

Human Resource Management (HRM), Field Service Management (FSM), and Payroll.

Module 1: Core HR Management

This module is the foundation for managing your employees.

- **Employee Database:** A central place to store all employee information (personal details, contact info, job role, documents, etc.).
- **Document Management:** Upload and manage employee documents like contracts, ID proofs, and educational certificates.
- **Onboarding & Offboarding:** Streamlined processes for adding new employees and managing exits.

Module 2: User Roles & Permissions

This is critical for security and ensures users only see what they are supposed to.

- **Admin:** Has full control over the entire system. Can manage all settings, view all data, and create/modify other user accounts.
- **HR User:** Can manage employee data, leaves, attendance, and payroll processes. Cannot access system-level settings like the Admin.
- **Engineer (Field User):** A limited-access role. Can view assigned tasks, update task status, manage their own attendance, view their stock, and apply for leave.
- **Employee (Standard User):** The most basic role for office staff. Can view their own profile, apply for leave, view payslips, and punch attendance.

Module 3: Time & Attendance Management

This module tracks employee work hours.

- **Punch-in / Punch-out:** Employees can mark their attendance. For desktop users, this can be a button on their dashboard. For field engineers, this should be done via a mobile app, capturing their location at the time of punching in.
- **Attendance Tracking:** View daily, weekly, and monthly attendance records for all employees.
- **Shift Management:** Ability to create and assign different work shifts.

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- **Overtime Calculation:** Automatically calculate overtime based on punch records and company policy.

Module 4: Leave Management

- **Leave Application:** Employees can apply for leave through their portal.
- **Approval Workflow:** Leave requests are automatically sent to their manager or HR for approval.
- **Leave Balance Tracking:** The system automatically tracks and displays the balance of different leave types (e.g., Casual Leave, Sick Leave).
- **Leave Adjustment:** HR/Admin can manually adjust leave balances if required.

Module 5: Field Service & Task Management (For Engineers)

This is a key module for your business.

- **Call/Task Assignment:** The Admin or manager can create a new service call (e.g., customer complaint, installation request) and assign it to a specific engineer.
- **Live GPS Location Tracking:** You can view the real-time location of your on-duty engineers on a map. This requires the engineers to have a companion mobile app on their smartphones.
- **Automated SMS/App Notifications:** When a call is assigned to an engineer, the system automatically sends them an SMS and/or a push notification on their mobile app with the call details (customer name, address, problem description).
- **Task Status Updates:** The engineer can update the status of the call from their mobile app (e.g., "Accepted", "On my way", "Work in Progress", "Completed", "Pending - Parts Required").

Module 6: Inventory & Stock Management

This is linked directly to the Field Service module.

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- **Central Stock:** Manage the main inventory of spare parts and equipment.
- **Engineer's Stock:** Assign parts to individual engineers. Their mobile app should show the stock they are currently carrying.
- **Stock Consumption:** When an engineer uses a part for a service call, they can mark it as used in their app, and it will be automatically deducted from their stock.
- **Low Stock Alerts:** Automatic alerts when stock levels (both central and engineer's) fall below a certain threshold.

Module 7: Payroll & Compliance (India Specific)

- **Salary Slip Generation:** Automatically generate monthly salary slips for all employees in PDF format.
- **Automated Calculations:** The system should automatically calculate earnings (Basic, HRA, etc.) and deductions (TDS, Provident Fund - PF, ESI, Professional Tax).
- **Form 16 Generation:** At the end of the financial year, the system should be able to auto-generate Form 16 for employees based on their salary and tax deductions.
- **Statutory Reports:** Generate PF, ESI, and other compliance-related reports.

Develop This Software:-

You are essentially describing a hybrid **HRMS + FSM** system. For the desktop requirement, the best modern approach is a **web-based application** that can be accessed from any computer's web browser. For the field engineers, a **companion mobile app (Android)** is essential.

Here's the recommended system architecture:

1. **Admin/HR Web Portal (Desktop Application):** This is the main application you and your HR team will use. It will have all the features for management, assignment, tracking, and payroll.
2. **Engineer Mobile App:** This is for your field staff. It is crucial for:
 - Receiving and managing assigned calls.
 - Updating task status on the go.

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- GPS tracking.
 - Marking attendance from the field.
 - Managing their personal stock of parts.
3. **Central Database & Server:** This is the "brain" of the system that stores all the data and connects the web portal and the mobile app.