

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
│       └── ...

```