**1. Smart Rickshaw & CNG Fare Calculator**

**Tech Implementation:**

* **React (Frontend)**:
  + Get GPS location using navigator.geolocation.
  + Show a map (Google Maps API or Leaflet.js).
  + Display fare calculation dynamically.
* **Node.js + Express (Backend)**:
  + Calculate fare based on distance (Haversine formula for GPS points).
  + Store trip history in database.
* **MongoDB (Database)**:
  + Store fare rates, trip logs, driver details, passenger details.
* **Extras**:
  + PDF or email-based **digital receipts** (pdfkit in Node.js).
  + Complaint form linked to backend.

### ****2. Women Safety & Emergency Response App****

**Tech Implementation:**

* **React (Frontend)**:
  + SOS button → when clicked, fetch current GPS location and send to backend.
  + Fake call animation/alert in UI for quick diversion.
  + Show list of nearby police stations on a map.
* **Node.js + Express (Backend)**:
  + Handle SOS requests and send SMS/WhatsApp messages via Twilio, Vonage, or a Bangladeshi SMS API.
  + Store emergency contacts and past incidents.
* **MongoDB (Database)**:
  + Store user profiles, emergency contact info, location history (optional for privacy).
* **Extras**:
  + Push notifications (OneSignal or Firebase Cloud Messaging).

#### **3. Flood & Cyclone Early Warning**

* **Frontend (React)** → map showing flood zones, shelter locations, latest updates.
* **Backend (Node + Express)** → fetches weather data from APIs, sends push notifications/SMS alerts.
* **Database (MongoDB)** → store locations, alerts, shelter capacity.