**Visitor Management System - Full Project Plan (Professional Format)**

**Technology Stack:** React (Frontend), Node.js + Express (Backend), MongoDB (Database)  
**Target Roles:** Visitor, Company, Admin  
**Prepared For:** Senior Review & Project Approval  
**Developer:** Single Resource (Beginner Level)

**Phase 0: Learning & Project Setup**

**Objective:** Acquire technical foundation and prepare for development **Duration:** 5–6 Days

**Detailed Breakdown:**

1. **Web Technologies Fundamentals** (1 Day)
   * Learn HTML tags, CSS layouting, JavaScript basics (variables, loops, functions)
2. **React.js Basics** (1 Day)
   * Understand components, props, state, lifecycle, hooks
3. **Node.js with Express.js** (1 Day)
   * Setup REST APIs, handle routes, use middleware and Express Router
4. **MongoDB Essentials** (1 Day)
   * Create schemas, insert, update, delete, and query documents
5. **Postman, Git & Local Dev Tools** (0.5 Day)
   * Learn API testing using Postman and version control using Git
6. **Practice Setup Project** (0.5 Day)
   * Build a simple login/register app with React + Node + Mongo

**Phase 1: Core Visitor-Company Workflow**

**Objective:** Implement core functionality for visitor tracking and check-in/out system **Duration:** 10–12 Days

**Features and Tasks:**

1. **Project Environment Setup** (1 Day)
   * Setup folder structure, connect backend with MongoDB, enable CORS
2. **Authentication System with JWT** (2 Days)
   * Create registration/login APIs for Visitors and Companies
   * Secure routes with JWT tokens
3. **Visitor Profile Registration** (1 Day)
   * Form to capture visitor details like name, email, ID proof, photo
4. **Visit Request Submission** (1 Day)
   * Visitors submit visit requests with company name, date, purpose
5. **Company Approval Dashboard** (1 Day)
   * Company views requests, can approve or reject, updates status in DB
6. **QR Code Generation** (1 Day)
   * Generate QR on approval using visitor data, render on frontend
7. **QR Code Scanning and Visit Logging** (1 Day)
   * Staff can scan QR to log check-in/check-out, update DB accordingly
8. **Basic Notification System** (1 Day)
   * Send in-app or email notifications on approval/rejection
9. **Company Dashboard Overview** (1 Day)
   * Filter requests by date/status, show summary table
10. **Manual Testing and Refinement** (1–2 Days)

* Cross-check forms, flows, and secure login/auth

**Phase 2: Advanced Admin Controls & Reporting**

**Objective:** Build admin features, multi-step approvals, and reporting modules **Duration:** 10–12 Days

**Features and Tasks:**

1. **Admin Role and Company Management** (1 Day)
   * Admin login; add/edit/delete company profiles
2. **Assign Company Staff Accounts** (1 Day)
   * Admin assigns users for specific roles (e.g., Manager, Security)
3. **Visit History and Log Access** (1 Day)
   * Company views all past visits with filters by date, visitor, status
4. **Multi-Step Approval Workflow** (2 Days)
   * Implement status flow: Manager → Security → Final Approval
   * Each user updates status step-by-step
5. **Advanced Notification System** (1 Day)
   * Trigger email notifications at each step with dynamic content
6. **Exporting Reports** (1 Day)
   * CSV or PDF export of daily, weekly, or custom visitor logs
7. **,,Enhanced Security** (1 Day)
   * Implement RBAC (Role-Based Access Control), input validation
8. **QR Code Scan Logs** (1 Day)
   * Log scan data (timestamp, device, location if available)
9. **Visual UI Improvements** (1 Day)
   * Color indicators for statuses, improved layout, better feedback
10. **Phase Testing & Debugging** (1–2 Days)

* Functional testing with edge case handling

**Phase 3: Dynamic System Configuration**

**Objective:** Convert static forms and logic into dynamic, configurable system **Duration:** 10–14 Days

**Features and Tasks:**

1. **Dynamic Form Builder (Admin)** (2 Days)
   * Admin creates forms with fields (text, number, dropdown)
   * Save form structure in DB
2. **Dynamic Form Rendering** (1 Day)
   * Render visitor or company forms based on saved config
3. **Dynamic Table Columns** (2 Days)
   * Show/hide columns in visitor/company dashboards based on config
4. **Multi-Step Approval Setup (Configurable)** (2 Days)
   * Admin defines approval steps, roles, and logic per company
5. **QR Code Settings Panel** (1 Day)
   * Enable/disable QR, set expiration rules, retry limits
6. **Notification Settings** (1 Day)
   * Admin decides when and how notifications are triggered
7. **UI Conditional Logic** (2 Days)
   * Admin sets UI logic like: show extra field if option selected
8. **Testing with Multiple Configs** (2 Days)
   * Validate system with various company setups and form rules
9. **Documentation and Walkthrough Creation** (1 Day)
   * Write usage guide and prepare a walkthrough video or demo

**Total Estimated Duration: 35–40 Days**