**🛠️ Project Structure & Functionality**

**1️ Dashboard (Role-Based Access)**

* **Admin View:**
  + Displays total employees, active supervisors, and attendance summary.
  + Provides search and filter functionality (City, Zone, Ward).
  + Allows exporting attendance reports.
* **Supervisor View:**
  + Shows assigned wards and the count of employees.
  + Displays today’s attendance summary.
  + Enables marking attendance for employees.
  + Tracks attendance logs with GPS data.

**2️ Employee Management (Admin Only)**

* **Functionality:**
  + Admin can **add, edit, and delete** employees.
  + Assign employees to **wards, designations, and departments**.
  + Search and filter employees based on different fields.
* **Fields Included:**
  + Name, Employee Code, Phone, Ward, Designation, Department.

**3️ Supervisor Management (Admin Only)**

* **Functionality:**
  + Admin can **add, edit, delete, and assign wards** to supervisors.
  + Reset supervisor passwords.
* **Fields Included:**
  + Name, Email, Phone, Role, Assigned Wards.

**4️ Attendance Marking (Supervisor Role)**

* **Functionality:**
  + Supervisors can **search for an employee** (by name or employee code).
  + Mark attendance as **Present, Absent, or Leave**.
  + Capture **punch-in/punch-out timestamps** with GPS tracking.
  + Upload punch-in/punch-out **images using camera integration**.
* **Fields Included:**
  + Employee Code, Name, Date (Auto-set to Today), Attendance Status,
  + Punch-in/Punch-out Time, GPS Location, Image Upload.

**5️ Attendance Reports & Logs**

* **Functionality:**
  + Filter by **Employee, Date, Ward, Zone**.
  + View **Daily, Weekly, Monthly** attendance reports.
  + Export reports as **CSV/PDF**.
  + Sort records based on **Late Punch-in, Early Punch-out, and Status**.

**6️ Settings Page (Admin Only)**

* **Functionality:**
  + Manage **Cities, Zones, and Wards**.
  + Manage **Departments and Designations**.
  + Configure system preferences.

**🗂️ Project Folder Structure (Frontend)**

/frontend

│── /src

│ ├── /components

│ │ ├── Sidebar.js

│ │ ├── DashboardStats.js

│ │ ├── AttendanceChart.js

│ │ ├── QuickActions.js

│ ├── /pages

│ │ ├── Dashboard.js

│ │ ├── EmployeeList.js

│ │ ├── AttendanceReports.js

│ │ ├── Supervisors.js

│ │ ├── Settings.js

│ ├── App.js

│ ├── index.js

│ ├── routes.js

│── tailwind.config.js

│── package.json

* **Routing:** Implemented using **React Router** for smooth navigation.
* **Styling:** Used **Tailwind CSS** for consistency across pages.
* **State Management:** Currently handled via **React hooks (useState, useEffect)**.

**⏭️ Next Steps (Possible Enhancements)**

1️ **Authentication & Authorization:** Implement **role-based authentication** (Admin & Supervisor).  
2️ **Backend Integration:** Connect frontend with **Node.js (Express) / Django / Laravel** and PostgreSQL.  
3️ **API Development:** Set up API endpoints for managing employees, attendance, and settings.  
4️ **Error Handling & Validations:** Implement proper form validations and user-friendly error messages.  
5️ **Performance Optimization:** Improve rendering efficiency using **lazy loading** and **pagination**.