

CRM SYSTEM MANAGEMENT FORGE



CRM System Management Forge is an advanced, cross-platform **Customer Relationship Management (CRM)** solution built for businesses to streamline all organizational workflows including **Sales, Leads, Training, Warehouse, Payments, and Reports** under one ecosystem.

The system helps manage customers, employees, and company operations efficiently — accessible via **mobile (Expo React Native)** with a powerful **Node.js backend** and **MongoDB Atlas** for data storage.

Project Objectives



Centralize Operations

Centralize all company activities into one unified dashboard.



Manage Relationships

Manage leads, clients, and sales from acquisition to closure.



Track Performance

Track employee performance, leave requests, and expenses.



Automate Training

Automate training and service tracking for institutions.

Simplify Warehouse Management

Simplify warehouse management and stock flow.

Handle Payments Digitally

Handle all payment approvals and reports digitally.

Provide Business Insights

Provide business insights via detailed analytics and reports.

Cross-Platform Support

Support both Android and iOS using a single Expo build.

Technology Stack

Layer	Technology	Purpose
Frontend	Expo (React Native)	Cross-platform mobile development
Backend	Node.js + Express.js	RESTful API and business logic
Database	MongoDB Atlas	Cloud-based NoSQL database
Authentication	Firebase Auth / JWT	Secure login and session management
Storage	Cloudinary or Firebase Storage	For file and image uploads
State Management	Redux Toolkit	Global state management
Charts / Reports	Chart.js or Victory Native	Data visualization
Notifications	Firebase Cloud Messaging (FCM)	Real-time push notifications

Core Modules Overview

The screenshot shows the ViswamEdutech dashboard. At the top, there's a navigation bar with the company logo, user name 'Pavan Simhadri', and a search bar. Below the header is a main navigation menu on the left containing items like Dashboard, DC, Users / Employees, Leave Management, Trainings & Services, Warehouse, Stock Returns, Payments, Expenses, Reports, Settings, and Sign out. The dashboard itself features several cards: 'Active Leads' (blue), 'Total Sales' (red), 'Existing Schools' (orange), 'Completed Trainings' (green), 'Pending Services' (yellow), and 'Pending Trainings' (orange). Below these cards is a table titled 'Leads' with columns for Zone, Total Leads, Hot, Warm, and Cold. The table shows one entry for 'Nizamabad' with values 0, 0, 0, and 0 respectively.

1 Dashboard

- Overview of all business metrics.
- Cards showing:
 - Active Leads
 - Total Sales
 - Existing Schools
 - Pending Trainings
 - Completed Trainings
 - Pending Services
 - Completed Services
- Lead summary table (Zone, Total Leads, Hot, Warm, Cold).

2 DC (Delivery / Dispatch Control)

- Create Sale
- Closed Sales
- Saved DC
- Pending DC
- Employee DC

3 Users / Employees

- Add New Employee
- Active Employees
- Inactive Employees
- Pending Leaves

Additional Core Modules

01

Leave Management

- Pending Leaves
- Leaves Report

02

Trainings & Services

- Add Trainer
- Active Trainers
- Trainers Dashboard
- Assign Training/Service
- Trainings List
- Services List
- Inactive Trainers

03

Warehouse

- Inventory Items
- Stock
- DC @ Warehouse
- Completed DC
- Hold DC

04

Stock Returns

- Employee Returns List
- Warehouse Returns List

Payments

- Add Payment
- Transaction Report
- Approval Pending
(Cash/Cheques)
- Approved Payments
- Hold Payments

Expenses

- Pending Expenses List
- Finance Pending Expenses List

Reports

- Leads Report
- Sales Visit
- Employee Track
- Contact Queries
- Change Logs
- Stock Report
- DC Report
- Returns Report
- All Expenses Report

System Architecture



All modules are connected through secure APIs. JWT/Firebase handles authentication, and data syncs live between users and backend.

Folder Structure

Frontend (Expo App):

```
CRM-Forge-App/
|
|   └── src/
|       ├── components/
|       ├── screens/
|       |   ├── Dashboard.js
|       |   ├── DC.js
|       |   ├── Employees.js
|       |   ├── Payments.js
|       |   ├── Reports.js
|       ├── redux/
|       ├── utils/
|       └── App.js
|
└── package.json
```

Backend (Node.js Server):

```
crm-forge-server/
|
|   └── config/
|       └── db.js
|
|   └── controllers/
|       ├── userController.js
|       ├── salesController.js
|       ├── paymentController.js
|
|   └── models/
|       ├── User.js
|       ├── Sale.js
|       ├── Training.js
|       ├── Payment.js
|       └── Report.js
|
|   └── routes/
|       ├── userRoutes.js
|       ├── salesRoutes.js
|       ├── paymentRoutes.js
|
|   └── middleware/
|       └── authMiddleware.js
|
└── server.js
|
└── package.json
```

Database Design & Authentication

Database Design (MongoDB)

Collections:



users

employee/admin info



leads

customer/lead data



sales

sales details



dc

dispatch records



trainings

trainer assignments



payments

cash & cheque tracking



warehouse

stock and inventory



expenses

finance data



reports

analytics and logs

Authentication Flow

- **Firebase Auth / JWT Token** for each user.
- **Role-based access control (RBAC):**
 - Super Admin
 - Admin
 - Employee
 - Finance Manager
 - Trainer

Each role has unique permissions to access modules.

API Endpoints & Deployment

API Endpoints (Sample)

Method	Endpoint	Description
POST	/api/auth/login	User login
POST	/api/sales/create	Create new sale
GET	/api/leads	Fetch all leads
POST	/api/training/assign	Assign training
GET	/api/reports/all	Fetch complete reports

Deployment Plan

Frontend:

- Build Expo app → expo build:android / expo build:ios
- Generate .apk and .ipa files for distribution.

Backend:

- Host Node.js server on **Render** / **Railway** / **AWS EC2** / **Vercel**.
- MongoDB Atlas for database.

Environment Variables (.env):

```
MONGO_URI=<Your MongoDB URI>
JWT_SECRET=<Your Secret Key>
FIREBASE_API_KEY=<Firebase Key>
```

Reports & Analytics



Daily and Monthly Analytics

Daily and monthly sales analytics.



Lead Conversion

Lead conversion reports.



Employee Performance

Employee performance.



Payment Approvals

Payment approvals and pending status.



Warehouse Stock

Warehouse stock summary.



Expense Tracking

Expense tracking & balance sheets.

Future Enhancements & Conclusion

Future Enhancements

- AI-Powered Predictions

Add AI-powered sales predictions.

- Communication Integration

Integrate WhatsApp/Email CRM notifications.

- Offline Sync

Add offline sync for mobile app.

- Advanced Visualization

Introduce advanced data visualization (Power BI / Tableau).

- Multi-Language Support

Multi-language support.

- Web Portal

Admin web portal (React.js).

Conclusion

CRM System Management Forge offers a complete enterprise-level CRM experience combining **sales automation, employee management, and data analytics** in a single cross-platform app.

It is built for scalability, security, and performance — ideal for any growing organization.