DAS SYSTEM

Master Blueprint: Static Architecture, Linguistic Logic & Memory Science

System Architect: Static-First, Zero-DB
Target: Free, Ad-Supported, SEO-Dominated
Stack: Next.js 14, MDX, JSON Objects

Linguist: Logic-Based, No Rote Memorization
Learning Science: Forced Recall, Micro-Logic
Audience: Poor Student -> Fluent Speaker

1. The "Memory Lock" System (Core Philosophy)

Principle: German structures must get "stuck in the learner's brain automatically." We achieve this through repetition, not memorization.

> **Rule #1: Micro-Logic Rule**
> One grammar page = One mental rule.
> *Bad:* "German Nouns"
> *Good:* "The -ung Rule: Predicting Gender"

> **Rule #2: Pattern First, Exception Last**
> Teach the dominant pattern (99% accuracy). Show exceptions ONLY after the pattern is internalized.

> **Rule #3: Forced Recall > Passive Reading**
> Every page must include a Prediction Task, Fill-the-Gap Logic Test, or "Guess Before Reveal" component. No passive scrolling.

> **Rule #4: Spaced Reinforcement via Cross-Linking**
> Pages are not islands. Every page links to:
> 1. Relevant vocab pages
> 2. Previously learned rules (Back-link)
> 3. Future dependent rules (Forward-link)

2. Grammar Architecture (The 100+ Static Pages)

Strategy: SEO-Optimized URLs based on the *problem* the learner solves. Content is MDX files.

Grammar Sitemap (A1 - B2)

Lvl	Category	Page Title (Micro-Logic)	SEO URL Slug
A1	Articles	The Suffix Rule (Predicting Gender)	`/grammar/articles/suffix-rule-gender`
A1	Articles	Groups: -ung, -heit, -keit (Feminine)	`/grammar/articles/feminine-groups`
A1	Articles	Groups: -ling, -or, -ig (Masculine)	`/grammar/articles/masculine-groups`
A1	Articles	The Biological Exception (Der/Die)	`/grammar/articles/biological-exceptions`
A1	Cases	The Nominative (Who is doing it?)	`/grammar/cases/nominative-logic`
A1	Cases	The Accusative (Direct Object)	`/grammar/cases/accusative-direct-object`
A2	Cases	The Dative (Indirect Object)	`/grammar/cases/dative-indirect-object`
A2	Cases	Prepositions: Accusative Only (durch, für)	`/grammar/cases/accusative-prepositions`
A2	Cases	Prepositions: Dative Only (aus, bei)	`/grammar/cases/dative-prepositions`
B1	Cases	Two-Way Prepositions (Wo vs. Wohin)	`/grammar/cases/two-way-prepositions-wo-wohin`
B1	Cases	The Genitive (Possession)	`/grammar/cases/genitive-possessive`
A1	Verbs	Sein vs. Haben (Perfect Tense)	`/grammar/verbs/perfect-sein-haben`
A1	Verbs	Separable Prefixes (The Logic)	`/grammar/verbs/separable-prefix-logic`
A2	Verbs	Inseparable Prefixes (be-, ver-, er-)	`/grammar/verbs/inseparable-prefixes`
B1	Verbs	Modal Verbs (Subjunctive Meaning)	`/grammar/verbs/modals-subjunctive`
B1	Verbs	Passive Voice Construction	`/grammar/verbs/passive-construction`
A2	Structure	TeKaMoLo (Word Order)	`/grammar/structure/tekamolo-word-order`
A2	Structure	Coordinating Conjunctions (und, aber)	`/grammar/structure/coordinating-conjunctions`
B1	Structure	The Verb Kick (Subordinate Clauses)	`/grammar/structure/verb-kick-nebensatz`

B1	Structure	Relative Clauses (Der/Die/Das vs. Welcher/Welche)	`/grammar/structure/relative-clauses`
B2	Structure	Konjunktiv II (If I were...)	`/grammar/structure/konjunktiv2-conditional`
B1	Adjectives	Strong Endings (No Article)	`/grammar/adjectives/strong-endings`
B1	Adjectives	Weak Endings (Der/Die/Das present)	`/grammar/adjectives/weak-endings`

Grammar Page Template (Technical & UI)

```
// FILE: /grammar/[...slug]/page.tsx (MDX Render)

-------------------------------------------------------------
| HEADER: [H1] The Suffix Rule: Predicting Gender           |
| --------------------------------------------------------- |
| [BREADCRUMB] Home > Grammar > Articles                    |
-------------------------------------------------------------

[LEVEL BADGE: A1] [TAGS: Nouns, Gender]


"Don't memorize genders. Look at the ending.
Most nouns ending in -ung are DIE (Feminine)."


| Suffix | Gender | Example | Logic               |
|--------|--------|---------|---------------------|
| -ung   | die    | Lösung  | Solution (Process) |
| -heit  | die    | Freiheit| Freedom             |




"You used this rule in die Lösung.
Next up: Learn about Accusative Case."


"Exceptions are rare. E.g., Der Sprung (The jump)."
-------------------------------------------------------------
```

3. Vocabulary Architecture (Static Object Pages)

Strategy: Vocabulary is logic-grouped, not random. Every word gets a permanent page.

Vocabulary Sitemap Structure

- **By Frequency:** `/vocab/frequency/a1/top-100`

- **By Grammar Dependency:** `/vocab/grammar/verbs-with-dative`
- **By Word Page:** `/vocab/word/tisch`

Data Object Schema (TS Interface)

```
interface VocabEntry {
  id: string;
  word: string;           // "Der Tisch"
  slug: string;           // "tisch"
  level: "A1" | "A2" ...

  // --- LINGUISTIC LOGIC ---
  gender: "der" | "die" | "das";
  plural: string;         // "die Tische"
  logic_hint: string;     // "Ends in -isch, usually Masculine" (or null)
  type: "noun" | "verb" | "adj";

  // --- MEMORY LOCK ---
  memory_hook: string;    // "Think: A TISH (dish) is on the table."
  collocations: string[]; // ["Tisch decken", "am Tisch sitzen"]
  common_patterns: string[]; // ["Der Tisch ist groß", "Auf dem Tisch"]

  // --- GRAMMAR LINKS ---
  related_rules: string[]; // ["/grammar/articles/suffix-rule"] -> Auto-links

  // --- EXAMPLES ---
  examples: {
    de: string;
    en: string;
    grammar_focus: string; // "Accusative"
  }[];
}
```

Vocabulary Page Template

```
------------------------------------------------------------
| HEADER: Der Tisch (The Table)                             |
| --------------------------------------------------------- |
| [AUDIO BUTTON] [LEVEL: A1]                                |
------------------------------------------------------------


Der Tisch die Tische


"Think: A TISH (dish) is on the table."



"Ends in -isch. This suffix is usually masculine."




1. den Tisch decken - to set the table
2. unter dem Tisch - under the table



[Quiz Component]
"Translate: The table is big."
> Input: [             ] (Check Answer)



See also: Der Stuhl | Die Bank

Grammar: Articles Rule
------------------------------------------------------------
```

4. SEO & Monetization Strategy (Ad-Supported)

SEO Strategy:

- **Long-Tail Problem Solving:** Optimize for "Why is *Handlung* feminine?", not just "German gender rules."
- **Exam Targets:** Create pages for "Goethe B1 Exam Grammar List" aggregating links to static pages.
- **Crawlability:** All pages are HTML. No JS required for Googlebot.

Monetization (Ads):

- **Placement:** Top Sidebar (Sticky) + Bottom of article. Never in-content ads that break reading flow.
- **User Experience:** Ads must be static images/text only. No popups. No videos (distraction).

- **Session Goal:** Maximize "Session Duration" and "Pages per Session" by using the cross-linking "Memory Lock" system.
- **Revenue Target:** Scale content to hit 10,000+ unique grammar/vocab pages to drive massive organic traffic.

5. Technical Implementation: Static Generation

The system uses Next.js `generateStaticParams` to map the data arrays to HTML pages.

The Generator Logic

```
// app/vocabulary/[slug]/page.tsx
import { VOCAB_LIST } from '@/data/vocab-list';

export async function generateStaticParams() {
  // Map the JS object array to 5000+ static pages
  return VOCAB_LIST.map((entry) => ({
    slug: entry.slug
  }));
}

export default function VocabPage({ params }) {
  // Find data in the array (Client bundle or server prop)
  const data = VOCAB_LIST.find(v => v.slug === params.slug);
  return ;
}
```

6. 30-Day Build Roadmap

Day	Task	Deliverable
1-3	Architecture Setup	Next.js SSG, Base Layout, Navigation
4-7	Core Components	"Prediction Task" React Component, "Memory Hook" Card
8-14	Grammar Content Sprint	Write 20 Core Grammar MDX files (Articles, Cases, Basic Verbs)
15-21	Vocab Data Structure	Create Vocab TS Schema. Populate first 500 words with Logic Hints.
22-25	SEO Optimization	Implement Sitemap.xml generation. Meta tags for all pages.
26-28	Ad Integration	Placeholders for Ad slots (Top/Bottom). Clean layout verification.
29-30	Launch & Indexing	Deploy to Vercel. Submit Sitemap to Google Search Console.

FINAL GOAL:

A 100% free platform where a student starts at **/grammar/articles/suffix-rule** and, through natural logic and cross-linking, ends up fluent without ever spending a cent.