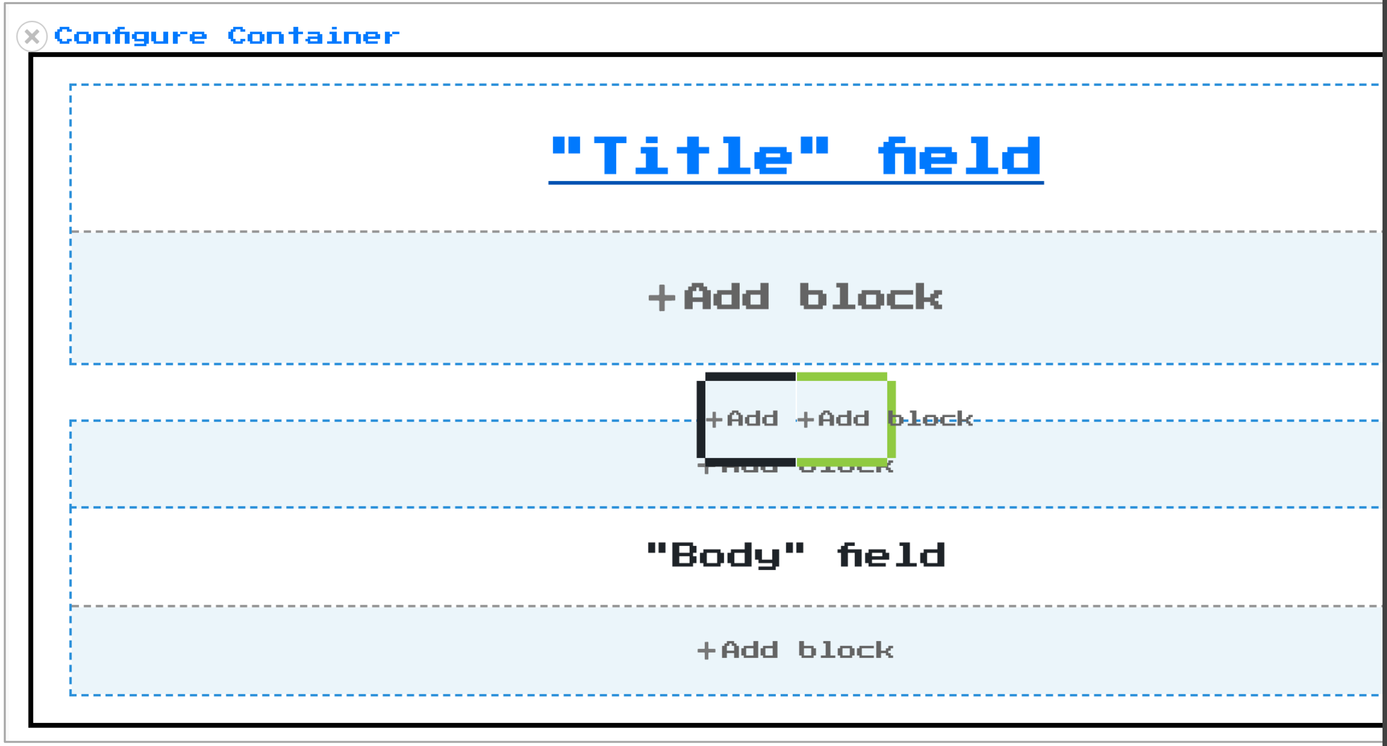
LAYOUTS AND LAYOUT BUILDER

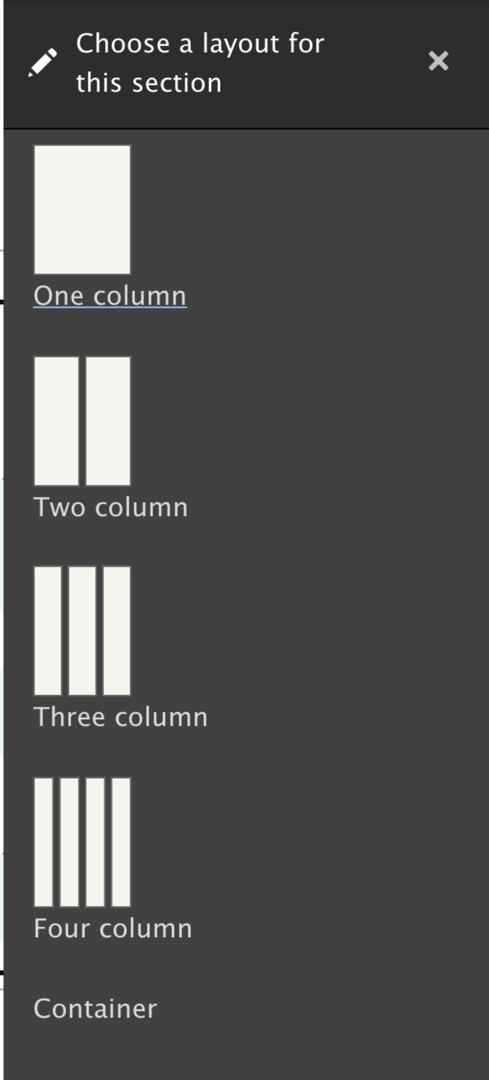

c-container.twig web/themes/custom/nes/nes-components/source/_patterns/03-components/container/c-contain

```
<div {{ attributes.addClass('container') }}>
  <div class="nes-container with-title is-centered">
    {% if title %}
      <div {{ region_attributes.title.addClass('title-region') }}>
        <h2 class="title"><a href={{ link }}>{{ title }}</a></h2>
      </div>
    {% endif %}
    {% if platform or year %}
      <div class="nes-badge is-splited">
        {% if platform %}<span class="is-dark">{{ platform }}</span>{% endif %}
        {% if year %}<span class="is-success">{{ year }}</span>{% endif %}
      </div>
    {% endif %}
    {% if image %}
      <div {{ region_attributes.image.addClass('image-region') }}>
        {{ image }}
      </div>
    {% endif %}
    {% if body %}
      <div {{ region_attributes.body.addClass('body-region') }}>
        {{ body }}
      </div>
    {% endif %}
    {% if link %}
      <a class="nes-btn is-primary" href={{ link }}>Press Start</a>
    {% endif %}
  </div>
</div>
```

LAYOUTS AND LAYOUT BUILDER

Add ‘container’ section for teaser layout





LAYOUTS AND LAYOUT BUILDER

Challenges:

- For full layout builder functionality, need to retain container and region attributes
- Need to be able to addClass and attributes functions in Pattern Library
- Some components might not be practical for visual field mapping
- Layout Builder UI introduces additional markup that may conflict with your component

COMPONENT DEFINITION APPROACHES

Manual Definition

- Define component in code so that Drupal becomes aware of it.
- Likely requires some amount of duplication between Drupal and component library

Automatic Discovery

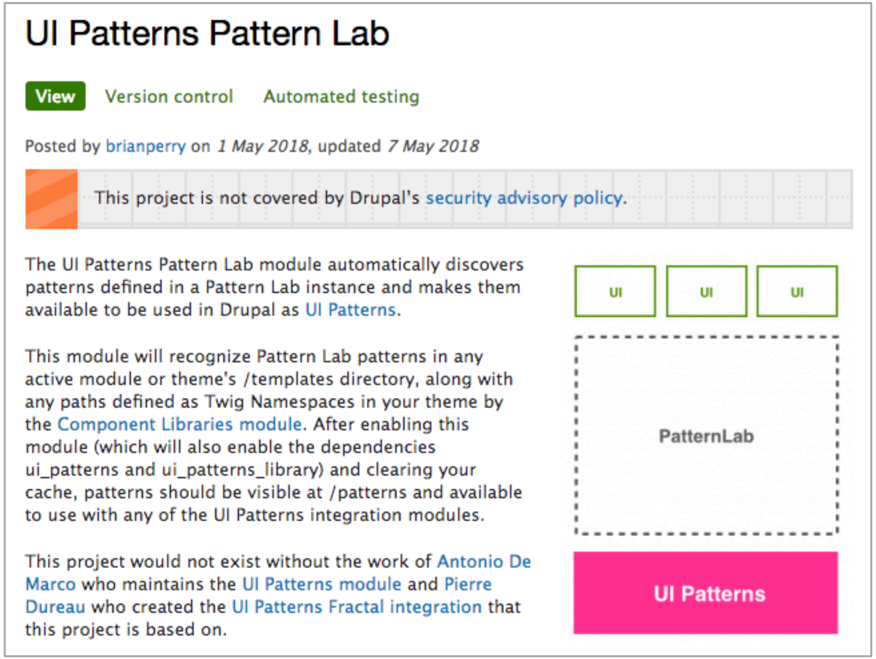
- Drupal module automatically discovers components from component library and makes them available to Drupal.
- Emerging/experimental concept.
- Expects a particular convention and thus won’t work with all component libraries.

AUTOMATIC DISCOVERY

UI PATTERNS PATTERN LAB

Automatically create UI Patterns from your pattern library… really.

- End result same as previous UI Patterns Example
- No redundant ui_patterns.yml file necessary
- Some limitations
  - Requires yml or json file with pattern data
  - Requires specific approach to nested components.



UI Patterns Pattern Lab

View Version control Automated testing

Posted by brianperry on *1 May 2018*, updated *7 May 2018*

This project is not covered by Drupal's security advisory policy.

The UI Patterns Pattern Lab module automatically discovers patterns defined in a Pattern Lab instance and makes them available to be used in Drupal as UI Patterns.

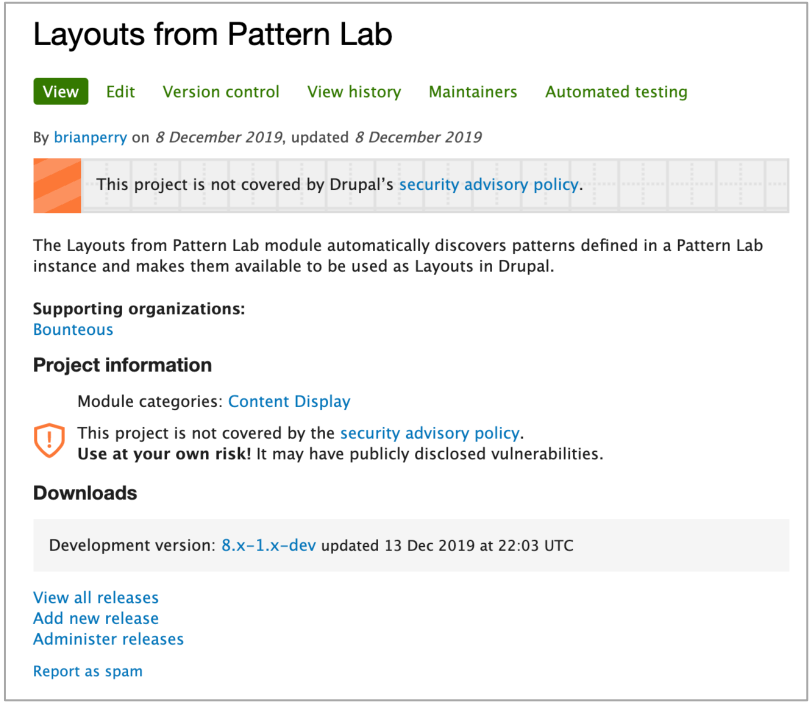
This module will recognize Pattern Lab patterns in any active module or theme's /templates directory, along with any paths defined as Twig Namespaces in your theme by the Component Libraries module. After enabling this module (which will also enable the dependencies ui_patterns and ui_patterns_library) and clearing your cache, patterns should be visible at /patterns and available to use with any of the UI Patterns integration modules.

This project would not exist without the work of Antonio De Marco who maintains the UI Patterns module and Pierre Dureau who created the UI Patterns Fractal integration that this project is based on.

LAYOUTS FROM PATTERN LAB

Automatically create Drupal Layouts from your pattern library… really.

- No explicitly defined layout necessary
- Use with Layout Builder
- Can select default field wrappers or only content (similar to UI Patterns)
- Early - many limitations
    - Need to work around Pattern Lab 3 not working with html.twig extension
    - Open issues with Layout Builder drag and drop.



Layouts from Pattern Lab

By brianperry on *8 December 2019*, updated *8 December 2019*

This project is not covered by Drupal's security advisory policy.

The Layouts from Pattern Lab module automatically discovers patterns defined in a Pattern Lab instance and makes them available to be used as Layouts in Drupal.

Supporting organizations:
Bounteous

Project information

Module categories: Content Display

This project is not covered by the security advisory policy.
Use at your own risk! It may have publicly disclosed vulnerabilities.

Downloads

Development version: 8.x-1.x-dev updated 13 Dec 2019 at 22:03 UTC

View all releases
Add new release
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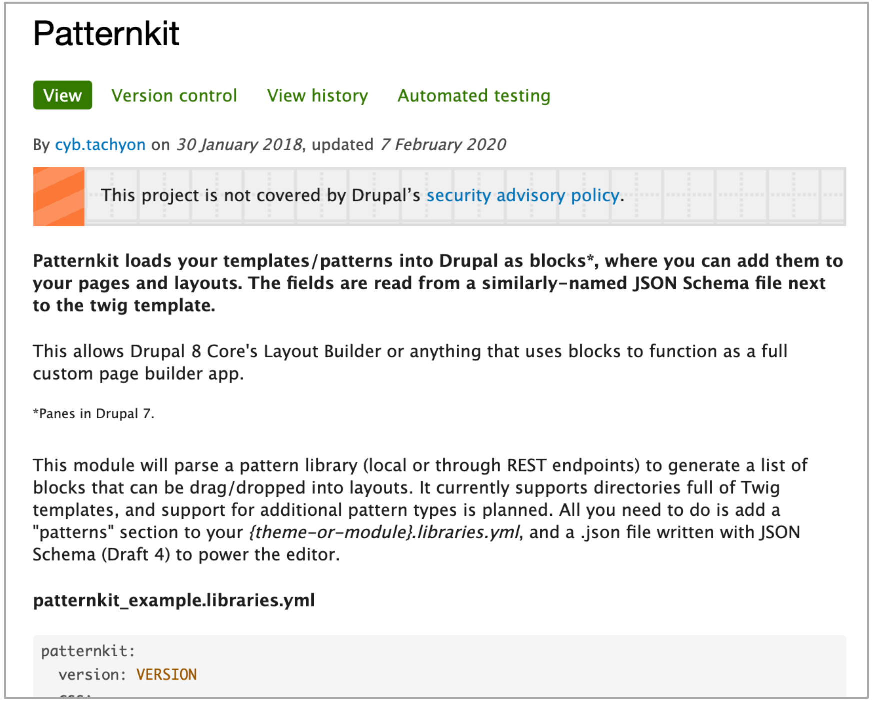
PATTERNKIT

Combines aspects of manual definition and automatic discovery

- Requires creating schema definition file (which has potential applications outside of Drupal)
- Automatically derives blocks from pattern library components
- Supports a specific set of field types
- Token support in D7 but not yet D8



Patternkit

By cyb.tachyon on *30 January 2018*, updated *7 February 2020*

This project is not covered by Drupal's security advisory policy.

Patternkit loads your templates/patterns into Drupal as blocks*, where you can add them to your pages and layouts. The fields are read from a similarly-named JSON Schema file next to the twig template.

This allows Drupal 8 Core's Layout Builder or anything that uses blocks to function as a full custom page builder app.

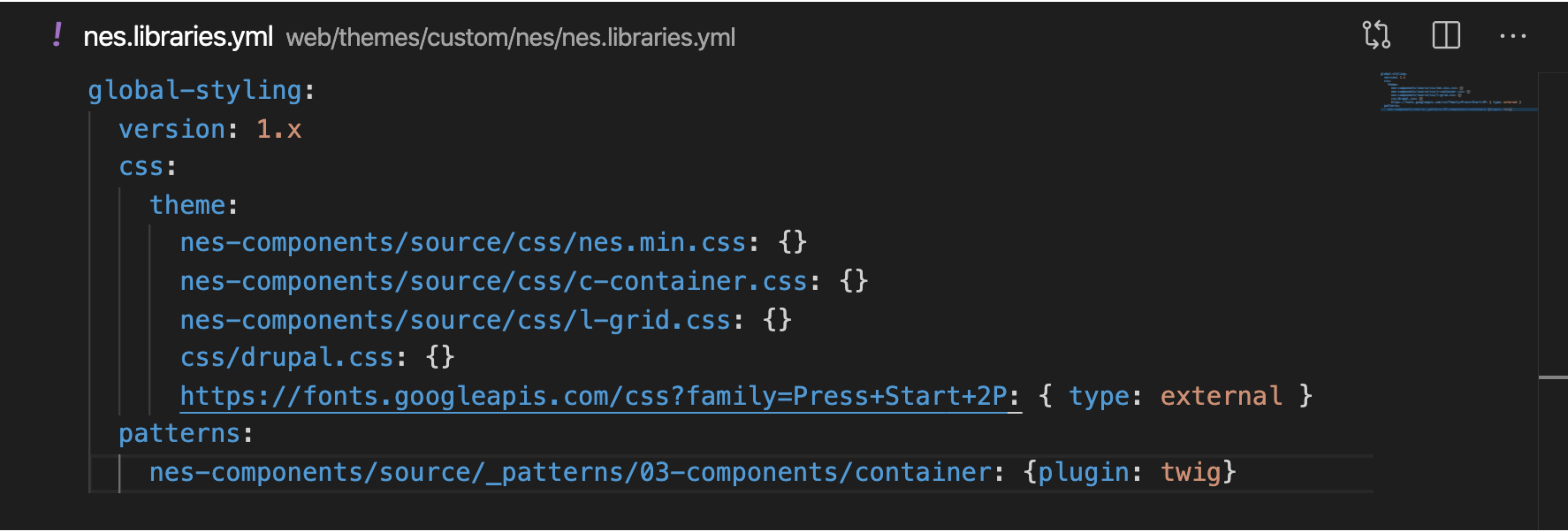
*Panes in Drupal 7.

This module will parse a pattern library (local or through REST endpoints) to generate a list of blocks that can be drag/dropped into layouts. It currently supports directories full of Twig templates, and support for additional pattern types is planned. All you need to do is add a "patterns" section to your *{theme-or-module}.libraries.yml*, and a .json file written with JSON Schema (Draft 4) to power the editor.

patternkit_example.libraries.yml

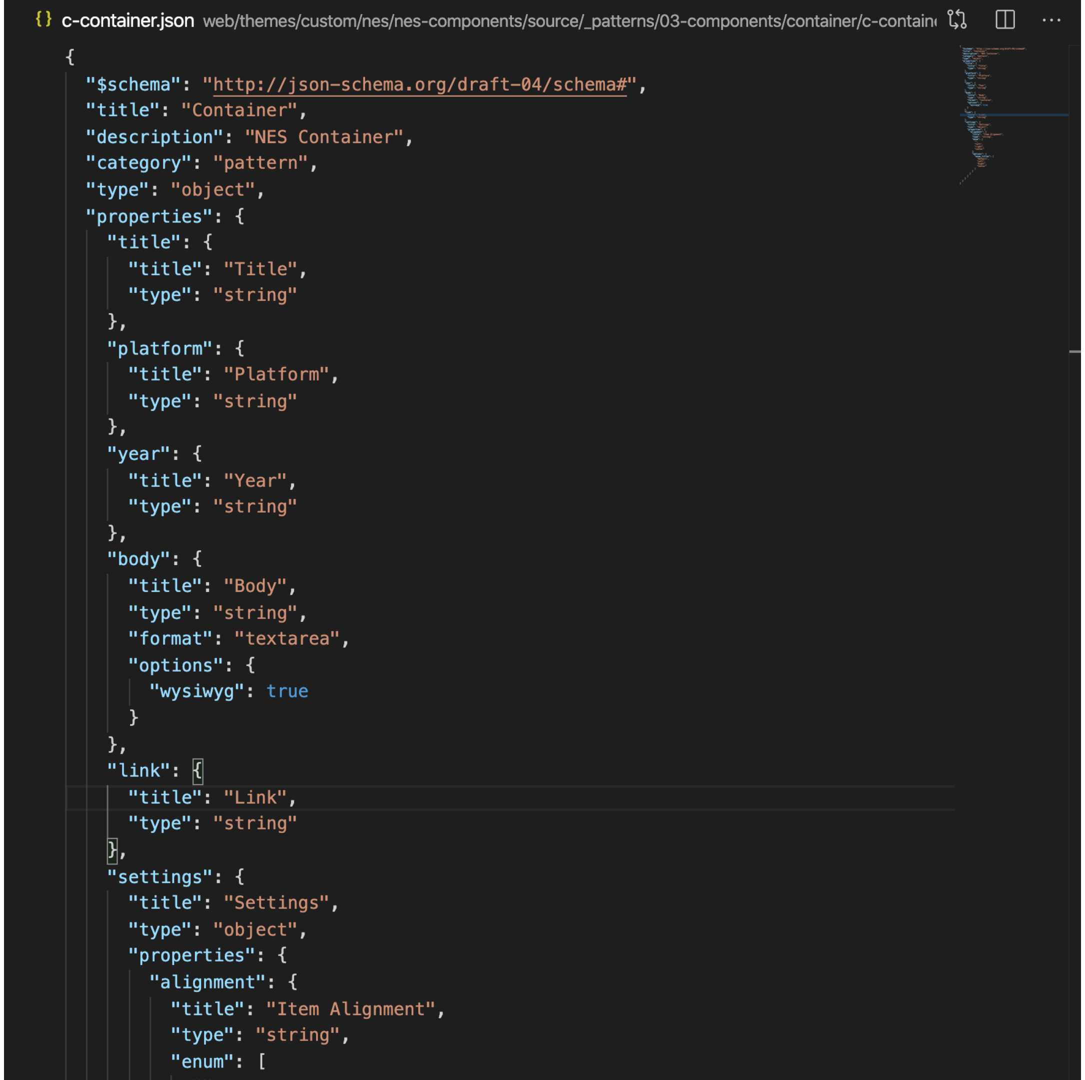
```
patternkit:
  version: VERSION
```

PATTERNKIT PATTERN DISCOVERY



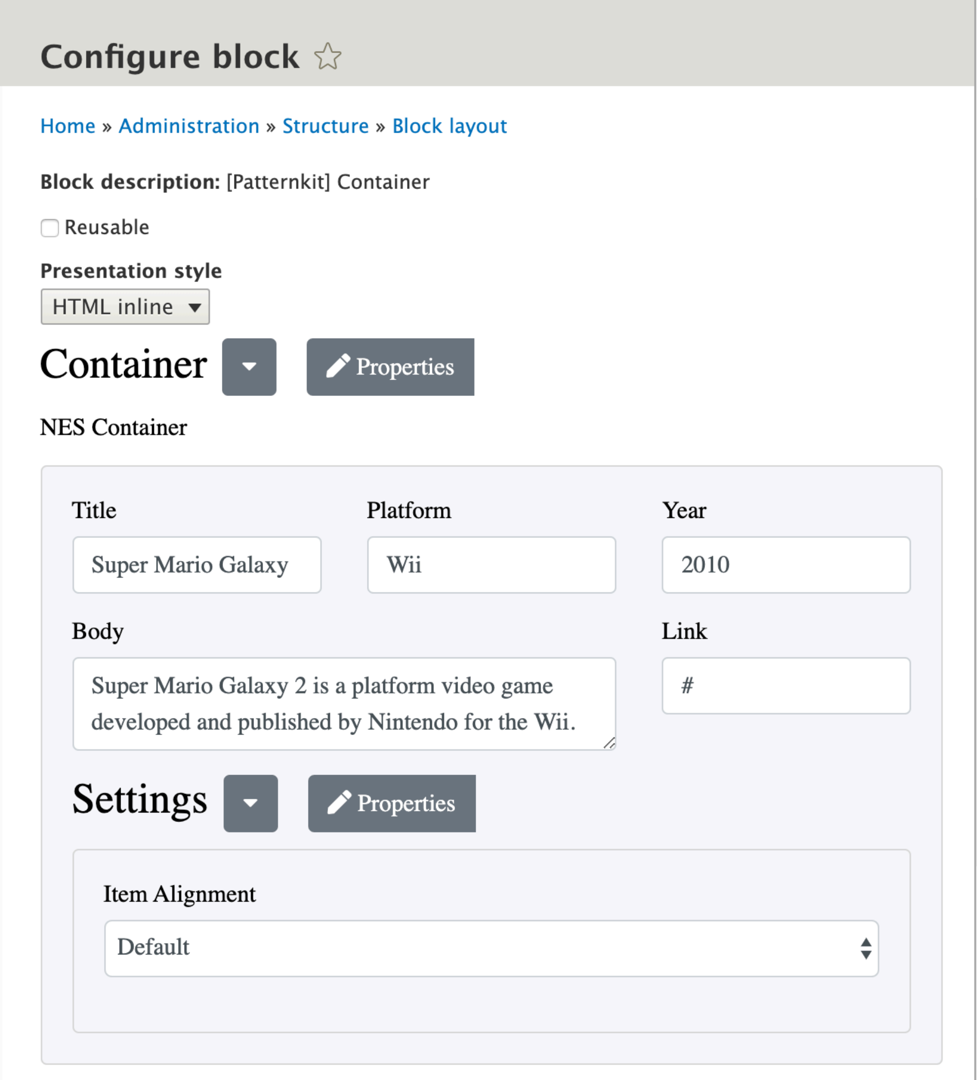
! nes.libraries.yml web/themes/custom/nes/nes.libraries.yml

```yaml
global-styling:
  version: 1.x
  css:
    theme:
      nes-components/source/css/nes.min.css: {}
      nes-components/source/css/c-container.css: {}
      nes-components/source/css/l-grid.css: {}
      css/drupal.css: {}
      https://fonts.googleapis.com/css?family=Press+Start+2P: { type: external }
  patterns:
    nes-components/source/_patterns/03-components/container: {plugin: twig}
```



c-container.json web/themes/custom/nes/nes-components/source/_patterns/03-components/container/c-containe

```
{
  "$schema": "http://json-schema.org/draft-04/schema#",
  "title": "Container",
  "description": "NES Container",
  "category": "pattern",
  "type": "object",
  "properties": {
    "title": {
      "title": "Title",
      "type": "string"
    },
    "platform": {
      "title": "Platform",
      "type": "string"
    },
    "year": {
      "title": "Year",
      "type": "string"
    },
    "body": {
      "title": "Body",
      "type": "string",
      "format": "textarea",
      "options": {
        "wysiwyg": true
      }
    },
    "link": {
      "title": "Link",
      "type": "string"
    },
    "settings": {
      "title": "Settings",
      "type": "object",
      "properties": {
        "alignment": {
          "title": "Item Alignment",
          "type": "string",
          "enum": [
```



Configure block ☆

Home » Administration » Structure » Block layout

Block description: [Patternkit] Container

□ Reusable

Presentation style

HTML inline ▾

Container

NES Container

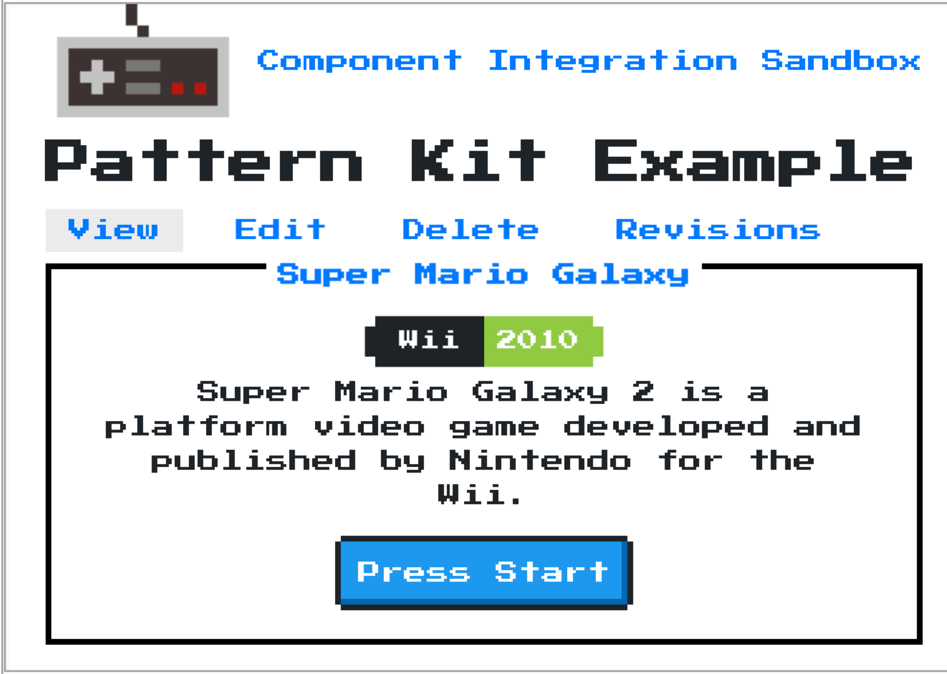
Title	Platform	Year
Super Mario Galaxy	Wii	2010

Body: Super Mario Galaxy 2 is a platform video game developed and published by Nintendo for the Wii.

Link: #

Settings

Item Alignment: Default



Component Integration Sandbox

Pattern Kit Example

Super Mario Galaxy

Wii 2010

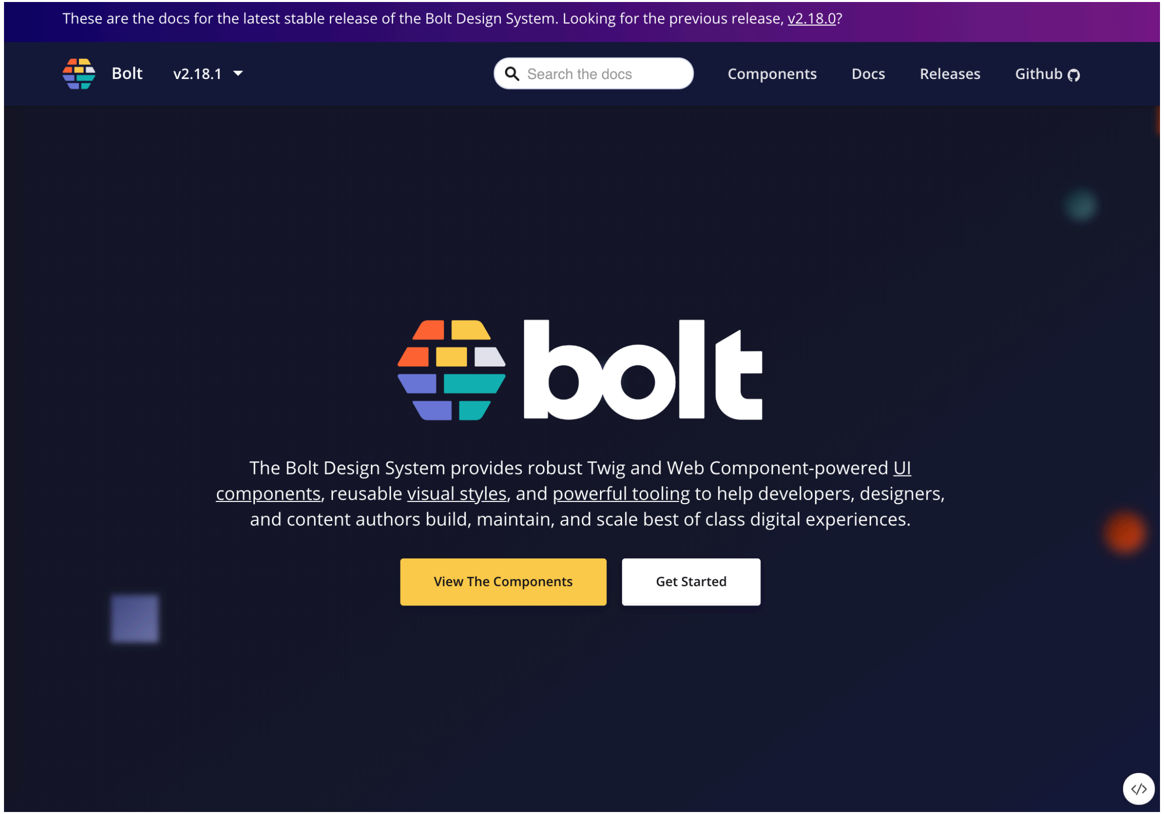
Super Mario Galaxy 2 is a platform video game developed and published by Nintendo for the Wii.

PRE-PACKAGED COMPONENT SOLUTIONS

BOLT DESIGN SYSTEM

Ready to use web-components

- Full design system
- Selectively require components.



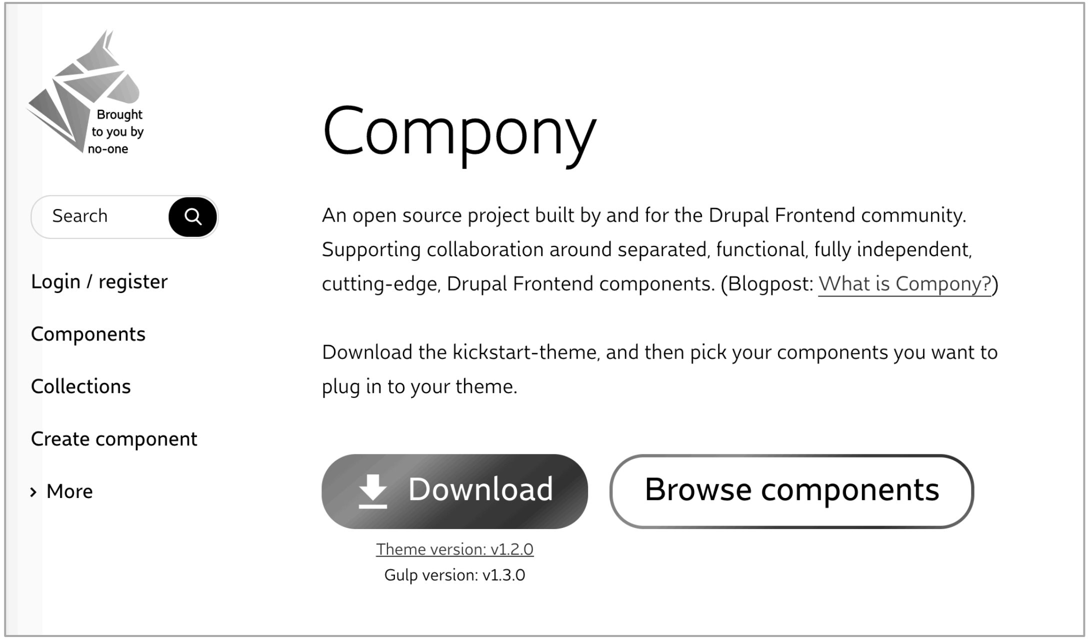
These are the docs for the latest stable release of the Bolt Design System. Looking for the previous release, v2.18.0?

The Bolt Design System provides robust Twig and Web Component-powered UI components, reusable visual styles, and powerful tooling to help developers, designers, and content authors build, maintain, and scale best of class digital experiences.

COMPONY

Component distribution system

- Combines a theme, Gulp workflow and components.
- Download existing components or create your own
- Not Composer / NPM driven



Compony

An open source project built by and for the Drupal Frontend community. Supporting collaboration around separated, functional, fully independent, cutting-edge, Drupal Frontend components. (Blogpost: What is Compony?)

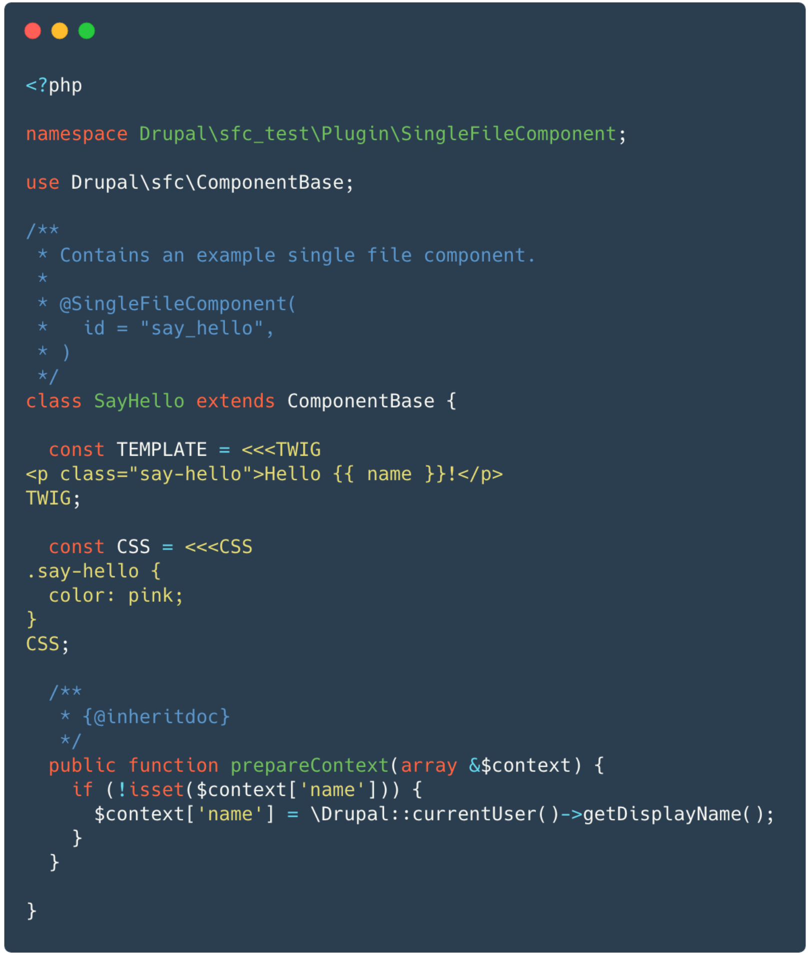
Download the kickstart-theme, and then pick your components you want to plug in to your theme.

Theme version: v1.2.0
Gulp version: v1.3.0

SINGLE FILE COMPONENTS

Drupal components with Vue style syntax

- Use like any template
- Automatically generates library definitions
- Derive Blocks and Layouts with Annotations
- Provides component library
- Doesn’t really solve integration problem
- Does help with distribution and re-use.



```php
<?php

namespace Drupal\sfc_test\Plugin\SingleFileComponent;

use Drupal\sfc\ComponentBase;

/**
 * Contains an example single file component.
 *
 * @SingleFileComponent(
 *   id = "say_hello",
 * )
 */
class SayHello extends ComponentBase {

  const TEMPLATE = <<<TWIG
<p class="say-hello">Hello {{ name }}!</p>
TWIG;

  const CSS = <<<CSS
.say-hello {
  color: pink;
}
CSS;

  /**
   * {@inheritdoc}
   */
  public function prepareContext(array &$context) {
    if (!isset($context['name'])) {
      $context['name'] = \Drupal::currentUser()->getDisplayName();
    }
  }

}
```

COMPONENT WORKFLOW

Present and Future

CURRENT APPROACH(ES)

Leveraging a mix of approaches

- Integrated components in a custom theme
  - Majority of twig/sass/js inside Pattern Library instance.
- Defining component mapping in Drupal UI for lightweight components
- Preprocess for components with heavy logic
  - Created preprocess helper abstract class – hope to open source in future
  - Project specific helper functions
- Build components compatible with Layout Builder
  - Custom block types with limited use of Paragraphs
- Limited mapping in twig templates

DREAM WORKFLOW

Basically React (or insert the name of your favorite JS framework here)

- Build fully packaged distributable components
- Easily install them
  - npm install cool-component / composer require drupal/cool-component
- Import them in code
  - import ‘CoolComponent’ from ‘cool-component’; / {% include ‘@components/cool-component.twig’ %}
- Use them as I see fit
  - <CoolComponent />

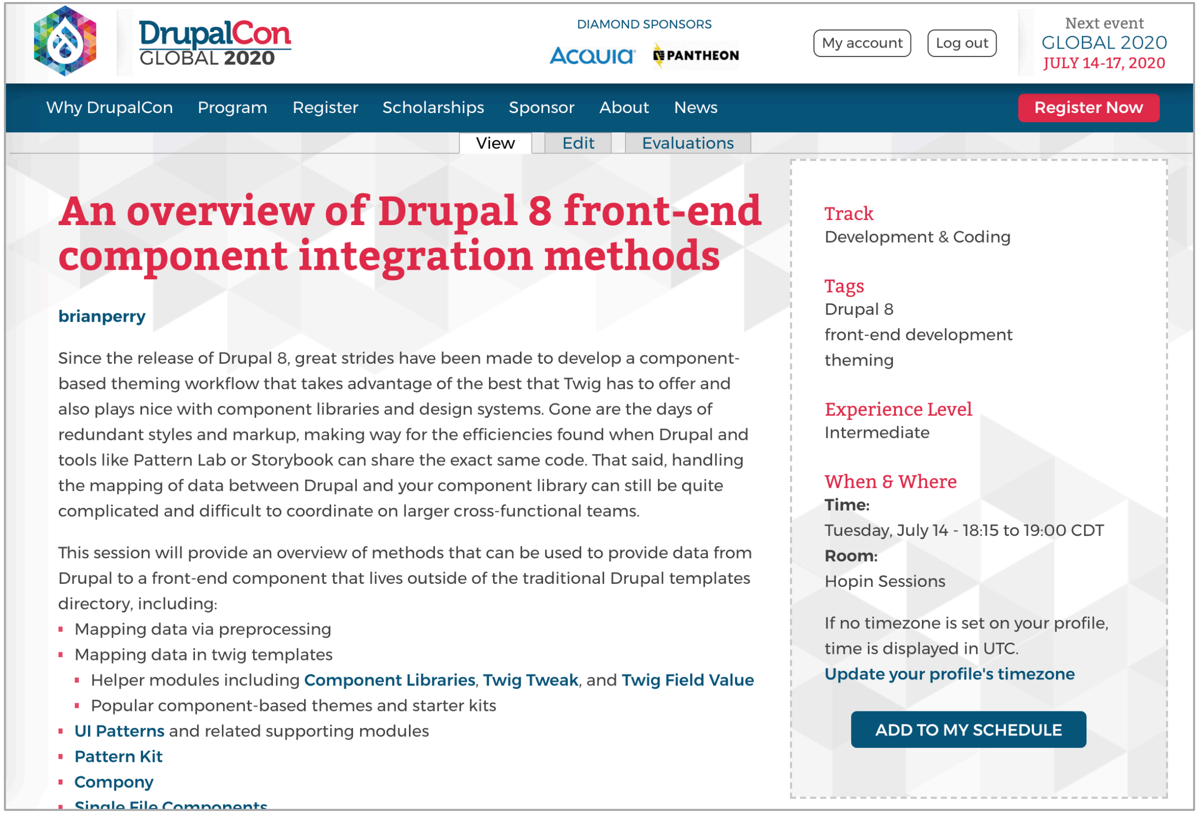
HOW DO WE GET THERE?

We seem to have a lot of the pieces

- Make it easier to package, distribute and use individual components
  - Track evolution of Web Components
- Improve UI based component configuration process in Drupal
  - With specific focus on Layout Builder.
- Evolve approaches allowing Drupal to automatically discover components
- Keep building amazing looking component based sites using Drupal

Thanks to the many **Drupal component ecosystem contributors!**

FEEDBACK APPRECIATED



An overview of Drupal 8 front-end component integration methods

brianperry

Since the release of Drupal 8, great strides have been made to develop a component-based theming workflow that takes advantage of the best that Twig has to offer and also plays nice with component libraries and design systems. Gone are the days of redundant styles and markup, making way for the efficiencies found when Drupal and tools like Pattern Lab or Storybook can share the exact same code. That said, handling the mapping of data between Drupal and your component library can still be quite complicated and difficult to coordinate on larger cross-functional teams.

This session will provide an overview of methods that can be used to provide data from Drupal to a front-end component that lives outside of the traditional Drupal templates directory, including:

- Mapping data via preprocessing
- Mapping data in twig templates
  - Helper modules including **Component Libraries**, **Twig Tweak**, and **Twig Field Value**
  - Popular component-based themes and starter kits
- **UI Patterns** and related supporting modules
- **Pattern Kit**
- **Compony**
- **Single File Components**

Track
Development & Coding

Tags
Drupal 8
front-end development
theming

Experience Level
Intermediate

When & Where
Time:
Tuesday, July 14 - 18:15 to 19:00 CDT
Room:
Hopin Sessions

If no timezone is set on your profile, time is displayed in UTC.
Update your profile's timezone

ADD TO MY SCHEDULE

Q&A

Brian Perry
Lead Front End Developer

Email: brian.perry@bounteous.com