Product Requirements Prompt (PRP)

Feature: Multi-Select Checkbox Filters (with Type)

Version: 2.0

Objective

To modify the index.html file to include three groups of dynamically generated, multi-select checkboxes for type, families, and tags. The JavaScript logic will be refactored into a final, unified filtering pipeline that correctly applies "OR" logic for types and "AND" logic for families and tags.

Execution Plan

Phase 1: HTML Structure Modification (index.html)

1. **Add Type Filter Container:**
   - Locate the <aside> element (the sidebar).
   - **Above** the existing #families-filter-container, add a new container <div> with id="type-filter-container". This ensures the correct display order.

Phase 2: JavaScript Logic Refactoring & Implementation (index.html)

The main script block will be updated to handle the third filter category and its unique logic.

1. **Update State Management:**
   - The activeFilters state object will be updated to include the new category: const activeFilters = { types: new Set(), families: new Set(), tags: new Set() };.
2. **Update populateFilters() Function:**
   - The function will be extended to also extract, sort, and render checkboxes for the type field, appending them to the new #type-filter-container.
3. **Update applyAllFilters() Function:**
   - The filtering pipeline will be updated to the following

sequence:

- **a. Text Search:** The existing text search logic will be applied first.
- **b. Type Filter (OR Logic):** If activeFilters.types is not empty, the results will be filtered. A plugin will be included if its type matches **any** of the types in the activeFilters.types set.
- **c. Families Filter (AND Logic):** The results from the type filter will be passed to the families filter. A plugin must contain **all** of the selected families to pass.
- **d. Tags Filter (AND Logic):** The results from the families filter will be passed to the tags filter. A plugin must contain **all** of the selected tags to pass.
- **e. Render:** The final, fully filtered array will be passed to the renderCards() function.

Final Review

- Confirm that three distinct sets of checkboxes for Type, Families, and Tags are dynamically generated and displayed in the correct order in the sidebar.
- Test the "OR" logic for the Type filter (e.g., selecting "instrument" and "fx" shows both types).
- Test the "AND" logic for Families and Tags.
- Test the full pipeline by combining text search, a type selection, and multiple family/tag selections to ensure the final result is correct.

Approval Request: The Product Director is requested to review this PRP. Upon approval, the Code Engine will proceed with the execution phase.