**Centralized Patient & Resource Management System**

**Problem Statement:**  
Wenlock Hospital currently faces fragmented communication across departments like Cardiology, OT, and Pharmacy. Despite having 73 display screens and a drug inventory system, there's no unified platform to manage OT schedules, display real-time updates, or broadcast emergency alerts.

### **Your Task:**

Design and prototype a modular Smart Display System that syncs:

* OT/Consultation schedules + token queues
* Real-time drug inventory updates
* Emergency alerts (Code Blue/Red)
* Patient-facing & staff-facing views

You must simulate real-time data syncing between at least **two departments** (e.g., OT + Pharmacy).

**Build Requirements (Pick 1 or Combine)**

| **Type** | **Example Tools** | **What to Build** |
| --- | --- | --- |
| Web App | React, Flask, Node, Firebase | A dashboard showing synced tokens, stock alerts, and emergency codes |
| Mobile App | Flutter, Android Studio | App to manage tokens and sync with inventory |
| Display Simulation | Figma, Canva, HTML/CSS | Simulated UI screens for public and internal displays |
| Backend Logic | Python, Node, SQL/NoSQL | Token system logic, alert broadcast, sync simulation |

**What to submit:**

* Concept Note: 1-pager with your solution flow, key challenges addressed
* Demo: Link to a working prototype or recorded video demo (3–5 min max).
* Codebase: GitHub link or zip file with clearly structured files.
* Screenshots of simulated display views (patients + staff).

**Pro Tips**

* Keep patient privacy in mind (no full names, consider initials/token IDs).
* Include emergency alert mockups – how does Code Blue trigger across screens?
* Think modular: hospital systems evolve slowly, so your solution should plug into existing tech (like LG display manager or inventory backend).

**Dummy database:** <https://drive.google.com/drive/folders/1Zxhkx9_Q486L_K_Md2lSVBhRphI9cIa5?usp=sharing>