

WATERPROOFING ERP SYSTEM

Developer Requirement Document (Final Version)

1. Project Overview

System Type: Web-based ERP + Secure Client Portal Industry: Waterproofing / Construction (UAE)
Goal: To build a full enterprise ERP system similar to Zoho Books but customized for waterproofing companies including Word-style quotation system, client portal with signed quotation & LPO upload, milestone-based installment payment system (50/30/20), warranty automation, legal escalation workflow, inventory management, full accounting (VAT, P&L, Balance Sheet), and multi-company support.

2. Multi-Company Structure

System must support multiple companies (e.g., Index Emirates, Index Berry, Inqem). Each company must have separate financial books, quotation numbering, legal documents, and VAT reports. Company switcher required at top level.

3. User Roles

Internal Roles: Super Admin, Company Admin, Sales Engineer, Accounts, Procurement, Storekeeper, Site Engineer, Legal Officer. External Role: Client Portal User. Role-based access control mandatory.

4. CRM Module

Lead management, lead status tracking, convert Lead to Client, sales assignment, communication timeline.

5. Quotation Module (Word-Style Layout)

Must replicate professional Word format (A4 printable) including: Header, Intro Paragraph, Scope of Work sections, Price Table with VAT calculation, Notes, Payment Terms, Client Requirements, Closing, and Signature Block. Status Flow: Draft → Sent → Signed Uploaded → LPO Uploaded → Project Created.

6. Client Portal

Magic link / OTP authentication. Clients can view quotation, upload signed quotation & LPO, track progress, view payment schedule (50/30/20), download invoices & receipts, view legal status, download warranty (after unlock), and view legal documents.

7. Payment Installment Logic

50% on LPO confirmation, 30% when progress $\geq$ 50%, 20% on completion. System auto-unlocks installments based on project status.

8. Warranty Automation

Warranty remains locked until project completed and outstanding amount is zero. Auto-generated warranty PDF after unlock.

9. Project Module

Linked quotation, budget tracking, expenses, progress %, milestones, photos, and profit calculation.

10. Inventory Module

Item master, warehouse management, issue & return tracking, purchase request, purchase order, GRN, and low stock alerts.

11. Finance Module

Invoice generation, partial payments, receipt generation, cheque tracking, VAT reporting, P&L, balance sheet, cash flow, and project profitability report.

12. Legal Escalation System

7 days late → Reminder. 30 days late → Final Notice. Admin can mark Legal Review. Final stage: Case Filed. System generates Legal Notice PDF.

13. Legal & Compliance Section

Display Trade License, TRN, MOA, Authorized Signatory Letter. Optional secured documents: Passport, Visa, Emirates ID. Security: Watermark, view-only, access logs, encrypted storage.

14. Security Requirements

HTTPS mandatory, encrypted file storage, role-based access control, audit logs, token-based document access, backup policy.

15. Core Database Tables

Companies, Users, Roles, Clients, Leads, Quotations, QuotationItems, LPO, Projects, Milestones, Installments, Invoices, Payments, InventoryItems, StockTransactions, PurchaseOrders, GRN, Expenses, LegalCases, Warranty.