📁 CRM WorkSuite - Complete Code Structure

Project: CRM WorkSuite

📋 Table of Contents

🔧 Backend Structure
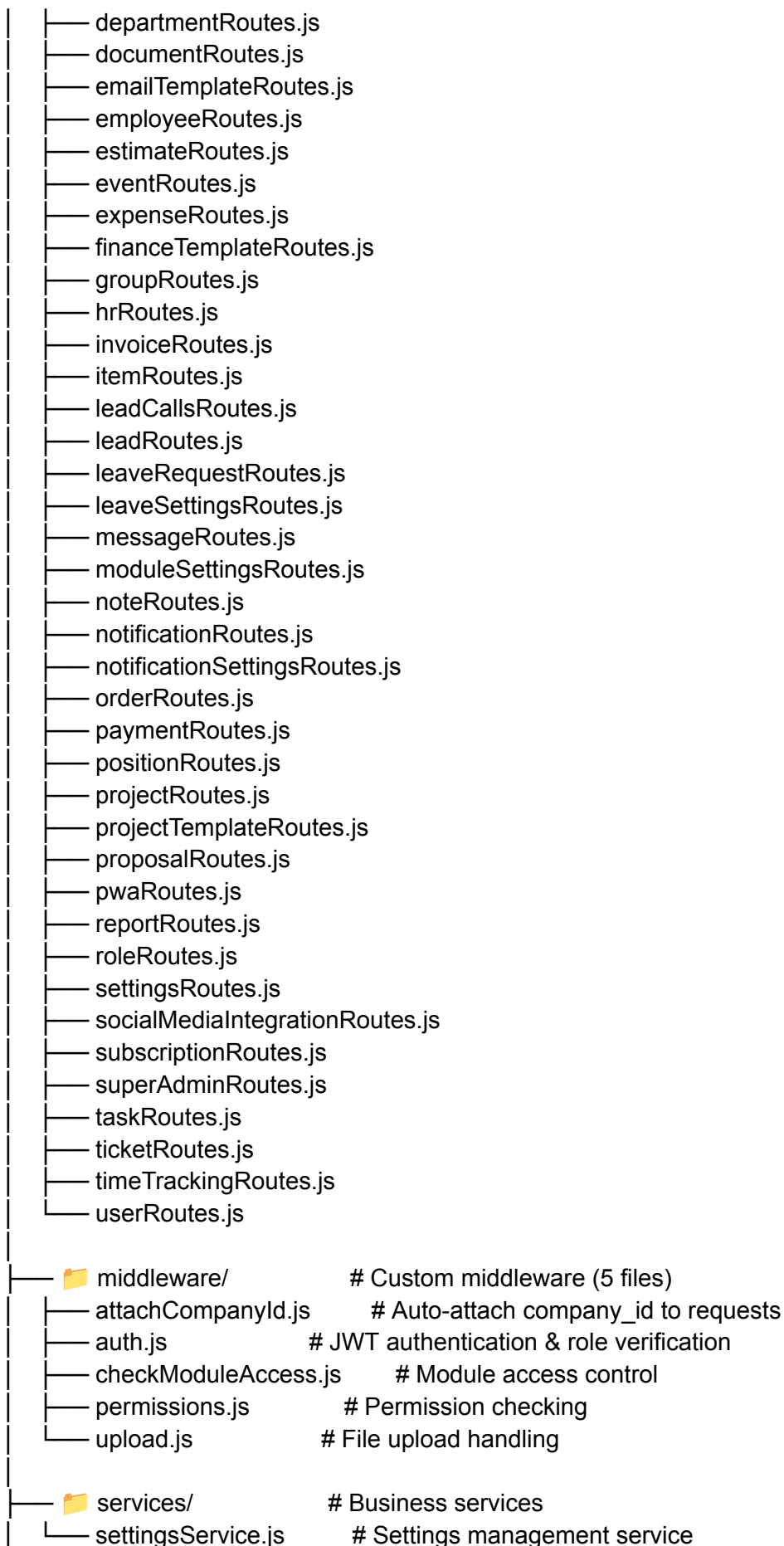
Root Directory: `backend-12-crm/`
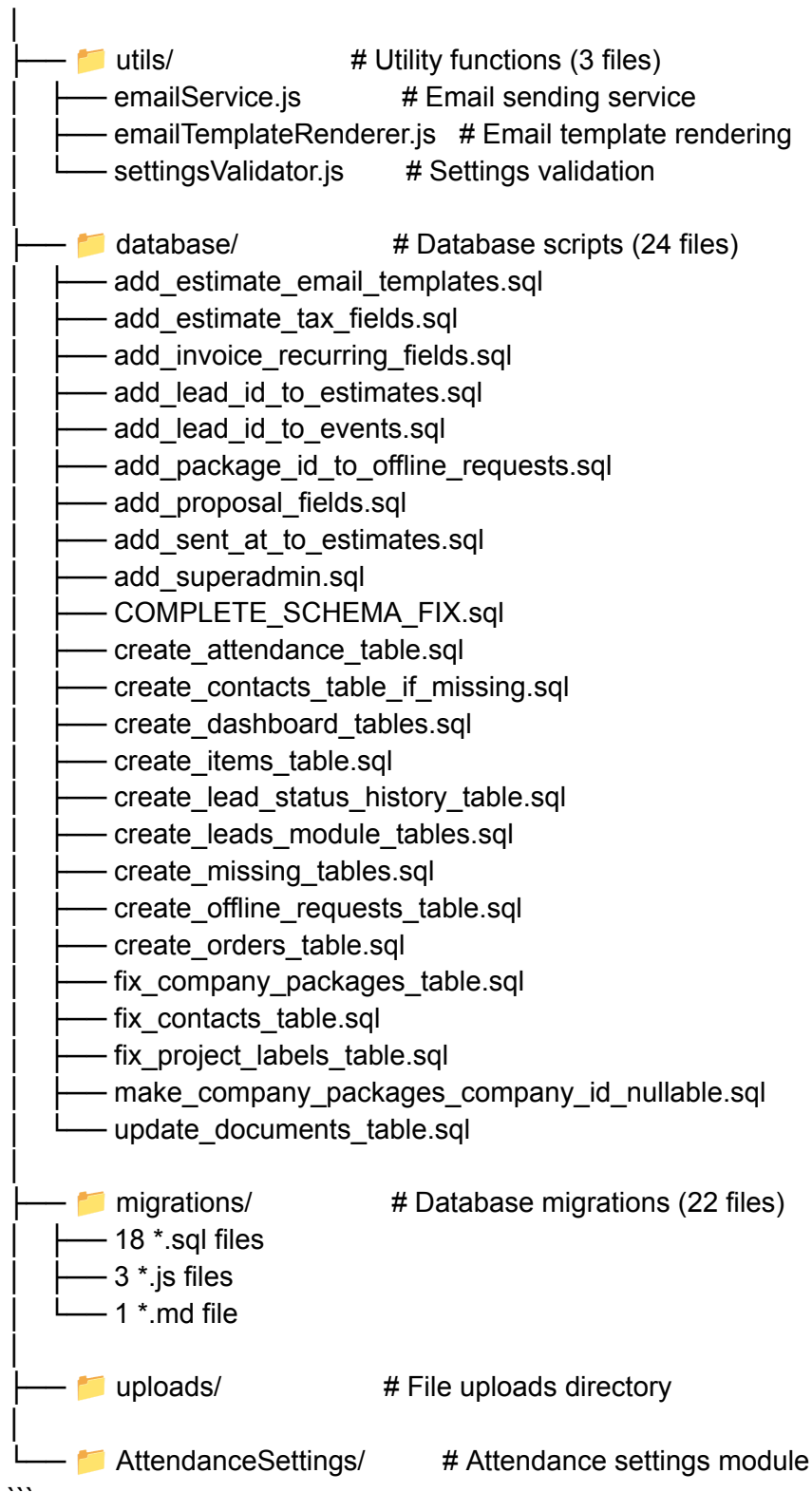
```
backend-12-crm/
├── 📄 server.js                # Main server entry point
├── 📄 package.json              # Dependencies & scripts
├── 📄 nodemon.json               # Development configuration
├── 📄 schema.sql                # Database schema
├── 📄 env-template.txt           # Environment variables template
│
├── 📁 config/                 # Configuration files
│   └── db.js                  # Database connection configuration
│
├── 📁 controllers/             # Business logic (50 files)
│   ├── attendanceController.js
│   ├── attendanceSettingsController.js
│   ├── auditLogController.js
│   ├── authController.js
│   ├── bankAccountController.js
│   ├── clientController.js
│   ├── companyController.js
│   ├── companyPackageController.js
│   ├── contractController.js
│   ├── creditNoteController.js
│   ├── customFieldController.js
│   ├── dashboardController.js
│   ├── departmentController.js
│   ├── documentController.js
│   ├── emailTemplateController.js
│   ├── employeeController.js
```

```
│   ├── estimateController.js
│   ├── eventController.js
│   ├── expenseController.js
│   ├── financeTemplateController.js
│   ├── groupController.js
│   ├── hrController.js
│   ├── invoiceController.js
│   ├── itemController.js
│   ├── leadCallsController.js
│   ├── leadController.js
│   ├── leaveRequestController.js
│   ├── leaveSettingsController.js
│   ├── messageController.js
│   ├── moduleSettingsController.js
│   ├── noteController.js
│   ├── notificationController.js
│   ├── notificationSettingsController.js
│   ├── orderController.js
│   ├── paymentController.js
│   ├── positionController.js
│   ├── projectController.js
│   ├── projectTemplateController.js
│   ├── proposalController.js
│   ├── pwaController.js
│   ├── reportController.js
│   ├── roleController.js
│   ├── settingsController.js
│   ├── socialMediaIntegrationController.js
│   ├── subscriptionController.js
│   ├── superAdminController.js
│   ├── taskController.js
│   ├── ticketController.js
│   ├── timeTrackingController.js
│   └── userController.js
│
├── 📁 routes/              # API routes (50 files)
│   ├── attendanceRoutes.js
│   ├── attendanceSettingsRoutes.js
│   ├── auditLogRoutes.js
│   ├── authRoutes.js
│   ├── bankAccountRoutes.js
│   ├── clientRoutes.js
│   ├── companyPackageRoutes.js
│   ├── companyRoutes.js
│   ├── contractRoutes.js
│   ├── creditNoteRoutes.js
│   ├── customFieldRoutes.js
│   ├── dashboardRoutes.js
```

```
│   ├── departmentRoutes.js
│   ├── documentRoutes.js
│   ├── emailTemplateRoutes.js
│   ├── employeeRoutes.js
│   ├── estimateRoutes.js
│   ├── eventRoutes.js
│   ├── expenseRoutes.js
│   ├── financeTemplateRoutes.js
│   ├── groupRoutes.js
│   ├── hrRoutes.js
│   ├── invoiceRoutes.js
│   ├── itemRoutes.js
│   ├── leadCallsRoutes.js
│   ├── leadRoutes.js
│   ├── leaveRequestRoutes.js
│   ├── leaveSettingsRoutes.js
│   ├── messageRoutes.js
│   ├── moduleSettingsRoutes.js
│   ├── noteRoutes.js
│   ├── notificationRoutes.js
│   ├── notificationSettingsRoutes.js
│   ├── orderRoutes.js
│   ├── paymentRoutes.js
│   ├── positionRoutes.js
│   ├── projectRoutes.js
│   ├── projectTemplateRoutes.js
│   ├── proposalRoutes.js
│   ├── pwaRoutes.js
│   ├── reportRoutes.js
│   ├── roleRoutes.js
│   ├── settingsRoutes.js
│   ├── socialMediaIntegrationRoutes.js
│   ├── subscriptionRoutes.js
│   ├── superAdminRoutes.js
│   ├── taskRoutes.js
│   ├── ticketRoutes.js
│   ├── timeTrackingRoutes.js
│   └── userRoutes.js
│
├── 📁 middleware/            # Custom middleware (5 files)
│   ├── attachCompanyId.js        # Auto-attach company_id to requests
│   ├── auth.js                   # JWT authentication & role verification
│   ├── checkModuleAccess.js      # Module access control
│   ├── permissions.js            # Permission checking
│   └── upload.js                 # File upload handling
│
├── 📁 services/              # Business services
│   └── settingsService.js        # Settings management service
```

```
│
├── 📁 utils/              # Utility functions (3 files)
│   ├── emailService.js        # Email sending service
│   ├── emailTemplateRenderer.js   # Email template rendering
│   └── settingsValidator.js      # Settings validation
│
├── 📁 database/            # Database scripts (24 files)
│   ├── add_estimate_email_templates.sql
│   ├── add_estimate_tax_fields.sql
│   ├── add_invoice_recurring_fields.sql
│   ├── add_lead_id_to_estimates.sql
│   ├── add_lead_id_to_events.sql
│   ├── add_package_id_to_offline_requests.sql
│   ├── add_proposal_fields.sql
│   ├── add_sent_at_to_estimates.sql
│   ├── add_superadmin.sql
│   ├── COMPLETE_SCHEMA_FIX.sql
│   ├── create_attendance_table.sql
│   ├── create_contacts_table_if_missing.sql
│   ├── create_dashboard_tables.sql
│   ├── create_items_table.sql
│   ├── create_lead_status_history_table.sql
│   ├── create_leads_module_tables.sql
│   ├── create_missing_tables.sql
│   ├── create_offline_requests_table.sql
│   ├── create_orders_table.sql
│   ├── fix_company_packages_table.sql
│   ├── fix_contacts_table.sql
│   ├── fix_project_labels_table.sql
│   ├── make_company_packages_company_id_nullable.sql
│   └── update_documents_table.sql
│
├── 📁 migrations/          # Database migrations (22 files)
│   ├── 18 *.sql files
│   ├── 3 *.js files
│   └── 1 *.md file
│
├── 📁 uploads/            # File uploads directory
│
└── 📁 AttendanceSettings/     # Attendance settings module
```

Backend API Structure

Base URL: `/api/v1`

Main Modules:
- **Authentication:** `/api/v1/auth/*`

- **Users:** `/api/v1/users/*`
- **Companies:** `/api/v1/companies/*`
- **Clients:** `/api/v1/clients/*`
- **Leads:** `/api/v1/leads/*`
- **Projects:** `/api/v1/projects/*`
- **Tasks:** `/api/v1/tasks/*`
- **Invoices:** `/api/v1/invoices/*`
- **Estimates:** `/api/v1/estimates/*`
- **Proposals:** `/api/v1/proposals/*`
- **Payments:** `/api/v1/payments/*`
- **Expenses:** `/api/v1/expenses/*`
- **Employees:** `/api/v1/employees/*`
- **Attendance:** `/api/v1/attendance/*`
- **Time Tracking:** `/api/v1/time-tracking/*`
- **Events:** `/api/v1/events/*`
- **Messages:** `/api/v1/messages/*`
- **Tickets:** `/api/v1/tickets/*`
- **Documents:** `/api/v1/documents/*`
- **Reports:** `/api/v1/reports/*`
- **Settings:** `/api/v1/settings/*`
- **Super Admin:** `/api/v1/superadmin/*`

Standard CRUD Pattern:
```
GET    /api/v1/{resource}       # List all (with company_id filter)
GET    /api/v1/{resource}/:id    # Get by ID
POST   /api/v1/{resource}        # Create
PUT    /api/v1/{resource}/:id    # Update
DELETE /api/v1/{resource}/:id     # Delete
```

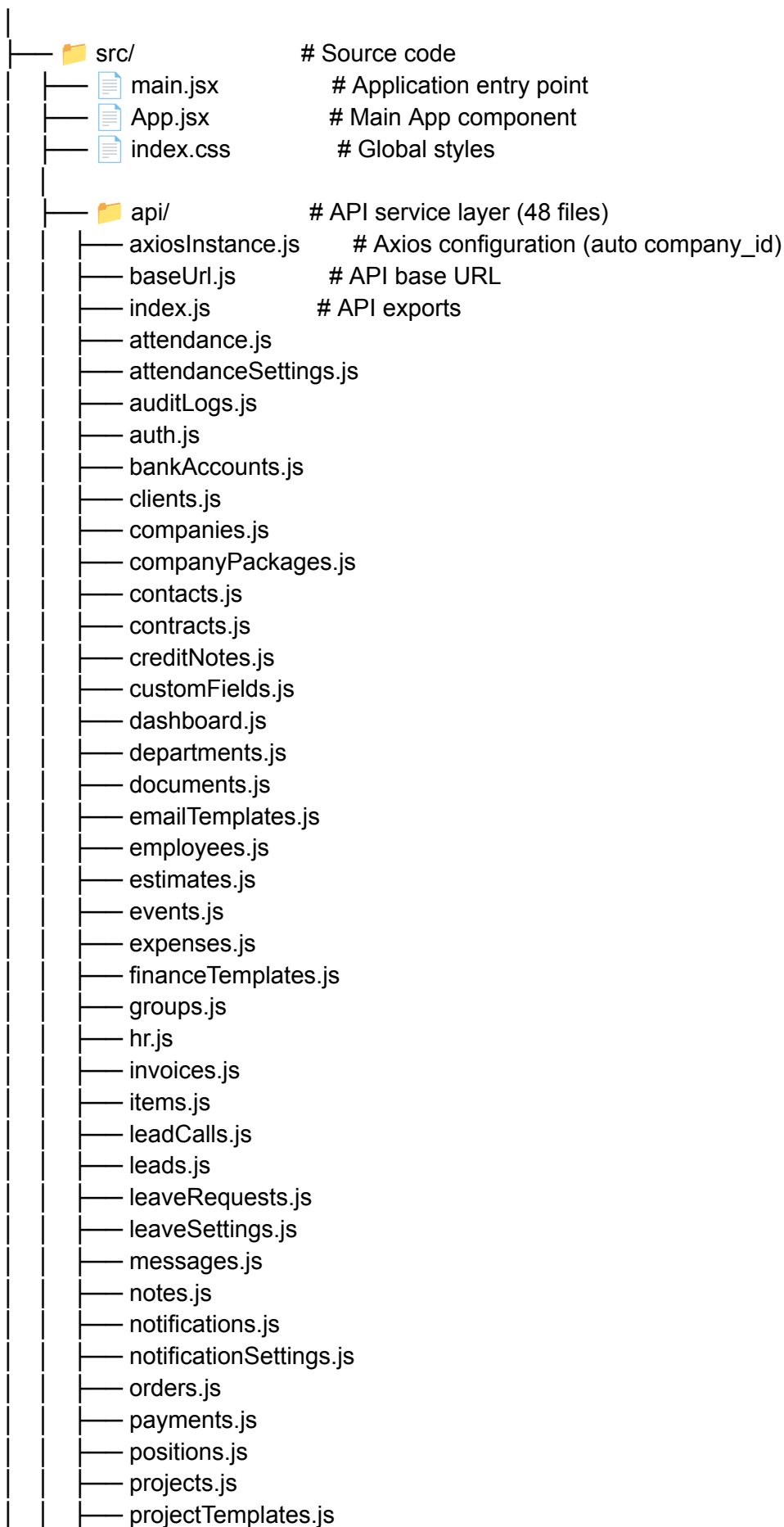## 🎨 Frontend Structure

Root Directory: `frontend-12-crm/`

```
frontend-12-crm/
├── 📄 package.json            # Dependencies & scripts
├── 📄 vite.config.js          # Vite configuration
├── 📄 tailwind.config.js       # Tailwind CSS configuration
├── 📄 postcss.config.js        # PostCSS configuration
├── 📄 index.html              # Main HTML file
│
├── 📁 public/                 # Static assets
│   ├── manifest.json           # PWA manifest
│   └── icons/                 # PWA icons
```

```
├── 📁 src/                # Source code
│   ├── 📄 main.jsx         # Application entry point
│   ├── 📄 App.jsx          # Main App component
│   ├── 📄 index.css        # Global styles
│   │
│   ├── 📁 api/             # API service layer (48 files)
│   │   ├── axiosInstance.js    # Axios configuration (auto company_id)
│   │   ├── baseUrl.js          # API base URL
│   │   ├── index.js            # API exports
│   │   ├── attendance.js
│   │   ├── attendanceSettings.js
│   │   ├── auditLogs.js
│   │   ├── auth.js
│   │   ├── bankAccounts.js
│   │   ├── clients.js
│   │   ├── companies.js
│   │   ├── companyPackages.js
│   │   ├── contacts.js
│   │   ├── contracts.js
│   │   ├── creditNotes.js
│   │   ├── customFields.js
│   │   ├── dashboard.js
│   │   ├── departments.js
│   │   ├── documents.js
│   │   ├── emailTemplates.js
│   │   ├── employees.js
│   │   ├── estimates.js
│   │   ├── events.js
│   │   ├── expenses.js
│   │   ├── financeTemplates.js
│   │   ├── groups.js
│   │   ├── hr.js
│   │   ├── invoices.js
│   │   ├── items.js
│   │   ├── leadCalls.js
│   │   ├── leads.js
│   │   ├── leaveRequests.js
│   │   ├── leaveSettings.js
│   │   ├── messages.js
│   │   ├── notes.js
│   │   ├── notifications.js
│   │   ├── notificationSettings.js
│   │   ├── orders.js
│   │   ├── payments.js
│   │   ├── positions.js
│   │   ├── projects.js
│   │   ├── projectTemplates.js
```

```
│ │ ├── proposals.js
│ │ ├── pwa.js
│ │ ├── reports.js
│ │ ├── roles.js
│ │ ├── settings.js
│ │ ├── socialMediaIntegrations.js
│ │ ├── socialMediaLeads.js
│ │ ├── subscriptions.js
│ │ ├── tasks.js
│ │ ├── tickets.js
│ │ ├── timeTracking.js
│ │ └── users.js
│ │
├── 📁 app/                  # Application pages (role-based)
│ │ │
│ ├── 📁 admin/              # Admin role pages (70 files)
│ │ └── pages/
│ │ │     ├── AdminDashboard.jsx
│ │ │     ├── Attendance.jsx
│ │ │     ├── AttendanceSettings.jsx
│ │ │     ├── AttendanceSettings/
│ │ │     │   ├── AttendanceRegularisationTab.jsx
│ │ │     │   ├── AttendanceSettingsTab.jsx
│ │ │     │   ├── EmployeeShiftsTab.jsx
│ │ │     │   ├── QRCodeTab.jsx
│ │ │     │   └── ShiftRotationTab.jsx
│ │ │     ├── AuditLogs.jsx
│ │ │     ├── BankAccounts.jsx
│ │ │     ├── Calendar.jsx
│ │ │     ├── ClientDetail.jsx
│ │ │     ├── Clients.jsx
│ │ │     ├── Companies.jsx
│ │ │     ├── CompanyPackages.jsx
│ │ │     ├── ContractDetail.jsx
│ │ │     ├── Contracts.jsx
│ │ │     ├── CreditNotes.jsx
│ │ │     ├── CustomFields.jsx
│ │ │     ├── DatabaseBackup.jsx
│ │ │     ├── Departments.jsx
│ │ │     ├── Documentation.jsx
│ │ │     ├── Documents.jsx
│ │ │     ├── EmailTemplates.jsx
│ │ │     ├── EmailTemplatesSettings.jsx
│ │ │     ├── EmployeeDetail.jsx
│ │ │     ├── Employees.jsx
│ │ │     ├── EstimateDetail.jsx
│ │ │     ├── Estimates.jsx
│ │ │     ├── Expenses.jsx
```

```
│   │   │       ├── FinanceTemplates.jsx
│   │   │       ├── hrm/
│   │   │       │   ├── AttendanceSettings.jsx
│   │   │       │   └── LeaveSettings.jsx
│   │   │       ├── Integrations.jsx
│   │   │       ├── InvoiceDetail.jsx
│   │   │       ├── Invoices.jsx
│   │   │       ├── Items.jsx
│   │   │       ├── LeadDetail.jsx
│   │   │       ├── Leads.jsx
│   │   │       ├── LeaveRequests.jsx
│   │   │       ├── LicenseManagement.jsx
│   │   │       ├── Messages.jsx
│   │   │       ├── ModuleSettings.jsx
│   │   │       ├── NotificationSettings.jsx
│   │   │       ├── OrderDetail.jsx
│   │   │       ├── Orders.jsx
│   │   │       ├── PaymentGateways.jsx
│   │   │       ├── Payments.jsx
│   │   │       ├── Positions.jsx
│   │   │       ├── ProjectDetail.jsx
│   │   │       ├── Projects.jsx
│   │   │       ├── ProjectTemplateForm.jsx
│   │   │       ├── ProjectTemplates.jsx
│   │   │       ├── ProposalDetail.jsx
│   │   │       ├── Proposals.jsx
│   │   │       ├── QuickBooks.jsx
│   │   │       ├── Reports.jsx
│   │   │       ├── RolesPermissions.jsx
│   │   │       ├── Settings.jsx
│   │   │       ├── SocialMediaLeads.jsx
│   │   │       ├── Store.jsx
│   │   │       ├── Subscriptions.jsx
│   │   │       ├── SystemHealth.jsx
│   │   │       ├── SystemUpdates.jsx
│   │   │       ├── Tasks.jsx
│   │   │       ├── Tickets.jsx
│   │   │       ├── TimeTracking.jsx
│   │   │       ├── TourGuide.jsx
│   │   │       ├── Users.jsx
│   │   │       └── ZohoBooks.jsx
│   │   │
│   │   ├── 📁 client/          # Client role pages (20 files)
│   │   └── pages/
│   │       ├── Calendar.jsx
│   │       ├── ClientDashboard.jsx
│   │       ├── Contracts.jsx
│   │       ├── CreditNotes.jsx
```

```
│   │   │   ├── Estimates.jsx
│   │   │   ├── Events.jsx
│   │   │   ├── Files.jsx
│   │   │   ├── InvoiceDetail.jsx
│   │   │   ├── Invoices.jsx
│   │   │   ├── Messages.jsx
│   │   │   ├── Notes.jsx
│   │   │   ├── Notifications.jsx
│   │   │   ├── Orders.jsx
│   │   │   ├── Payments.jsx
│   │   │   ├── Profile.jsx
│   │   │   ├── ProjectDetail.jsx
│   │   │   ├── Projects.jsx
│   │   │   ├── ProposalDetail.jsx
│   │   │   ├── Proposals.jsx
│   │   │   ├── Settings.jsx
│   │   │   ├── Store.jsx
│   │   │   ├── Subscriptions.jsx
│   │   │   ├── Tasks.jsx
│   │   │   └── Tickets.jsx
│   │   │
│   ├── 📁 employee/          # Employee role pages (13 files)
│   │   └── pages/
│   │   │   ├── Attendance.jsx
│   │   │   ├── Calendar.jsx
│   │   │   ├── EmployeeDashboard.jsx
│   │   │   ├── LeaveRequests.jsx
│   │   │   ├── Messages.jsx
│   │   │   ├── MyDocuments.jsx
│   │   │   ├── MyProfile.jsx
│   │   │   ├── MyProjects.jsx
│   │   │   ├── MyTasks.jsx
│   │   │   ├── Notifications.jsx
│   │   │   ├── Settings.jsx
│   │   │   ├── Tickets.jsx
│   │   │   └── TimeTracking.jsx
│   │   │
│   │   ├── 📁 superadmin/        # SuperAdmin role pages (11 files)
│   │   └── pages/
│   │       ├── AdminFAQ.jsx
│   │       ├── Billing.jsx
│   │       ├── Companies.jsx
│   │       ├── FrontSettings.jsx
│   │       ├── OfflineRequests.jsx
│   │       ├── Packages.jsx
│   │       ├── PwaSettings.jsx
│   │       ├── Settings.jsx
│   │       ├── SuperAdminDashboard.jsx
```

```
│ │         ├── SupportTickets.jsx
│ │         └── Users.jsx
│ │
├── 📁 auth/              # Authentication pages
│ └── pages/
│ │   ├── LoginPage.jsx
│ │   ├── SignupPage.jsx
│ │   ├── ForgotPasswordPage.jsx
│ │   └── ResetPasswordPage.jsx
│ │
├── 📁 components/          # Reusable components
│ │ │
│ │ ├── 📁 charts/         # Chart components
│ │ │   ├── BarChart.jsx
│ │ │   ├── DonutChart.jsx
│ │ │   └── LineChart.jsx
│ │ │
│ │ ├── 📁 items/          # Item-related components
│ │ │   └── AddItemModal.jsx
│ │ │
│ │ ├── 📁 layout/         # Layout components
│ │ │   ├── GlobalSearch.jsx
│ │ │   ├── LanguageDropdown.jsx
│ │ │   ├── MessagesPanel.jsx
│ │ │   ├── NotificationDropdown.jsx
│ │ │   ├── SendMessageModal.jsx
│ │ │   ├── Sidebar.jsx
│ │ │   └── TopBar.jsx
│ │ │
│ │ ├── 📁 messages/        # Message components
│ │ │   ├── AddMembersModal.jsx
│ │ │   ├── CreateGroupModal.jsx
│ │ │   └── ViewGroupMembersModal.jsx
│ │ │
│ │ ├── 📁 shared/          # Shared components
│ │ │   └── EventsSection.jsx
│ │ │
│ │ └── 📁 ui/             # UI components
│ │     ├── AddButton.jsx
│ │     ├── Badge.jsx
│ │     ├── BulkUpdateModal.jsx
│ │     ├── Button.jsx
│ │     ├── Calendar.jsx
│ │     ├── Card.jsx
│ │     ├── DataTable.jsx
│ │     ├── DetailPageLayout.jsx
│ │     ├── EnhancedDataTable.jsx
│ │     ├── FilterPanel.jsx
```

```
│   │       ├── FormRow.jsx
│   │       ├── Input.jsx
│   │       ├── Modal.jsx
│   │       ├── NotificationModal.jsx
│   │       ├── PwaInstallPrompt.jsx
│   │       ├── RichTextEditor.jsx
│   │       ├── RightSideModal.jsx
│   │       ├── TaskFormModal.jsx
│   │       ├── Timer.jsx
│   │       └── UniqueIdBadge.jsx
│   │
│   ├── 📁 context/            # React Context providers (6 files)
│   │   ├── AuthContext.jsx        # Authentication state
│   │   ├── LanguageContext.jsx    # Multi-language support
│   │   ├── ModulesContext.jsx     # Module access control
│   │   ├── PermissionsContext.jsx # Permission management
│   │   ├── SettingsContext.jsx    # Application settings
│   │   └── ThemeContext.jsx       # Theme management
│   │
│   ├── 📁 layouts/            # Layout components (3 files)
│   │   ├── AppLayout.jsx          # Main app layout (with sidebar)
│   │   ├── AuthLayout.jsx         # Authentication layout
│   │   └── WebsiteLayout.jsx      # Public website layout
│   │
│   ├── 📁 routes/             # Routing configuration
│   │   └── AppRoutes.jsx          # Main routing file
│   │
│   ├── 📁 config/             # Configuration files (4 files)
│   │   ├── adminSidebarData.jsx   # Admin sidebar menu
│   │   ├── clientSidebarData.jsx  # Client sidebar menu
│   │   ├── employeeSidebarData.jsx # Employee sidebar menu
│   │   └── superAdminSidebarData.jsx # SuperAdmin sidebar menu
│   │
│   ├── 📁 locales/            # Internationalization (6 files)
│   │   ├── index.js
│   │   ├── en.json            # English
│   │   ├── hi.json            # Hindi
│   │   ├── es.json            # Spanish
│   │   ├── fr.json            # French
│   │   ├── de.json            # German
│   │   └── ar.json            # Arabic
│   │
│   ├── 📁 utils/              # Utility functions
│   │   └── pwaInit.js             # PWA initialization
│   │
│   ├── 📁 assets/             # Static assets
│   │   ├── crm_bg_img.png
│   │   ├── crm_img.avif
```

```
│   │   ├── crm_img.png
│   │   └── premium_bg.png
│   │
│   └── 📁 website/            # Public website pages
│       ├── components/
│       │   ├── WebsiteFooter.jsx
│       │   └── WebsiteHeader.jsx
│       └── pages/
│           ├── HomePage.jsx
│           ├── AboutPage.jsx
│           ├── ContactPage.jsx
│           ├── PricingPage.jsx
│           ├── PrivacyPolicyPage.jsx
│           ├── RefundPolicyPage.jsx
│           └── TermsPage.jsx
```
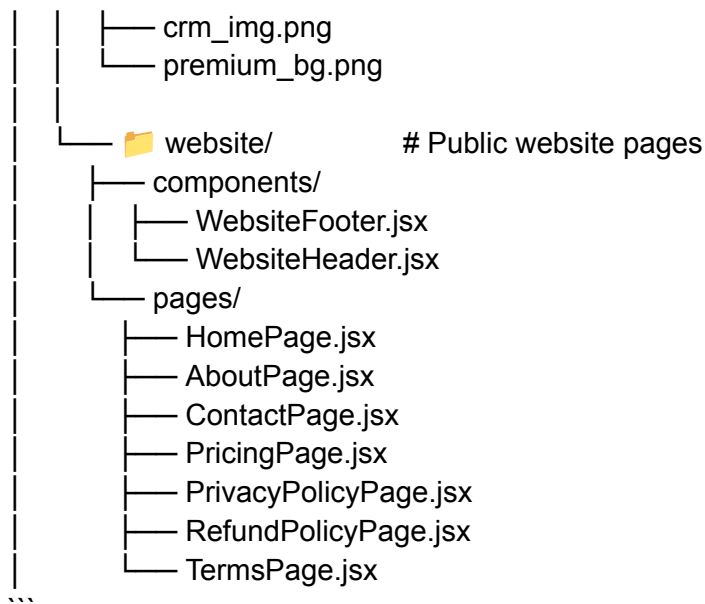
Frontend Routing Structure

Public Routes:
- `/` - Home Page
- `/about` - About Page
- `/contact` - Contact Page
- `/pricing` - Pricing Page
- `/privacy` - Privacy Policy
- `/terms` - Terms & Conditions
- `/refund` - Refund Policy

Authentication Routes:
- `/login` - Login Page
- `/signup` - Signup Page
- `/forgot-password` - Forgot Password
- `/reset-password` - Reset Password

Admin Routes: `/admin/*`
- `/admin/dashboard` - Admin Dashboard
- `/admin/leads` - Leads Management
- `/admin/clients` - Clients Management
- `/admin/projects` - Projects Management
- `/admin/tasks` - Tasks Management
- `/admin/invoices` - Invoices Management
- `/admin/employees` - Employees Management
- ... (70+ admin pages)

Client Routes: `/client/*`
- `/client/dashboard` - Client Dashboard
- `/client/projects` - My Projects
- `/client/invoices` - My Invoices
```

- `/client/payments` - Payments
- ... (20+ client pages)

**Employee Routes:** `/employee/*`
- `/employee/dashboard` - Employee Dashboard
- `/employee/tasks` - My Tasks
- `/employee/projects` - My Projects
- `/employee/attendance` - Attendance
- ... (13+ employee pages)

**SuperAdmin Routes:** `/superadmin/*`
- `/superadmin/dashboard` - SuperAdmin Dashboard
- `/superadmin/companies` - Companies Management
- `/superadmin/packages` - Packages Management
- ... (11+ superadmin pages)

---

## 🛠️ Technology Stack

### Backend
- **Runtime:** Node.js
- **Framework:** Express.js
- **Database:** MySQL
- **Authentication:** JWT (JSON Web Tokens)
- **Security:** Helmet, CORS, bcryptjs
- **File Upload:** Multer
- **Email:** Nodemailer
- **Logging:** Morgan
- **Rate Limiting:** express-rate-limit
- **Excel Export:** ExcelJS

### Frontend
- **Framework:** React 18.2.0
- **Build Tool:** Vite 5.0.8
- **Routing:** React Router DOM 6.20.0
- **HTTP Client:** Axios 1.7.2
- **Styling:** Tailwind CSS 3.3.6
- **UI Components:** Custom components
- **Charts:** Recharts 2.10.3
- **Rich Text Editor:** React Quill 2.0.0
- **Calendar:** React Calendar 6.0.0
- **Notifications:** React Hot Toast 2.6.0
- **Icons:** React Icons 4.12.0
- **Animations:** Framer Motion 12.23.26
- **PWA:** Service Worker support

---

## ✨ Key Features

### 🔐 Authentication & Authorization
- JWT-based authentication
- Role-based access control (SUPERADMIN, ADMIN, EMPLOYEE, CLIENT)
- Company-level data isolation (multi-tenant)
- Permission-based module access

### 📊 Core Modules
1. **CRM (Customer Relationship Management)**
   - Leads Management
   - Clients Management
   - Contacts Management
   - Social Media Leads Integration

2. **Project Management**
   - Projects & Tasks
   - Project Templates
   - Time Tracking
   - Project Labels & Status

3. **Financial Management**
   - Invoices
   - Estimates
   - Proposals
   - Payments
   - Expenses
   - Credit Notes
   - Bank Accounts
   - Items & Store

4. **HR Management**
   - Employees Management
   - Attendance Tracking
   - Leave Requests
   - Departments & Positions
   - HR Reports

5. **Communication**
   - Messages (1-on-1 & Groups)
   - Notifications
   - Email Templates
   - Tickets/Support

6. **Document Management**
   - Document Upload/Download
   - File Organization

- Document Sharing

7. **Reporting & Analytics**
   - Dashboard Analytics
   - Custom Reports
   - Audit Logs

8. **Settings & Configuration**
   - Company Settings
   - Module Settings
   - Role & Permissions
   - Custom Fields
   - Email Templates
   - Finance Templates

9. **SuperAdmin Features**
   - Company Management
   - Package Management
   - System Settings
   - Offline Requests
   - Billing Management

### 🌐 Additional Features
- Multi-language support (6 languages)
- PWA (Progressive Web App) support
- Dark/Light theme
- Responsive design
- Real-time notifications
- Calendar integration
- Event management
- Subscription management
- Social media integrations

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## 📝 File Count Summary

### Backend
- **Controllers:** 50 files
- **Routes:** 50 files
- **Middleware:** 5 files
- **Services:** 1 file
- **Utils:** 3 files
- **Database Scripts:** 24 files
- **Migrations:** 22 files

### Frontend
- **API Services:** 48 files

- **Admin Pages:** 70 files
- **Client Pages:** 20 files
- **Employee Pages:** 13 files
- **SuperAdmin Pages:** 11 files
- **Components:** 30+ files
- **Contexts:** 6 files
- **Layouts:** 3 files
- **Config:** 4 files
- **Locales:** 6 files

**Total:** 300+ files

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## 🔄 Data Flow

### Authentication Flow
```

1. User Login → Backend validates → Returns JWT token
2. Frontend stores token in localStorage
3. All API requests include token in headers
4. Backend validates token & extracts user/company info
5. Data filtered by company_id automatically
```

### API Request Flow
```

1. Frontend Component → API Service (axiosInstance)
2. axiosInstance adds company_id & JWT token
3. Request sent to Backend Route
4. Route → Middleware (auth, permissions)
5. Controller → Database Query (with company_id filter)
6. Response → Frontend Component
```

### Multi-Tenant Architecture
- Each company has isolated data
- `company_id` automatically added to all requests
- Backend filters all queries by `company_id`
- SUPERADMIN can access all companies
- Other roles limited to their company

---

## 📌 Important Notes

1. **Company Isolation:** All data is filtered by `company_id` to ensure multi-tenant isolation
2. **Role-Based Access:** Different roles see different pages and data

3. **Auto company_id:** Frontend automatically adds `company_id` to all API requests
4. **JWT Authentication:** All protected routes require valid JWT token
5. **Permission System:** Module-level permissions control feature access
6. **PWA Ready:** Application supports Progressive Web App features
7. **Multi-language:** Supports 6 languages with i18n
8. **Responsive:** Mobile-first responsive design

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**Status:** Complete ✅