DECOUPLED DAYS 2021
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Introducing Vuer

Background

- Drupal Outline Module
    - Used Drupal Javascript
    - Outline similar to a Drupal Book
    - Also similar to Taxonomy
        - Vocabulary is an Outline
        - Term is an Outline Entry
        - Entries organized heirarchicaly
        - Entries be stand alone piece of content or they can provide a wrapper for any Drupal Entity

- Drupal Javascript Modernization Initiative
    - Goal was to provide Admin UI functionality in a React App
    - Attempted to integrate Outline module

- Vuer
    - Drupal General Project
    - Component based approach
        - Generic Web Components
        - Decoupled Menus Initiative
        - Druxt

What does Vuer do?

- Improved Content Editing Interface for Drupal
    - drag n drop, undo/redo, graphical workflow, etc.

- Improved Book Publishing
    - Outlines can reference any Drupal entity, not just Book nodes
    - Ability to publish an outline as a document, e.g. pdf
    - Open outlines multiple Drupal servers simultaneously

- Improved Drupal Administrative UI
    - Taxonomy editing
    - Permissions
    - Workflow
    - Status Report

Technical Architecture

Front End

- Vue / Vuex / Vuetify SPA
- Druxt
- GraphQL / Apollo

Back End

- Drupal / GraphQL
- Node.js

Vue / Vuex / Vuetify

- Vue has an easy to understand templating syntax.

- Vuex state management
  - Similar to React Redux

- Vuetify provides Material Design components.

Druxt

- Nuxt for Drupal
    - https://nuxtjs.org

- Requires a Drupal module and JS library
    - https://www.drupal.org/project/druxt
    - https://github.com/druxt

- Provides Vue components for rendering and editing Drupal entities.
    - Currently these components communicate directly with Drupal using JSON API.
    - The long term goal is to create Vue components that wrap Generic Web Components made available by the Drupal Core team.
    - Other Druxt components are provided too, e.g. site, menu, blocks, views, etc.

Backend

- Drupal
  - Requires Outline, Druxt and GraphQL modules
  - Druxt components communicate using JSON API
  - Vuer components communicate to Drupal using GraphQL.

- Node.js
  - Provides a place to save Vuer configuration
  - Nuxt server side rendering
  - Puppeteer screen scraping

Drupal

- Drupal Entities
    - A strength of Drupal is its robust entity support.
    - Entities are "fieldable"
    - Entities can have multiple display and edit modes.
    - Vuer can be thought of as a "Drupal entity editor" where the entities can be organized in a hierarchy.
- Drupal Core Taxonomy module similarities
    - Outline module code was a fork of the D8 Core Taxonomy module.
    - Outline is a Drupal configuration entity similar to a Taxonomy Vocabulary
    - Outline Entry is a content entity similar to Taxonomy Term
- Major differences
    - Outline Entry has only one parent
    - Outline Entry may not have custom fields
    - Outline Entry Base fields include name, content, expansion state, and entity reference
    - Link between servers
- Entity Reference Field
    - Allows an Outline Entry to point too any valid Drupal Entity
    - Outline Entry becomes a wrapper around a Drupal Entity

Development Environment

- Easy install
  - npm i
  - Defaults to test endpoint, so Drupal install not required.
- Vue Plugin
- Lando
- VS Code
- Drupal treated as an npm package
- Provides a starting point for developing custom Vue apps that use Drupal as the back end.

Roadmap

- Content Editing
    - Integrate Druxt editing components
    - Drag/Drop, Undo/Redo, Spell Check
- Book and Taxonomy Integration
    - Editing
    - Migration
    - Export PDF
- Auto-generate outlines / outline entries
    - e.g. Book of sale items on e-Commerce site
- Drupal Views Support
- Native App
    - Content editing could be done on a mobile device!
- PDF replacement
    - Create stand alone books using Browser plugins
- Static Generation

Code Walkthrough

- Drupal Outline Module
    - Based on Drupal Core Taxonomy Module where a Vocabulary is an Outline, and a Term is an Outline Entry.
- Vue App
    - Vuex
    - GraphQL/Apollo
    - Follows Nuxt project structure