simplifytech

Simplify Tech Pvt. Ltd.

Standard Technology Stack & Engineering Guidelines

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1. Purpose of This Document

This document defines the **official, standardized technology stack** used at **Simplify Tech Pvt. Ltd.** It is intended to:

- Ensure consistency across all projects
- Improve maintainability, scalability, and security
- Align development, deployment, and collaboration practices
- Serve as a reference for all team members (developers, designers, DevOps, and management)

This stack must be followed for **all current and future projects**, unless explicitly approved otherwise.

2. Infrastructure Overview

2.1 Server Architecture

We maintain **two dedicated servers** for all projects:

Environment	Purpose
Development Server	Used for active development, testing, and staging

Production Server	Used for live, client-facing applications

Hosting Provider: Contabo
Operating System: Linux (Ubuntu)

Each project is containerized and deployed independently using Docker.

3. Website Technology Stack

3.1 Small Websites (Marketing / Informational)

Used for simple company websites, landing pages, and content-focused sites.

- **CMS / Platform:** WordPress
- **Domain & Hosting:** Babbal Hosting
- **Development:** Local
- **Use Cases:**
  - Company profile websites
  - Landing pages
  - Content-driven sites with minimal custom logic

3.2 Large Websites & Web Applications

Used for scalable, dynamic, and feature-rich platforms.

Core Technologies

- **Frontend Language:** JavaScript
- **Backend Runtime:** Node.js
- **Database:** PostgreSQL
- **CMS:** Payload CMS

Hosting & Deployment

- **Domain Provider:** Babbal Hosting
- **Frontend Hosting:** Vercel
- **Backend Hosting:** Self-hosted on Contabo server
- **Containerization:** Docker
- **DNS Management:** Vercel

4. Universal Technology Standards (Mandatory)

The following standards apply to **all projects**, regardless of size.

4.1 Application Stack

- **Frontend:** JavaScript
- **Backend:** JavaScript (Node.js)
- **Framework Standard: TanStack Framework** (mandatory)
- **Database:** PostgreSQL

4.2 Database Management

- **Database Engine:** PostgreSQL
- **Database Management Tool:** DBeaver

4.3 Design & UI/UX

- **Design Tool:** Figma
- All UI/UX designs must be finalized in Figma before development begins.

5. Deployment & DevOps Standards

5.1 Containerization

- **Tool:** Docker
- Every project must:
  - Have its own Docker configuration
  - Be deployed as isolated containers

5.2 Deployment Environment

Environment	Deployment Target
Development	Dev Server (Contabo)
Production	Prod Server (Contabo)

- **Operating System:** Ubuntu Linux

- **Deployment Method:** Docker-based deployment

6. Version Control & Code Management

6.1 Source Code Repository

- **Platform:** GitHub

6.2 Branching Strategy

We follow a strict **two-branch model**:

Branch	Purpose
dev	Active development branch
main	Stable production-ready branch

6.3 Deployment Flow

- Commits to **dev** branch automatically deploy to the **Development Server**
- Commits to **main** branch deploy to the **Production Server**

6.4 Pull Request Policy

- Direct commits to `main` branch are **not allowed**
- To merge `dev` → `main`:
  - A **Pull Request (PR)** must be created
  - The PR must be **reviewed and approved by Abhishek Wagle**
  - Only after approval can the code be merged and deployed to production

7. CMS & Content Management

- **Primary CMS for Large Projects:** Payload CMS
- CMS must be integrated with Node.js backend
- Content models should be designed for scalability and reuse

8. Summary – Official Stack Snapshot

Infrastructure

- Contabo Servers (Dev & Prod)
- Ubuntu Linux
- Docker

Development

- JavaScript (Frontend & Backend)
- Node.js
- TanStack Framework
- PostgreSQL
- Payload CMS

Design

- Figma

DevOps & Tools

- GitHub (dev & main branches)
- DBeaver (PostgreSQL management)
- Vercel (Frontend hosting & DNS)

CMS / Small Sites

- WordPress
- Babbal Hosting
- Local

9. Compliance

All team members are expected to:

- Follow this stack without deviation

- Propose changes only when technically justified
- Maintain documentation and deployment discipline

This document serves as the **official engineering and technology standard** of **Simplify Tech Pvt. Ltd.**