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A HANDS-ON GUIDE TO FSE & BLOCK THEMES

BUILD YOUR DEVELOPER PORTFOLIO

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FSE IS NOT FOR SERIOUS DEVELOPERS.

You've heard it. Maybe you've said it.

- "theme.json feels like XML soup"
- "I lose precision"
- "My clients will break it"
- "Where is my template hierarchy?"

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THE COST OF WAITING

- Block themes are now the default. Twenty Twenty-Two onward.
- Classic theme reviews on wp.org are slowing.
- Clients ask for editor flexibility. Builders provide it. So can you — natively.
- The longer you wait, the bigger the gap.

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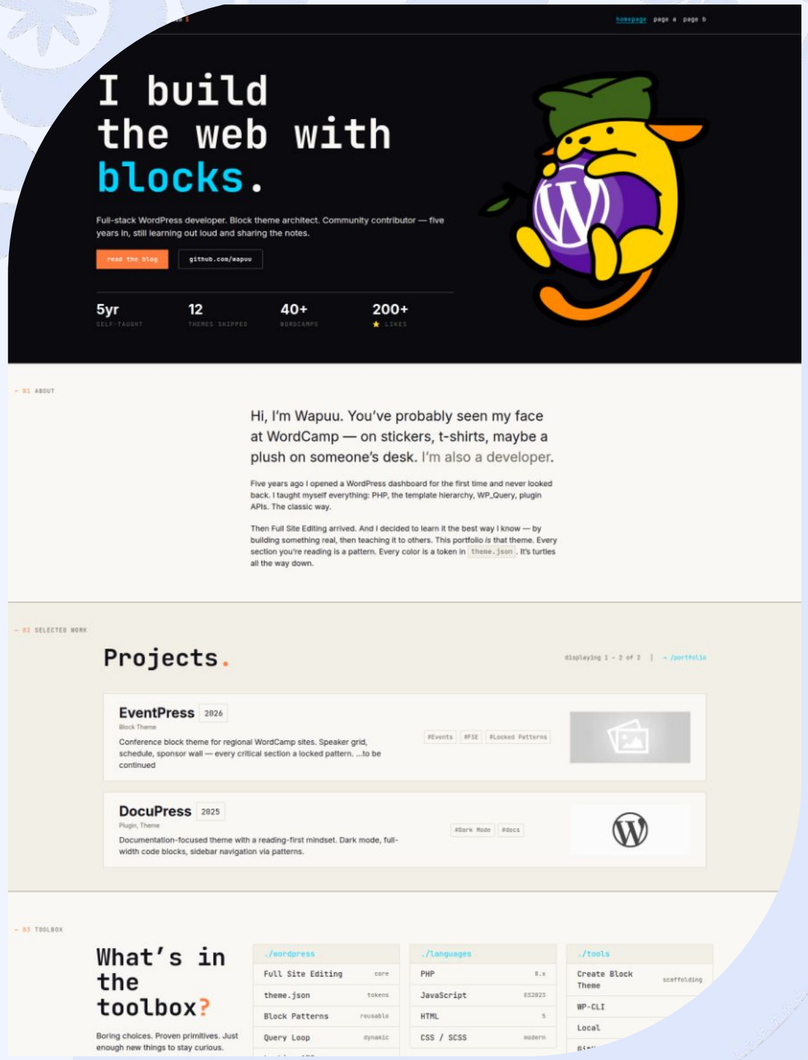
A REAL THEME. FROM SCRATCH. IN 75 MINUTES.

- A working block theme
- Dark mode developer portfolio
- 5 portfolio projects in a Query Loop
- Locked, client-proof layout



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THE FICTIONAL CLIENT: WAPUU

- Persona: self-taught WP dev, 5 years
- Wants: portfolio, blog, project showcase
- Doesn't want: a designer to maintain it
- This is who we're building for

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You wrote	Now it lives in
header.php	parts/header.html
footer.php	parts/footer.html
WP_Query loop	Query Loop block
get_template_part()	Pattern
wp_enqueue_style()	theme.json
page.php, single.php	templates/*.html

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WHAT'S ACTUALLY NEW

1. theme.json — design tokens as data, not code
2. Block templates — HTML files instead of PHP
3. Patterns — composable UI you can register
4. Query Loop block — WP_Query with a UI
5. Locking APIs — your client governance layer

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75 MINUTES, 5 GIT BRANCHES

Checkpoint	Branch	What's on it
~10 min	01-start	Empty theme via plugin
~25 min	02-styles	theme.json design system
~35 min	03-patterns	Patterns
~50 min	04-portfolio-archive	Query Loop
~65 min	05-governance	Locking, content-only

https://github.com/dvranic-code/portfolio-fse

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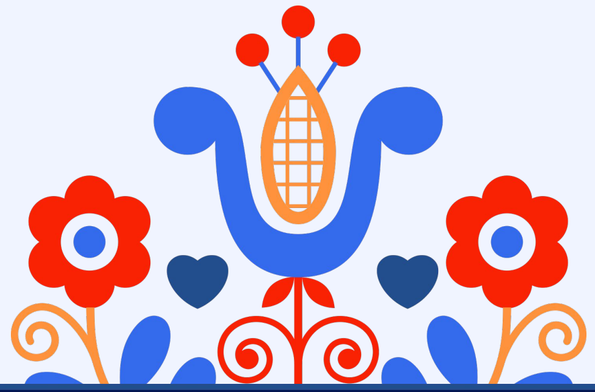
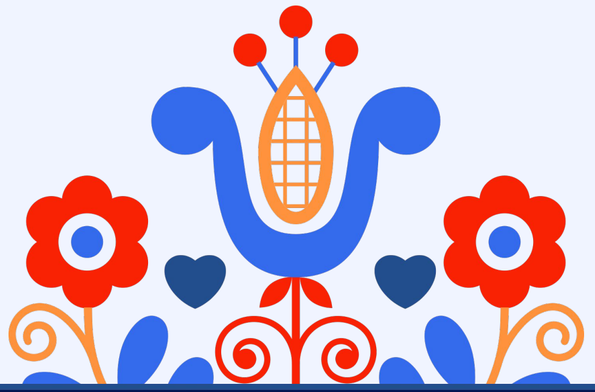
01_start

Scaffolding without writing a single file





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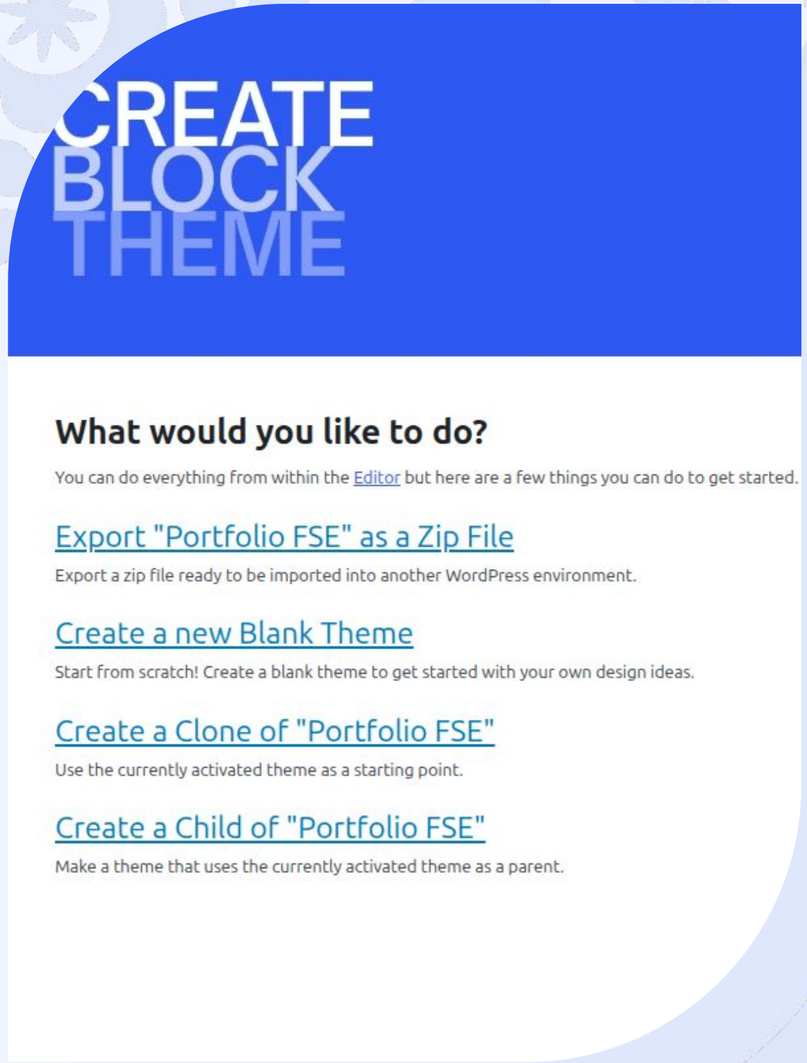
CREATE BLOCK THEME

- Maintained by the WordPress core team
- Free on wp.org
- Generates, clones, exports block themes from the editor
- We'll use "Create a new Blank Theme"

https://wordpress.org/plugins/create-block-theme/



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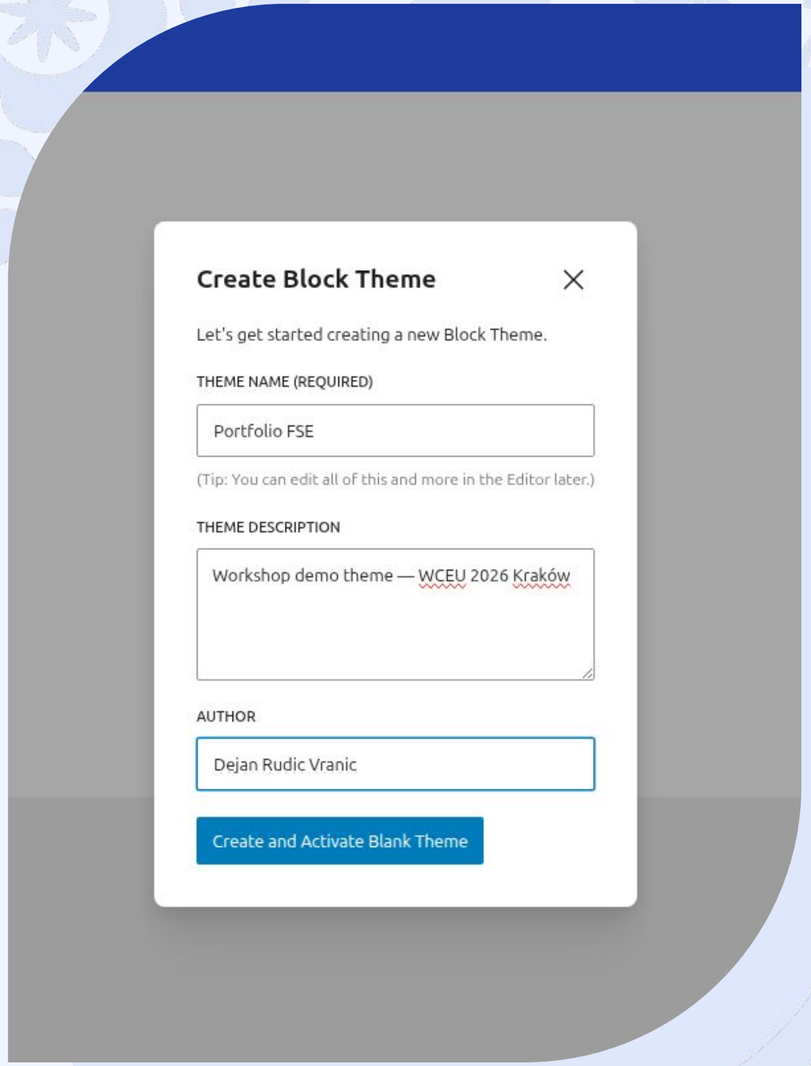
CREATE BLOCK THEME

- **Theme Name:** Portfolio FSE
- **Description:** Workshop demo theme — WCEU 2026 Kraków
- **Author:** your name



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WHAT THE PLUGIN GENERATED

```
portfolio-fse/
├── style.css
├── theme.json
├── parts/
│   ├── header.html
│   └── footer.html
├── templates/
│   └── index.html
├── readme.txt
└── screenshot.png
```

- 7 files
- ~57 KB
- 0 lines of PHP

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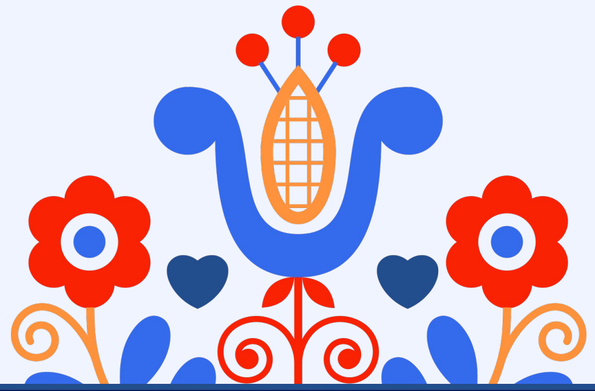
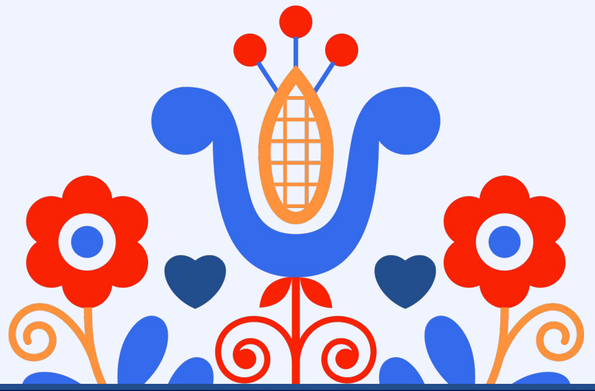
02_styles

The design system in one file





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WHAT IS THEME.JSON?

- Single source of truth for design tokens
- Replaces dozens of wp_enqueue_* calls in functions.php
- WordPress auto-generates CSS variables from it
- Editors read from it. Frontend reads from it. Same source.

```
portfolio-fse/
├── style.css      ← theme metadata only
├── theme.json     ← the entire design system
├── parts/
│   ├── header.html
│   └── footer.html
├── templates/
│   └── index.html
├── readme.txt
└── screenshot.png
```

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TWO HALVES. DON'T CONFUSE THEM.

SETTINGS

```
"settings": {
   "color": { "palette": [...] },
   "typography": { "fontSizes": [...] }
}
```

STYLES

```
"styles": {
   "typography": {
      "fontFamily": "var:preset|font-family|sans"
   }
}
```

Settings = the menu. Styles = what you ordered.

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COLORS - SEMANTIC, NOT VISUAL

- 12 colors mapped from the design reference
- Slugs are semantic (`accent-primary`), not visual (`cyan`)
- Why: swap `accent-primary` from cyan to orange without touching block markup
- `defaultPalette: false` removes WP's built-in colors

```
"color": {
  "defaultPalette": false,
  "palette": [
    {
      "slug": "background",
      "color": "#0a0a0f",
      "name": "Background"
    },
    {
      "slug": "accent-primary",
      "color": "#00d4ff",
      "name": "Accent Primary"
    },
    ...
  ]
}
```

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TYPOGRAPHY - SELF-HOSTED, TWO SLUGS

- Two families: Inter (sans), JetBrains Mono (mono)
- 4 weights each, woff2 only
- Self-hosted in `assets/fonts/`
- No Google Fonts at runtime
- Slugs are semantic again: `sans` and `mono`

8 woff2 files. ~320 KB total. Loaded by WordPress automatically.

```
"fontFamilies": [
  {
    "name": "Inter",
    "slug": "sans",
    "fontFamily": "Inter, -apple-system, ...",
    "fontFace": [
      {
        "fontFamily": "Inter",
        "fontWeight": "400",
        "fontStyle": "normal",
        "src": ["file:./assets/fonts/inter/inter-400.woff2"]
      },
      ...
    ]
  },
  ...
]
```

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FLUID TYPOGRAPHY VIA `clamp()`

- One toggle: `"fluid": true`
- Each size: min + max
- WordPress generates the `clamp()` math
- No media queries needed

```
"typography": {
  "fluid": true,
  "fontSizes": [
    {
      "slug": "huge",
      "name": "Huge",
      "size": "6rem",
      "fluid": {
        "min": "4rem",
        "max": "6rem"
      }
    }
  ]
}
```

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SPACING - ONE LINE, SIX TOKENS

- Geometric scale: each step = previous × 1.5
- Six steps from `~0.3rem` to `~2.25rem`
- Editor shows them in every block's spacing dropdown
- Replaces Tailwind's `p-1`, `p-2`, `p-4`, `p-8`...

```
"spacing": {
  "spacingScale": {
    "operator": "*",
    "increment": 1.5,
    "steps": 6,
    "mediumStep": 1,
    "unit": "rem"
  }
}
```

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THE 4 TOGGLES YOU'LL FORGET

Without these, WordPress core defaults pollute your design system.

Toggle	What it hides
`defaultPalette: false`	WP's built-in colors
`defaultGradients: false`	WP's built-in gradients
`defaultDuotone: false`	WP's duotone filters
`defaultFontSizes: false`	WP's `S/M/L/XL` font sizes

All four go inside their respective `settings` block.

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REFERENCE, DON'T REPEAT

- `styles` should never contain literal CSS
- Reference `settings` slugs via `var:preset|...`
- WordPress compiles to `var(--wp--preset--*)`

```
var:preset|font-family|sans
───  ──────  ───────────  ────
 │     │         │          │
 │     │         │          └─ slug from settings
 │     │         └─ category
 │     └─ "I'm a preset reference"
 └─ "I'm a CSS variable reference"
```

```
"styles": {
  "typography": {
    "fontFamily":
"var:preset|font-family|sans"
  },
  "elements": {
    "h1": {
      "typography": {
        "fontFamily":
"var:preset|font-family|mono"
      }
    }
  }
}
```

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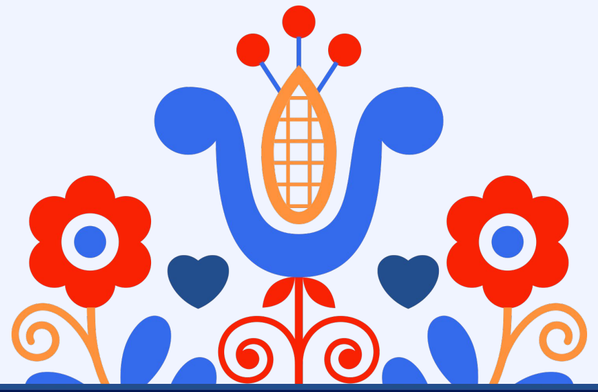
03_patterns

From `get_template_part()` to

`<!-- wp:pattern /-->`



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WHAT IS A PATTERN?

```php
// Classic PHP era

<?php
   get_template_part('parts/hero');
?>
```

- File include, runtime
- HTML hardcoded inside PHP
- Every change = code deploy
- Reuse tied to file location

```
// FSE era


<!-- wp:pattern {"slug":"portfolio-fse/hero"} /-->
```

- Block reference, parsed at render
- HTML lives as block markup
- Editable in Site Editor
- Reuse via slug (location-agnostic)

Patterns are **reusable block compositions**, not includes.

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WHAT IS A PATTERN?

```
<?php
/**
 * Title: Hero                              ← what users see
 * Slug: portfolio-fse/hero                 ← unique ID, theme-prefixed
 * Categories: portfolio-fse                ← inserter grouping
 * Description: Homepage hero section.      ← preview hover text
 * Keywords: hero, intro, landing           ← search terms
 * Block Types: core/post-content           ← starter for which contexts
 */
?>
<!-- wp:group ... -->
   <!-- block markup body -->
<!-- /wp:group -->
```

Header docblock = control panel. | Body = block markup.

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AUTO-REGISTRATION. NO PHP.

WordPress scans `patterns/*.php` on `init` hook. Header docblock is read. Pattern auto-registered.

```
themes/portfolio-fse/
├── functions.php
└── patterns/
    ├── hero.php                ← auto-registered
    ├── about-section.php       ← auto-registered
    └── work-list.php           ← auto-registered
```

No `register_block_pattern()` calls needed. Drop file, refresh editor, pattern exists.

Exception: Pattern **categories** must be registered in functions.php. WP doesn't infer them.

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WHERE DOES PHP STILL LIVE?

What	Why
`register_block_pattern_category()`	Custom inserter category
`register_post_type()`	Portfolio CPT
`register_taxonomy()`	Technologies + Project Types
`register_block_style()`	Primary/Secondary button variants
`wp_enqueue_style()`	Block themes don't auto-enqueue `style.css`

Five hooks, ~80 lines. Classic theme `functions.php` is ~400. **80% reduction is real.**

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show in rest: true-
THE FSE HANDSHAKE

```
register_post_type('portfolio', [
    'public'       => true,
    'has_archive'  => true,
    'show_in_rest' => true,    ← critical
    // ...
]);
```

Without it:

- ❌ Block Editor falls back to classic editor
- ❌ Query Loop block dropdown does NOT show your CPT
- ❌ Site Editor can’t create CPT templates

With it: Everything just works.

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YOU DON'T WRITE BLOCK MARKUP. YOU CONFIGURE IT.

1. Create new pattern HERO with Create Block Theme plugin
2. Open it, build visually in Site Editor
3. Save → "Save Changes to Theme"
4. Plugin writes block markup back to hero.php

Site Editor **IS** the IDE for blocks. Code editors only for: header metadata, lock attributes, namespaced class additions.

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WHEN `theme.json` IS NOT ENOUGH

```
Need to style something?
     │
     ├─ Closed elements set (button, link, h1–h6)?
     │    → theme.json styles.elements
     │
     ├─ Core block (paragraph, code, group)?
     │    → theme.json styles.blocks
     │
     └─ Anything else (code, mark, kbd, custom selectors)?
          → style.css with var(--wp--preset--*) tokens
```

`style.css` is **not auto-enqueued** in block themes. Manual `wp_enqueue_style` in `functions.php` is required. One of the few classic-era ceremonies that survives.

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QUERY LOOP IS MADE VISUAL

WP_Query

Classic PHP era:

```
$q = new WP_Query([
    'post_type'      => 'portfolio',
    'posts_per_page' => 5,
    'orderby'        => 'date',
    'order'          => 'DESC',
]);
while ($q->have_posts()) :
$q->the_post();

get_template_part('parts/project-card')
;
endwhile;
```

FSE era:

```
<!-- wp:query {"query":{
  "postType":"portfolio",
  "perPage":5,
  "orderBy":"date",
  "order":"desc"
}} -->
  <!-- wp:post-template -->
    <!-- wp:pattern
{"slug":"portfolio-fse/project-card"} /-->
  <!-- /wp:post-template -->
<!-- /wp:query -->
```

Same query. Same loop. Different syntax. **Configurable in UI.**

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CONTEXT FLOWS FROM POST TEMPLATE, NOT QUERY LOOP

```
Query Loop                          ← runs WP_Query
  └ Post Template                   ← iterates results
      └ ✓ post-title                 ← knows current post
      └ ✓ post-date                  ← knows current post
      └ ✓ post-excerpt               ← knows current post

Query Loop
  └ ✗ post-title                    ← OUTSIDE Post Template
                                       → shows sample data
  └ Post Template
```

`core/post-*` blocks must be **descendants of Post Template**. Siblings of Post Template do not get loop context.

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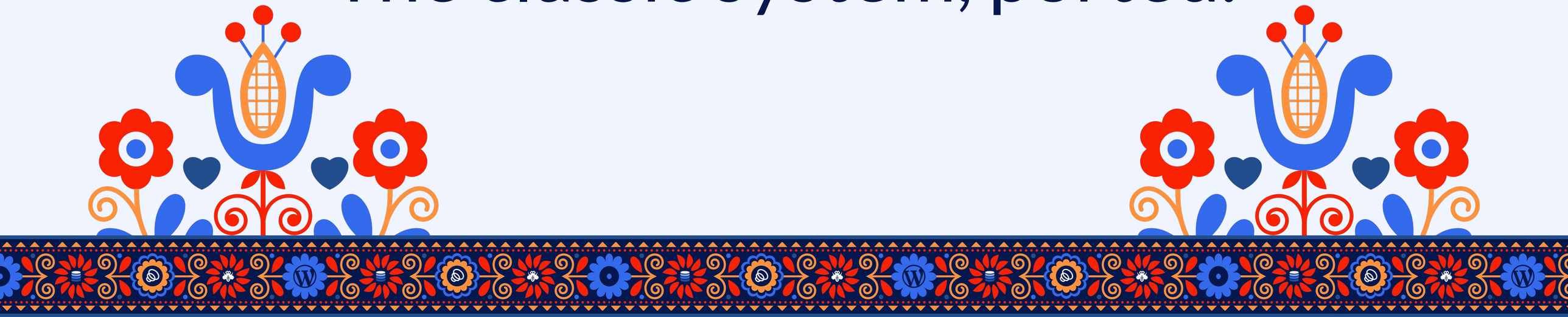
04_portfollo-archive

Templates & Hierarchy.
The classic system, ported.



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TEMPLATE HIERARCHY DIDN'T DIE. IT MOVED.

Classic PHP (root folder)	FSE (templates/ folder)
front-page.php	front-page.html
home.php	home.html
single.php	single.html
single-{post_type}.php	single-{post_type}.html
archive.php	archive.html
archive-{post_type}.php	archive-{post_type}.html
category.php	category.html
tag.php	tag.html
search.php	search.html
404.php	404.html
index.php	index.html

Same rules. New extension.
New folder.

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HOW WORDPRESS FINDS THE RIGHT TEMPLATE

Single project URL:

```
URL: /projects/wapuu-blocks/

WordPress checks (in order):

   single-portfolio.html        ← match. STOP.
   single-{post-slug}.html
   single.html
   singular.html
   index.html                   ← terminal fallback
```

Archive URL:

```
URL: /projects/

WordPress checks (in order):

   archive-portfolio.html       ← match. STOP.
   archive.html
   index.html                   ← terminal fallback
```

First match wins. `index.html` is the safety net.

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SINGLE TEMPLATE = NO QUERY LOOP

single.php (classic)

```php
<?php
while ( have_posts() ) :
    the_post();
    the_title();
    the_content();
    the_post_thumbnail();
endwhile;
?>
```

single.html (FSE)

```
<!-- wp:post-title /-->
<!-- wp:post-content /-->
<!-- wp:post-featured-image /-->
```

Post is implicit from URL.

No Query Loop. No Post Template wrapper.

`core/post-*` blocks work directly at template level.

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05_governance

Locking APIs.
Where FSE earns "**serious developer** " status.

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WHERE WE ARE

✓ "theme.json feels like XML soup"

→ answered in 02_styles

✓ "I lose precision"

→ answered in 02_styles

✓ "Where is my template hierarchy?"

→ answered in 04_portfolio-archive

→ **"My clients will break it"**

→ **we solve this now.**

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FOUR LOCK CONTROLS. THREE JOBS.

Control	Where it goes	What it does
`templateLock: "all"`	Template root or Group block	Editor cannot add or remove children
`templateLock: "insert"`	Template or Group block	Editor cannot add new blocks (can remove existing)
`lock: {"move": true, "remove": true}`	Per block	One block can't be moved or deleted
`templateLock: "contentOnly"`	Group block	Layout frozen. Text and media editable.

All four are JSON attributes. Zero PHP. Zero plugins.

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LAYER 1: LOCK THE STRUCTURE

```
templates/archive-portfolio.html

<!-- wp:group {"templateLock":"all"} -->

    <!-- wp:pattern {"slug":"portfolio-fse/archive-work-list"} /-->
    <!-- wp:pattern {"slug":"portfolio-fse/cta-banner"} /-->

<!-- /wp:group -->
```

✓ Editor can edit pattern content inside

✗ Editor cannot add new blocks at this level

✗ Editor cannot delete the patterns

✓ Page structure preserved

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LAYER 2: LOCK INDIVIDUAL BLOCKS.

```
patterns/hero.php

<!-- wp:group {
    "lock": {"move": true, "remove": true},
    "className": "hero-outer"
} -->

    <!-- hero content stays here -->

<!-- /wp:group -->
```

✓ Block stays in place

✗ Cannot be moved

✗ Cannot be deleted

✓ Other blocks around it remain editable

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LAYER 3: CONTENTONLY — THE KILLER FEATURE

Editor **SEES** the layout.

Can edit: text · images · links · post content

Can't edit: structure · layout · spacing · colors

Designer locks the design.

Editor owns the content.

Finally done right.

```
patterns/project-card.php

<!-- wp:group {"templateLock":"contentOnly"} -->

    <!-- wp:post-title /-->          ← editable text
    <!-- wp:post-excerpt /-->        ← editable text
    <!-- wp:post-featured-image /--> ← swappable image
    <!-- wp:post-terms /-->          ← editable taxonomy

<!-- /wp:group -->
```

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WHERE TO GO FROM HERE

Repository: github.com/dvranic-code/portfolio-fse

Official documentation:

- developer.wordpress.org/themes/
- developer.wordpress.org/themes/templates/template-hierarchy/
- developer.wordpress.org/themes/global-settings-and-styles/

Tools: Create Block Theme plugin

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THANK YOU!

studioagnis.com

@archiplace2015 on Make WP Slack

www.linkedin.com/in/dejan-rudic-vranic-nis/