

REAL-TIME RFID MAP SYSTEM – TECHNICAL DOCUMENTATION

SYSTEM OVERVIEW:

This system tracks hospital staff & patients in real-time using RFID and visualizes them on a live hospital map.

LIVE PARTICIPANTS:

- Patients
- Doctors
- Nurses
- Pharmacists

STATUS LOGIC:

RED → MDR Positive Patient

GREEN → Safe Patient

YELLOW → Hospital Staff

COMPLETE DATA FLOW:

RFID Scanner → Google Sheets → Apps Script → Node Backend → React Frontend

GOOGLE APPS SCRIPT:

- doPost(e): Sends live RFID data into Google Sheet
- doGet(): Fetches all sheet data as JSON

API FUNCTION:

Backend fetches Google Sheet data and filters all users currently inside the hospital.

FRONTEND FUNCTION:

Real-Time Map displays live people location on hospital rooms with auto refresh every 3 seconds.

COMPLETED FEATURES:

- RFID Integration
- Google Sheet Sync
- Real-Time Tracking
- MDR Highlighting
- Auto Refresh
- Secure Backend API

NEXT PHASE:

- Heatmaps
- Exposure Alerts
- Contact Tracing