Okay, here is a full description of your project, incorporating the features and structure we've discussed. It highlights reusable components, prototype scope, and future plans.

**Project Title:** SeekWell

1. Problem Statement:

Many individuals in rural communities across the APAC region face significant barriers to accessing timely and adequate healthcare. These challenges include distance to facilities, shortage of qualified medical personnel, limited personal access to technology (like smartphones), and lower digital literacy. This results in delayed diagnosis, inadequate management of common ailments, and difficulties in accessing preventive care, ultimately impacting community well-being and aligning with challenges under UN SDG 3 (Good Health and Well-being).

2. Vision & Goal:

To bridge the healthcare accessibility gap in underserved rural communities by developing an intelligent, multi-user web application. This platform will leverage Google's Gemini AI to provide preliminary health assessments and guidance, facilitated through a tiered access model involving patients, local support staff, and remote medical professionals. The immediate goal is to create a functional prototype for the APAC Solution Challenge 2025, demonstrating core AI capabilities and social impact potential.

3. Target Users:

The system is designed for three key user roles:

* **Patients:** Individuals within the community needing healthcare advice, who may access the system directly or with assistance.
* **Commune Cadres / Support Staff:** Designated, non-medical local individuals (e.g., community health workers, volunteers, local leaders) trained to use the application to assist patients, input information, facilitate AI interaction, and manage basic follow-up or escalation. This role is crucial for bridging the digital divide.
* **Medical Staff (Future Focus):** Qualified doctors or nurses who can remotely review complex cases flagged by the system or cadres, access patient summaries enhanced by AI, and provide professional consultation.

**4. Key Features:**

* **Multi-User Authentication & Role-Based Access:** Secure login for different user types with tailored interfaces and permissions.
  + *Reusability:* Adapts authentication logic from Clinic Management; requires significant role differentiation logic.
* **Assisted Patient Interaction (Cadre Workflow):** Interface for Cadres to select/manage basic patient profiles and initiate AI interactions on their behalf.
  + *Reusability:* Adapts patient info view/management from Clinic Management; requires new workflow design.
* **Gemini-Powered Symptom Checker & Guidance:** A chat interface where Cadres (or potentially Patients) input symptoms in natural language. Gemini analyzes symptoms, considers patient context (from EMR), asks clarifying questions, provides preliminary insights on potential conditions, suggests self-care, and offers basic triage advice (e.g., urgency, type of care needed), always with clear disclaimers.
  + *Reusability:* Replaces basic FAQ bot from Clinic Management; requires entirely new backend logic, extensive prompt engineering, and Gemini API integration. Core frontend/backend frameworks reused.
* **Simplified EMR & AI Personalization:** Basic storage for key patient data (allergies, chronic conditions, past interaction summaries). Gemini uses this data for contextualized chat responses and can generate easy-to-understand summaries of the EMR for Cadres/Patients.
  + *Reusability:* Adapts database schema and EMR concept from Clinic Management (highly simplified); requires new logic for AI summary generation and data retrieval for prompts.
* **(Placeholder) Rapid Diagnosis Module:** An interface element indicating the future capability to integrate more advanced AI diagnostic tools (like ECG analysis).
  + *Reusability:* Minimal reuse.
* **(Future) Medical Staff Dashboard:** A dedicated interface for registered medical professionals to review escalated cases, patient histories (with AI summaries), and potentially communicate feedback or diagnoses.
  + *Reusability:* Minimal reuse.

**5. Technology Stack:**

* **Frontend:** React *(Leveraged from Clinic Management)*
* **Backend:** Node.js / FastAPI *(Leveraged from Clinic Management)*
* **Database:** PostgreSQL / SQL Server *(Schema adapted from Clinic Management)*
* **AI:** Google Gemini API (via Vertex AI or Google AI SDKs) *(New Integration)*

6. Prototype Scope (APAC Solution Challenge):

The initial prototype will focus on demonstrating the core value proposition and mandatory Gemini usage, primarily focusing on the Cadre-Patient interaction:

1. **Cadre Login & Patient Selection:** Cadre can log in securely and select a patient profile (basic info view). *(Built using adapted Clinic Management components)*.
2. **Gemini Symptom Checker via Cadre:** The core feature. Cadre uses the chat interface to input symptoms for the selected patient; the backend sends this + basic mock EMR context to Gemini; Gemini's analysis/guidance is displayed. *(Requires significant new development for Gemini integration and prompt logic, built on Clinic Management frameworks)*.
3. **Basic EMR Context Provision:** The backend retrieves predefined mock EMR data (e.g., allergy: penicillin, condition: none) for the selected patient and includes it in the prompt sent to Gemini to demonstrate personalization. *(Adapts Clinic Management DB/EMR concept, requires backend logic)*.
4. **(Optional) Simple EMR Summary View:** A separate screen displaying the static mock EMR data used for context. *(Adapts Clinic Management concepts/UI)*.

**7. Future Work (Post-Prototype):**

* Develop direct Patient login and interface.
* Build the full Medical Staff dashboard and workflow.
* Integrate specific diagnostic AI models (e.g., ECG multimodal analysis).
* Implement robust EMR features (history tracking, data import).
* Add appointment referral or basic scheduling features.
* Develop multi-language support.
* Explore offline capabilities for intermittent connectivity.
* Refine AI responses based on user feedback and medical expert review.

This description provides a comprehensive overview aligned with your goals and our discussions. It clearly outlines what's achievable for the prototype while showcasing a compelling vision for the future. Let me know if you'd like any part adjusted!