ERP System for an Auditing Company

Project Details

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Introduction

Auditing companies manage complex operations, from employee assignments to valuation projects and client interactions. This proposal outlines the development of a centralized ERP system to streamline operations, enhance productivity, and provide management with real-time insights.

The ERP solution will integrate user management, project tracking, HR functions, valuation workflows, and dashboards into a single, scalable system accessible through web and mobile applications.

Problem

Currently, the auditing company faces several challenges that hinder operational efficiency and client satisfaction:

1. **Fragmented Processes:** Employee management, project tracking, valuation flows, and HR operations are handled through separate tools or manual processes, leading to duplication of effort.
2. **Inefficient Project Tracking:** Coordinators, field officers, and valuers lack a centralized system to manage the project lifecycle, leading to delays and miscommunication.
3. **Limited Client Transparency:** Clients often do not have real-time visibility into project progress, which reduces trust and increases follow-ups.
4. **Manual HR Operations:** Attendance, leave approvals, and payroll slips are tracked manually, consuming time and creating errors.
5. **Lack of Data-Driven Insights:** Management has limited visibility into employee productivity, project KPIs, and client engagement, which restricts informed decision-making.
6. **Ineffective Communication:** Notifications and reminders are not system-driven, causing missed deadlines, valuation delays, and reduced accountability.

Deliverables

At the end of the project, students should produce:

1. **Web ERP system.**
2. **Mobile app for field officers.**
3. **Comprehensive user manual and training material.**

Functional Requirements - ERP System

FR01 - User Management

- Admin, MD/GM/Coordinator logins.
- Field officer login (via mobile app).
- Direct addition of clients/agents.
- Client/agent invitation system.
- Admin tracking of invitation status.
- Admin ability to delete invitations.
- Clients/agents create accounts via invitations.
- Clients/agents login to system.

admin → view cordinator status

select cordinator | field officer - suggest by system

client | agent

what roles

FR02 - Employee Management

- Admin ability to view/add/edit/delete employees.
- Admin ability to assign roles.

payment criteria employee types

project → cost (differentiate)

FR03 - Project Configuration

- Coordinator can view/add/edit/delete projects.
- Ability to set/change project priority/urgency with color tags.
- Coordinator can assign clients to projects.
- Coordinator can assign agents to projects (if required).
- Coordinator can configure project visibility for clients/agents in their portals.

agents?

* Who receives project first.

FR04 - Valuation Flow Management

- Coordinator can assign field officers to projects.
- Coordinator can attach project detail files (PDFs, location, paths).
- Field officer can upload field-related items via mobile app.
- Assessor can view field officer files, draft valuation reports, and forward to senior valuer.
- Senior valuer can review drafts, add comments, and upload final valuation reports for MD/GM approval.
- MD/GM can review and approve project reports.
- Coordinator can update project statuses and upload documents.
- Coordinator can mark a project as complete.

FR05 - HR System

- Employees can mark attendance.
- Employees can submit leave requests.
- Admin can accept/reject leave requests.
- Employees can view remaining leave balances.
- Employees can update their work via a standup dashboard.
- Admin can upload and update payment slips. all employees or not
- Employees can view payment slips.

FR06 - Dashboard

- Admin can view daily standups.
- Admin can view attendance summary (weekly/monthly).
- Admin can view leave summary (weekly/monthly).
- KPI tracking dashboards, including:
  - Projects completed within deadlines (per employee, per month).
  - Employee attendance (monthly).
  - Leaves taken (monthly, per employee).
  - Average jobs completed per employee and time taken.

    - Overall project statuses (completed/ongoing/not started) by month/quarter/year.
    - Number of newly engaged clients (monthly).

FR07 - Notifications

- Coordinators, field officers, MD/GM receive in-app, SMS, and email notifications.
- Clients/agents receive SMS/email notifications for:
    - Project status updates
    - Valuation reminders.
    - Important events.

Functional Requirements - Mobile App

FA01 – Mobile Authentication and Roles

- Secure login using SSO/OAuth
- Role-based access for field officers
- Session refresh and logout

FA02 – Image Capture and Management

- Capture single or multiple images through device camera
- Auto-save metadata (timestamp, GPS coordinates, device ID)
- Image compression before upload
- Offline capture with later sync
- Option to mark primary photo and reorder images

FA03 – Similar Item Suggestion

- System performs lookup via internal catalog and approved external sources
- Show list of suggested items with confidence score
- Allow officer to confirm, reject, or edit suggestion
- Fallback option to create new item manually

FA04 – Item Attribute Editing

- Editable fields: item name, category, make/model, quantity, acquisition date, cost, condition

- Validation of required fields based on category
- Ability to attach multiple photos per item

FA05 – Depreciation Calculation

- Support Straight-Line, Diminishing Balance, and Units-of-Production methods
- Apply default rates per category from system policy tables
- Show computed depreciation and current book value
- Option to override depreciation with a reason

FA06 – Add Item to Audit Report

- “Add to report” action to attach items and images to the ongoing audit report
- Handle duplicates (merge or create new)
- Track who added the item and when
- Sync with ERP for central visibility

FA07 – Synchronization

- Store captured items in a server (catalog)
- Show sync status (Queued, Syncing, Synced, Failed)
- Automatic background sync when the connection is restored
- Conflict resolution during sync

FA08 – Comments and Notifications

- Field officer can add comments on items
- @mention coordinators for clarification
- Send in-app and email/SMS notifications

Project Plan and Special Instructions

- Schedule a meeting with a Senior Software Engineer of IXD Labs to finalise the tech stack, architecture, and the project plan.
- Prepare a Software Requirements Specification (SRS) once the requirements are given. The SRS must include:
    - Functional requirements
    - Non-functional requirements
    - User Stories
    - Timeline with milestones
    - Work distribution plan

- Prepare a Software Design Specification (SDS) once the requirements are given. The SDS must include:
  - Architecture Overview
  - Data Model (ERD/schema)
  - APIs (if any)
  - Deployment & Ops
- Design UIs and wireframes using Figma, and get confirmation from the Senior UX/UI designer of IXD Labs before starting development.
- Use GitHub repositories under the IXD Labs organization and obtain the required access through the assigned Project Manager.
- Set up a project management tool like ClickUp:
  - To manage all user stories
  - Assign tasks according to the SRS & SDS
  - Provide access to the IXD Labs project manager for feedback
- Proceed with development according to the agreed timeline. Progress updates must be presented at least once per month