# **🧩 Step 8.75: MetaSys ERP — Full-Stack User Management, Settings, and Role Hierarchy System (with Location Tracking)**

This is not just user settings — this is **the control center** for:

* Permissions & hierarchy
* Role-based controls
* User profiles
* Feature toggles
* Time tracking setup
* System admin-level authority

## **🎯 OVERALL GOAL**

Transform the **“Settings”** section from a broken placeholder into a **robust, permission-based system center** that includes:

* User Profile controls (name, password, profile picture, etc.)
* Role management & hierarchy
* Permission presets (create/edit/toggle per user)
* Feature flags (per user or org)
* Organization-wide and personal settings
* Chrome/browser location activation by default

## **🧭 MODULES TO BUILD**

| **Module** | **Purpose** | **Visible to** |
| --- | --- | --- |
| My Profile | Manage personal info, password, picture | All users |
| Org Settings | Default timezone, permissions, location/GPS setup | Admins |
| User Management | Add/edit/remove users, assign roles & permissions | Admins |
| Permission Templates | Create tiered presets for roles | Admins |
| Feature Toggles | Turn on/off specific modules or microfeatures | Admins |
| Advanced Settings | Optional: dark mode, branding preference, etc. | All users |
| Location Tracking Control | Ask for location on load, allow override | All users |

## **🔐 PERMISSION MATRIX (Who can do what?)**

| **Feature** | **Regular User** | **Manager** | **Admin** | **System Admin** |
| --- | --- | --- | --- | --- |
| View/Edit own profile | ✅ | ✅ | ✅ | ✅ |
| Change own password | ✅ | ✅ | ✅ | ✅ |
| Upload profile picture | ✅ | ✅ | ✅ | ✅ |
| Change full name | ❌ | ❌ | ✅ | ✅ |
| Reset other users' passwords | ❌ | ❌ | ✅ | ✅ |
| Assign or edit user roles | ❌ | ✅ (only for own team) | ✅ | ✅ |
| Access Org settings | ❌ | ❌ | ✅ | ✅ |
| Turn on/off platform features | ❌ | ❌ | ✅ | ✅ |
| Create permission templates | ❌ | ❌ | ✅ | ✅ |
| Activate location/GPS (By Default Turned on for Everyone) | ✅ | ✅ | ✅ | ✅ |

## **🖼️ “MY PROFILE” PAGE**

For **all users**

* View name, role, email (email editable)
* Upload/change profile picture
* Change password (requires old password)
* Optional: Add phone number, timezone

## **⚙️ “USER MANAGEMENT” FOR ADMINS**

* Add new user (name, email, role, org, password)
* Assign permission preset (dropdown)
* Optional toggles for:  
  + Access to Time Tracking
  + See Invoices
  + Approve Payroll
  + Edit Load Data
* Set reporting hierarchy (who reports to whom)

## **🧱 “PERMISSION PRESETS” (Tier Templates)**

Create and save presets like:

* **Sales Agent – Junior**
* **Dispatch – Manager**
* **System Admin – Full**

Each preset controls access to:

* Each Module (CRM, Dispatch, Invoices, HR, etc.)
* Each Action (View, Create, Edit, Delete)
* Approval rights
* Notification access

## **📍 LOCATION / GPS SYSTEM**

### **Purpose:**

Enable **browser-based location tracking**, synced with Time Tracking module.

### **Requirements:**

* Ask for location on login (Chrome prompt)
* Save last known location with timestamp
* Show simple “Location On” indicator in header
* Future: Geo-fencing and accuracy checks

### **For Replit:**

Let’s not force auto-permission from browser (not allowed in modern browsers).  
 Instead:

* Show an in-app popup that **asks user to allow location**
* If denied, show a yellow warning bar: “Location required for time tracking. Enable in browser.”

## **🪟 SETTINGS UI (By Role)**

| **Role** | **Tab: My Profile** | **Tab: Settings** | **Tab: Admin Tools** |
| --- | --- | --- | --- |
| Sales Agent | ✅ | Basic UX prefs | ❌ |
| Manager | ✅ | Personal + team settings | ✅ (for team) |
| Admin | ✅ | Full org settings | ✅ |
| System Admin | ✅ | Full control | ✅ |

## **🔧 SETTINGS EXAMPLES FOR REPLIT TO BUILD**

| **Setting** | **Description** | **Who Can Edit** |
| --- | --- | --- |
| Default Timezone | Set timezone per user/org | Admin |
| Enable Dark Mode | Optional toggle | User |
| Set Home Dashboard | Default landing page | User |
| Enable Kanban View (CRM) | Module-specific preference | Admin |
| Auto-assign Tasks to X | Workflow config | Admin |
| Invoice Auto-Generation | Toggle per org | Admin |
| Slack/Email notifications | On/Off | User |

## **🧩 SYSTEM ARCHITECTURE NOTES (FOR REPLIT)**

* All settings changes = audit-logged
* Permissions = stored in user.roles[] and org.policy[]
* Settings = JSON blob per user + org
* Use enums for roles to allow tier-based access
* Separate system-wide settings from user preferences