MERN List Distribution System

Comprehensive Installation and Configuration Guide

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Prerequisites

Required Softwares:

- Node.js (version 14)
- MongoDB (Local installation or MongoDB Atlas account)
- Git (for version control)
- Web Browser (Chrome)

Verify

Installation:

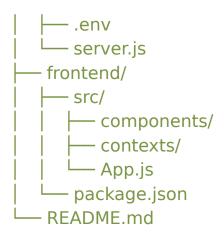
node --version

npm --version

mongod

-version

Project Structure



Backend Setup

- 1. Create backend directory and initialize npm.
- 2. Install dependencies (express, mongoose, bcryptjs, JWT, multer, csv-parser, xlsx, dotenv).
- 3. Create file structure: models, routes, middleware, server.js, .env.
- 4. Configure .env with PORT=5001, MongoDB URI, JWT secret.
- 5. Add scripts to package.json.
- 6. Create models (User, ListDistribution), middleware (auth), and routes (auth.js, agents.js, lists.js).
- 7. Setup server.js with Express, MongoDB connection, CORS, and routes.

Frontend Setup

- 1. Create React app.
- 2. Install dependencies: axios, react-router-dom.
- 3. Setup file structure: components, contexts.
- 4. Create AuthContext.js for authentication state.
- 5. Build components (Login, Dashboard, Agents, ListUpload, ListDistribution, MyLists, Navbar).
- 6. Configure App.js with router and protected routes.
- 7. Apply CSS for styling.

Database Configuration

Option 1: Local MongoDB

brew tap mongodb/brew

brew install mongodb-community

brew services start mongodb-

community mongosh

Option 2: MongoDB Atlas (Cloud) —- (Using)

- Create cluster on https://www.mongodb.com/cloud/atlas
- Update backend/.env with connection string.

Running the Application

Backend:(commands to start backend server)

cd backend

npm run dev

Frontend:(commands to start front-end server)

cd frontend

npm start

Access URL:

Frontend: http://localhost:3000

Backend: http://localhost:5001

Testing the Application

- 1. Create admin user with curl POST request.
- 2. Test login at http://localhost:3000.
- 3. Use dashboard, create agents, upload CSV files.
- 4. Verify distribution.

Sample CSV:

FirstName, Phone,Notes

John Doe,1234567890,Important

client Jane Smith,0987654321,Follow

up required

Troubleshooting

Common Issues:

- Backend not starting? process on port 5001.
- MongoDB connection failed ? Restart MongoDB service.
- CORS errors? Verify config and ports.
- Frontend build errors ? Reinstall node modules

Debugging:

- CORS ORIGIN ERROR, verify env variables, Added admin user using curl

Optimization:

- -Use database indexing, caching.
- Build frontend for production.
- Secure JWT, env vars, and CORS settings.

Login Credentials

For admin-

Email - <u>admin@system.com</u>

Password - admin123

For Agent -

Email - admin@example.com

Password - admin123