ROADMAP:

The Blueprint & Contract

- Finalize the "User Flow." Exactly what happens when a manufacturer adds a drug? What does the consumer see?
- Set up your development environment (Flutter/React).
- Write the **Smart Contract** (Solidity). It should have two main functions: register Medicine and verify Medicine. Deploy it to a local blockchain.

The Logic & Backend

- Connect your frontend to the blockchain using **Ethers.js**.
- Build the **Manufacturer Dashboard** (Simple Web/App view) where they can input a Batch ID and "Mint" a new medicine record.
- Set up **Firebase** for non-blockchain data (like user login or storing medicine photos).

The Scanner (The Core)

- Integrate the QR Scanner library (Google ML Kit).
- Write the logic: Scanner reads QR $\rightarrow$ Extracts ID $\rightarrow$ Calls the Blockchain $\rightarrow$ Returns "Authentic" or "Fake."
- Implement the **"Burn on Scan"** logic—if a consumer scans it, the status changes to "Sold" so it can't be reused by a counterfeiter.

UI/UX & Feedback Loops

- Design the "Result" screens. Using **Lottie animations** (Green checkmark for success, pulsing Red for warning).
- **:** Add "Detailed Info" view—show the manufacturing date, expiry, and the factory location fetched from the blockchain.
- Add a **"Report" button** for fake meds that captures the user's location.

Analytics

- Build a simple **Admin Heatmap** (using Leaflet.js). Show where fake scans are happening globally.
- Implement **Offline Verification** (optional)—pre-load certain public keys so the app can verify signatures without 5G.
- Edge-case testing. What happens if the QR is blurry? What if the internet is slow?

Refinement & Pitch Prep

- Bug hunting. Fix every crash. Ensure the transition between screens is butter-smooth.
- Create **Demo Props**. Print physical labels/boxes with real QR codes that link to live testnet deployment.
- Draft **Pitch Deck**. Focus : *The Problem* (lives lost), *The Tech* (Blockchain/AI), and *The Scalability*.

Simulation & Launch

- Run a "Full Loop" demo few times. Manufacturer mints $\rightarrow$ Scanner verifies $\rightarrow$ Admin sees the report.
- Record a **backup demo video** (just in case the live internet fails during the presentation!).
- Finally Pitch time…