

ERP Software Concepts – Board-Level Overview

Purpose

Provide a simple, non-technical explanation of key software concepts used in modern ERP systems.

Core Concepts

Entity: A real business object the system tracks (Customer, Order, Product).

DTO: A data package used to safely move information inside or outside the system.

Table: Where data is stored in rows and columns, like a spreadsheet.

Schema: The blueprint defining how tables are structured and related.

Module: A self-contained business function (Inventory, Purchasing, Accounting).

Controller: Directs requests to the right part of the system.

Service: Where business rules and decisions are executed.

API: A controlled doorway allowing other systems to interact with the software.

Config: Controls how the system runs (settings, environments).

Migrations: Safe, step-by-step database structure changes.

Seed Data: Starter data that makes the system usable from day one.

Source Files: Core instructions defining system behavior.

Main Files: Startup files that initialize and launch the system.

JSON: A simple, universal data format for system communication.

High-Level Flow

Requests enter through APIs, are routed by controllers, processed by services applying business rules, represented by entities, stored in tables governed by a schema, and returned as JSON responses. The system is started by main files, configured via config files, initialized with seed data, and safely evolved using migrations.

Executive Summary

This architecture separates responsibilities, reduces risk, improves scalability, and allows the ERP system to evolve without disrupting operations.