**Website Front-End Style & Functionality Requirements**

**1. Introduction**

This document outlines the visual styling and specific interactive functionality required for the website's front-end, built using MkDocs and hosted on GitHub Pages. The goal is to achieve a modern, clean, and highly readable user interface that enhances the user experience, particularly for technical documentation.

**2. General Styling Requirements**

The website should adhere to a consistent aesthetic with a focus on readability and clear visual hierarchy.

**2.1. Core Typography & Body**

* **Font Family:** Use a modern sans-serif font stack. Prioritize Segoe UI (for Windows users), Tahoma, Geneva, Verdana, and a generic sans-serif as fallbacks.
* **Base Font Size:** 16px.
* **Line Height:** 1.6 for comfortable reading.
* **Text Color:** Dark gray (#333d47) for main body text to ensure good contrast.
* **Background Color:** Light, neutral background for the main page (#f0f2f5).
* **Font Rendering:** Ensure smooth font rendering (-webkit-font-smoothing: antialiased; -moz-osx-font-smoothing: grayscale;).

**2.2. Headings (H1-H4)**

Headings are critical for content structure and scannability.

* **Font Family for Headings:** A slightly more pronounced sans-serif font, such as Montserrat, should be used for all headings (H1-H6).
* **Font Weight:** Semi-bold (600) for all headings.
* **Line Height:** Tighter line height (1.25) for multi-line headings.
* **Spacing:** Consistent vertical spacing (1.8em top, 0.8em bottom) to separate content sections.
* **H1 (Main Title):**
  + **Font Size:** 2.8em.
  + **Color:** Slightly darker blue-gray (#1a2c3d).
  + **Bottom Border:** A subtle 2px solid #e0e6ed line.
  + **Bottom Margin:** 1em.
* **H2 (Major Sections):**
  + **Font Size:** 2.2em.
  + **Color:** Standard blue-gray (#34495e).
  + **Left Decorator:** A 6px x 6px circular accent (#3498db) positioned centrally on the left side of the heading text (position: absolute; left: 0; top: 50%; transform: translateY(-50%);).
* **H3 (Sub-Sections):**
  + **Font Size:** 1.7em.
  + **Color:** Muted blue-gray (#4a6572).
* **H4 (Minor Headings):**
  + **Font Size:** 1.3em.
  + **Color:** Softer blue-gray (#5d7a86).

**2.3. Paragraphs & Text Elements**

* **Paragraph Spacing:** 1.2em bottom margin.
* **Text Alignment:** Justified (optional, but preferred for a block look).
* **Links (<a>):**
  + **Color:** Accent blue (#3498db).
  + **Underline:** No default underline (text-decoration: none).
  + **Hover Effect:** Change color to a darker blue (#2980b9) and add an underline (text-decoration: underline).
  + **Transition:** Smooth color transition (transition: color 0.3s ease;).
* **Strong/Bold Text (<strong>):**
  + **Font Weight:** Stronger bold (700).
  + **Color:** Matches main heading color (#2c3e50) for emphasis.
* **Italic Text (<em>):**
  + **Font Style:** italic.
  + **Color:** Slightly muted gray (#5d7a86).

**2.4. Lists (Unordered & Ordered)**

* **Spacing:** 1.5em bottom margin for the entire list, 0.6em bottom margin for individual list items.
* **Indentation:** 25px left padding.
* **Line Height:** 1.5 for list items.

**2.5. Tables**

* **Width:** Full width (100%).
* **Borders:** Collapsed borders (border-collapse: collapse), 1px solid #e0e6ed for inner borders.
* **Padding:** 12px top/bottom, 15px left/right for cells.
* **Alignment:** Left-aligned text.
* **Header (<th>):**
  + **Background:** Accent blue (#3498db).
  + **Text Color:** White (#ffffff).
  + **Font:** 600 weight, uppercase, 0.9em font size.
* **Row Striping:** Alternate row backgrounds for readability (#f8faff for even rows).
* **Hover Effect:** Light blue background on row hover (#eaf6ff).
* **Visual Enhancements:** 6px border-radius and a subtle box-shadow: 0 2px 8px rgba(0, 0, 0, 0.05); for the entire table.

**2.6. Code Blocks (<pre>) & Inline Code (<code>)**

* **Code Blocks:**
  + **Background:** Dark gray (#2d2d2d).
  + **Text Color:** Light gray (#f8f8f2).
  + **Padding:** 1em.
  + **Border Radius:** 6px.
  + **Overflow:** overflow-x: auto for horizontal scrolling.
  + **Font:** Monospaced font stack (e.g., Fira Code, Cascadia Code, Consolas, Monaco, monospace).
  + **Font Size:** 0.9em.
  + **Line Height:** 1.5.
  + **Shadow:** box-shadow: 0 2px 8px rgba(0, 0, 0, 0.1);.
* **Inline Code:**
  + **Background:** Light gray (#e0e6ed).
  + **Text Color:** Subtle red (#c0392b).
  + **Padding:** 0.2em top/bottom, 0.4em left/right.
  + **Border Radius:** 3px.
  + **Font Size:** 0.9em.

**2.7. Horizontal Rules (<hr>)**

* **Style:** Thin, light gray line (1px solid #e0e6ed).
* **Spacing:** Generous vertical spacing (3em top/bottom).

**2.8. Callouts / Admonitions (MkDocs Extension Specific)**

If the MkDocs admonitions extension is enabled:

* **General Style:** 5px left border, 4px border-radius, light background, 1em 1.5em padding, 2em vertical margin, subtle box-shadow.
* **Title:** Bold, 1.1em font size, vertically centered with an optional emoji or icon (::before pseudo-element).
* **Type-Specific Colors:**
  + **Note:** Blue left border (#3498db), light blue background (#eaf6ff), darker blue title (#2980b9), 💡 icon.
  + **Tip:** Green left border (#27ae60), light green background (#e6ffee), darker green title (#219653), ✨ icon.
  + **Warning:** Orange left border (#f39c12), light orange background (#fff8e6), darker orange title (#d68910), ⚠️ icon.
  + **Danger:** Red left border (#e74c3c), light red background (#ffebeb), darker red title (#cc392b), 🚨 icon.

**3. Layout & Structure Requirements**

**3.1. Page Layout**

* **Main Container:**
  + Max width 1400px (or adjustable).
  + Centered on the page with auto horizontal margins.
  + White background (#ffffff), 8px border-radius, subtle box-shadow.
  + Inner padding (30px).
* **Content Area & Table of Contents (ToC):**
  + Use **CSS Grid** for the main layout.
  + Left Column (main-content): Occupy majority of space (e.g., minmax(auto, 800px)).
  + Right Column (table-of-contents): For the ToC (remaining space, 1fr).
  + 40px gap between columns.

**3.2. Table of Contents (ToC) Styling**

* **Positioning:** position: sticky; top: 20px; so it scrolls with the user.
* **Background:** Light blue (#f0f8ff), 1px solid #cfe2ff border, 8px border-radius, box-shadow.
* **Heading:** Centered, bold, blue title (#0056b3), with a bottom border (1px solid #cfe2ff).
* **List Style:** No default list markers (list-style: none).
* **Links:** Blue text (#007bff), block display with padding, smooth color and background-color transitions on hover.
* **Nested Items:** Indent nested list items (margin-left: 15px).

**4. Specific Functionality Requirements: Mermaid Diagrams Toggle**

This section details the behavior of the "Show Diagrams Expanded" toggle.

**4.1. Toggle Element & Location**

* **Element:** A checkbox (<input type="checkbox">) styled as a modern toggle switch.
* **Label:** "Show Diagrams Expanded".
* **Location:** Positioned **above** the main content container, aligned to the **right** of the page.
* **Default State:** The toggle should be **ON (checked)** by default when the page loads.

**4.2. Mermaid Diagram Structure**

* Each Mermaid diagram will be enclosed within a parent div with the class **mermaid-block**.
* The actual Mermaid code (e.g., graph LR; A-->B;) will be inside a child div with the class **mermaid-diagram-content**. This content might initially be within a <pre><code> block.
* The title for the expandable section will be provided via a **data-summary attribute** on the mermaid-block div (e.g., <div class="mermaid-block" data-summary="🌊 Power BI Ecosystem Flow">).
* **Critical:** When the Mermaid diagram text (e.g., graph LR; A-->B;) is programmatically handled (e.g., stored in a JavaScript variable, passed to the Mermaid API, or set as a data attribute), ensure that **the entire Mermaid definition string is correctly enclosed within double quotes** to maintain its integrity as a string literal. For instance, mermaid.mermaidAPI.render(id, "graph LR; A-->B;").

**4.3. Toggle Behavior**

* **When Toggle is ON (Checked):**
  + All Mermaid diagrams must be **fully expanded and visible** directly on the page.
  + They should *not* be wrapped in any dropdown (<details>) elements.
  + The mermaid-diagram-content div should be a direct sibling of the element it was originally placed next to in the Markdown.
* **When Toggle is OFF (Unchecked):**
  + All Mermaid diagrams must **remain visible**, but they should be **wrapped within a <details> / <summary> dropdown**.
  + The <summary> element should display the text from the data-summary attribute of its corresponding mermaid-block div, possibly bolded.
  + The <details> element should be styled (mermaid-details-wrapper class) to indicate it's an expandable section (e.g., with a small arrow icon, border, and background color, as demonstrated in the prototype).
  + The mermaid-diagram-content div will be nested inside this <details> element.

**4.4. Initial Page Load**

* On initial page load, the toggle will be **ON (checked)**.
* Consequently, all Mermaid diagrams should be **fully expanded and directly visible** by default.

**4.5. Technical Implementation Notes (for Developer)**

* **DOM Manipulation:** This functionality requires JavaScript to dynamically create and remove <details> and <summary> elements, moving the mermaid-diagram-content in and out of them.
* **Mermaid Initialization:** Ensure Mermaid diagrams are correctly initialized and re-rendered if necessary after DOM manipulation, especially when moving them between different parent elements. The mermaid.init() or mermaid.mermaidAPI.render() functions will be key.
* **Class Names:** Utilize the provided class names (mermaid-block, mermaid-diagram-content, mermaid-details-wrapper, toggle-switch, toggle-label) for consistent styling and JavaScript targeting.
* **Mermaid String Handling:** As mentioned in 4.2, ensure that when the Mermaid definition is extracted or passed around in JavaScript, it is handled as a **properly quoted string literal** to prevent parsing errors.

**5. Responsive Design**

The website should be fully responsive.

* **Desktop (>= 992px):** Maintain the two-column grid layout with content on the left and sticky ToC on the right.
* **Tablet & Mobile (< 992px):**
  + The layout should collapse into a single column, stacking the main content and the ToC vertically.
  + The ToC should lose its sticky positioning and appear below the main content (or above, if deemed more user-friendly).
  + The "Show Diagrams Expanded" toggle should shift to the **left** side of the page for better visibility on smaller screens.