### **Gamified LMS Single Page Application**

Build a Single Page Application (SPA) for an educational LMS course with gamification, YAML/JSON-driven content, and a modular architecture.

### **Functional Requirements**

1. **Single Page Application (SPA)** using React.
2. **Two main layouts:**
   * Two-column layout (Video + Sidebar)
   * Full-screen layout (Quiz or Activities)
3. **Left Sidebar** for navigating modules and pages.
4. **Top/Bottom Navigation Buttons** for next/previous page.
5. **Settings Button** to mute/unmute global audio.
6. **Embedded Video Player** on applicable pages.
7. **Gamification:**
   * Page/module completion tracking.
   * Visual indicators (checkmarks, locks).
   * Progress bar and optional badges or animations.

### **Content Architecture**

Content should be **driven by YAML or JSON files**:

* Modules have nested activities → activities have pages.
* Each page has:  
  + content.yml: actual instructional content
  + Page.js: component to render the page
  + en.json: localization text (optional)
  + Page.scss: styles for this page

### **Project Folder Structure**

css

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/src

├── components/ # Reusable components (Sidebar, Button, Player)

├── layouts/ # TwoColumnLayout, FullPageLayout

├── modules/

│ ├── module-1/

│ │ ├── activities/

│ │ │ ├── activity-1/

│ │ │ │ ├── page-1/

│ │ │ │ │ ├── content.yml

│ │ │ │ │ ├── Page.js

│ │ │ │ │ ├── en.json

│ │ │ │ │ └── Page.scss

├── locales/

│ ├── course-menu/

│ │ └── en.json

│ ├── navigation-menu/

│ │ └── en.json

├── styles/

│ ├── \_global.scss

│ └── main.scss

### **Technical Stack**

* **React + React Router** for SPA routing
* **SCSS** for styling
* **YAML** via js-yaml for content parsing
* **i18next** or react-intl for localization
* **Context API** or Zustand for app-wide state
* **react-player** or native <video> tag for videos

### **Gamification Features**

* Completion state stored in localStorage or context.
* Lock/unlock future modules based on progress.
* Confetti or badge for course completion.
* Progress bar on sidebar or header.

### **Deliverables**

* A working SPA using React that dynamically loads course content from YAML/JSON.
* Ability to switch layouts based on page type.
* Clear navigation and progress tracking.
* Responsive and accessible UI.