

CRM PROJECT DOCUMENTATION

1. AUTHENTICATION SYSTEM

- Login/Register with email verification
- JWT token-based authentication
- Role-based access (Admin, HR, Manager, Employee)
- Password reset functionality

2. EMPLOYEE MANAGEMENT

- Employee profiles with personal/professional details
- Department assignment and role management
- Document upload/verification system
- Attendance tracking with status updates

3. PAYROLL SYSTEM

- Monthly salary calculation (30 days base)
- Attendance-based salary proration
- Allowances and deductions management
- PDF salary slip generation (10KB-20KB)
- Approval workflow (Draft !' Approved !' Paid)

4. CHAT SYSTEM

- Real-time messaging using Socket.IO
- WhatsApp-style notification sounds
- User online/offline status
- Message history and chat persistence
- Sound preference management

5. TECHNICAL STACK

Frontend:

- React.js with Context API
- Socket.IO Client
- Web Audio API for notifications
- React Icons and modern UI components

Backend:

- Node.js + Express.js
- MongoDB (Free Tier)
- Socket.IO Server
- JWT Authentication

Features:

- Real-time updates
- File size optimization
- Responsive design
- Error handling and logging

6. KEY API ENDPOINTS

Authentication:

- POST /api/auth/login
- POST /api/auth/register

Payroll:

- POST /api/payroll/generate
- PUT /api/payroll/:id
- GET /api/payroll/:id/salary-slip

Employees:

- GET /api/employees
- POST /api/employees
- PUT /api/employees/:id

7. PLANNED ENHANCEMENTS

- Advanced reporting system
- Leave management integration
- Performance review module
- Mobile app development