

VEDIUM PROJECT - MASTER ENGINEERING PLAN

1. PROJECT IDENTITY & SECURITY

- **Project Name:** Vedium
- **Production Domain:** `vedium.com.br`
- **Local Development:** `http://vedium.localhost` (No ports like `:8000` allowed in URL)
- **Repository:** `https://github.com/ivonsmatos/vedium.git`
- **Security Level:** High (Role Based Access Control - RBAC)
 - **Rule 1:** No secrets/API Keys in Git. Use `site_config.json` or Environment Variables.
 - **Rule 2:** All API endpoints must be whitelisted and permission-checked.
 - **Rule 3:** Strict separation between `frappe/lms` (Core) and `vedium_core` (Custom App).

2. STACK & ARCHITECTURE

- **Core:** Frappe Framework v15
- **LMS Engine:** Frappe LMS v15
- **Database:** MariaDB 10.6+
- **Caching:** Redis (Queue, Cache, Socketio)
- **Frontend:** Jinja2 Templates + Tailwind CSS (Must be configured via build process)
- **AI Engine:** Groq API (Low Latency) via Python Controller.

3. UI/UX DESIGN SYSTEM ("Raízes de Luxo")

- **Philosophy:** Hybrid between "MasterClass" (Cinematic) and "Duolingo" (Gamified).
- **Color Palette (Dark Mode Default):**
 - `bg-slate-900` (`#0f172a`) - Primary Background
 - `bg-slate-800` (`#1e293b`) - Surface/Cards
 - `text-indigo-500` (`#6366f1`) - Primary Action/Brand
 - `text-emerald-500` (`#10b981`) - Portuguese Track
 - `text-orange-600` (`#ea580c`) - Yoruba Track
- **Responsiveness:** Mobile-First approach.

4. PWA & OFFLINE-FIRST STRATEGY

- **Goal:** Native App feel on Android/iOS.
- **Manifest:**

- `display : "standalone"`
- `start_url : "/lms"`
- `background_color : "#0f172a"`
- **Service Worker Strategy:**
 - **Cache First:** For Assets (Images, CSS, JS, Fonts).
 - **Network First:** For dynamic content (Lessons, Quiz results).
 - **Offline Fallback:** Custom "You are offline" page with cached menu navigation.
 - **Storage:** Use IndexedDB for keeping user progress locally before syncing.

5. REPOSITORY STRUCTURE (Crucial for Git)

We only version the custom app. The framework is infrastructure.

```
vedium-bench/
├─ apps/
│   ├── frappe/ (Ignored)
│   ├── lms/ (Ignored)
│   ├── ...
│   └─ vedium_core/ <-- THIS IS LINKED TO GITHUB (ivonsmatos/vedium)
│       ├── .git/
│       ├── vedium_core/
│       │   ├── public/ (CSS/JS/Images)
│       │   ├── templates/ (Jinja Overrides)
│       │   └─ hooks.py
│       └─ ...
```