Gen AI Exchange Hackathon

Team Name : ZEB Codeing

Team Leader Name : Arshad Pasha

Problem Statement : **[Student] Generative AI for Youth Mental Wellness**

Brief about the prototype:

This prototype is designed to feel like a **safe, non-judgmental companion** for young people who often struggle in silence due to stigma around mental health. Instead of presenting itself as a medical app, it speaks in a warm, empathetic tone—listening first, validating emotions, and gently guiding users toward self-care practices such as journaling, grounding exercises, or breathing techniques. It leverages psychological principles like **active listening, emotional validation, and small actionable steps** to help youth feel heard and supported without fear of being labeled or judged. The experience is deliberately confidential, with anonymous login and private mood tracking, ensuring that young people can express themselves freely and safely.

On the technology side, the prototype integrates **Google Gemini** for natural empathetic dialogue, **Firebase** for secure and anonymous storage of mood logs and journals, and **Firestore** to power real-time interactions. **Apps Script** acts as a proxy to safely connect the chatbot to Gemini while hiding sensitive keys, and the entire interface runs as a simple **web app hosted on Firebase Hosting** for free. By combining psychology (empathetic interaction), technology (serverless Google stack), and the human need for safe expression, the prototype becomes a **confidential, AI-powered wellness space** where Indian youth can begin conversations about their feelings, access culturally sensitive coping strategies, and take small steps toward mental well-being.

Opportunity should be able to explain the following:

How different is it from existing solutions?

Most existing mental wellness apps are either paid, too clinical, or culturally disconnected from Indian youth. They often require full sign-up, collect personal data, or focus on therapy-style interventions that may intimidate students. Our solution is **anonymous, stigma-free, and culturally tuned**, offering empathetic conversations in **English, Hindi, and regional languages** using Google's generative AI. Unlike typical chatbots, it combines **emotional intelligence (psychology principles)** with **secure, free Google Cloud technology**, making it both accessible and trustworthy.

Opportunity should be able to explain the following:

How will it solve the problem?
By providing a **confidential AI companion** available 24/7, it gives youth a safe space to share feelings, track moods, and receive supportive coping strategies. The system uses **Gemini's empathetic responses** to reduce feelings of isolation, while **Firestore and Firebase** ensure private mood journaling and trend tracking. Over time, it helps students recognize their emotional patterns and gently nudges them toward healthier self-care, while crisis escalation features connect them with real resources if they need urgent help. This tackles stigma by normalizing conversations around emotions without requiring formal therapy upfront.
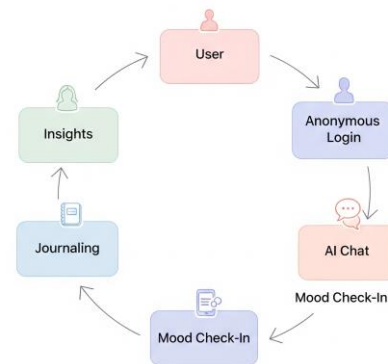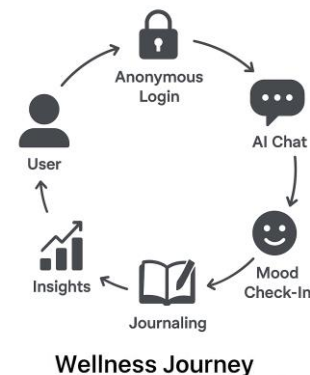
Opportunity should be able to explain the following:
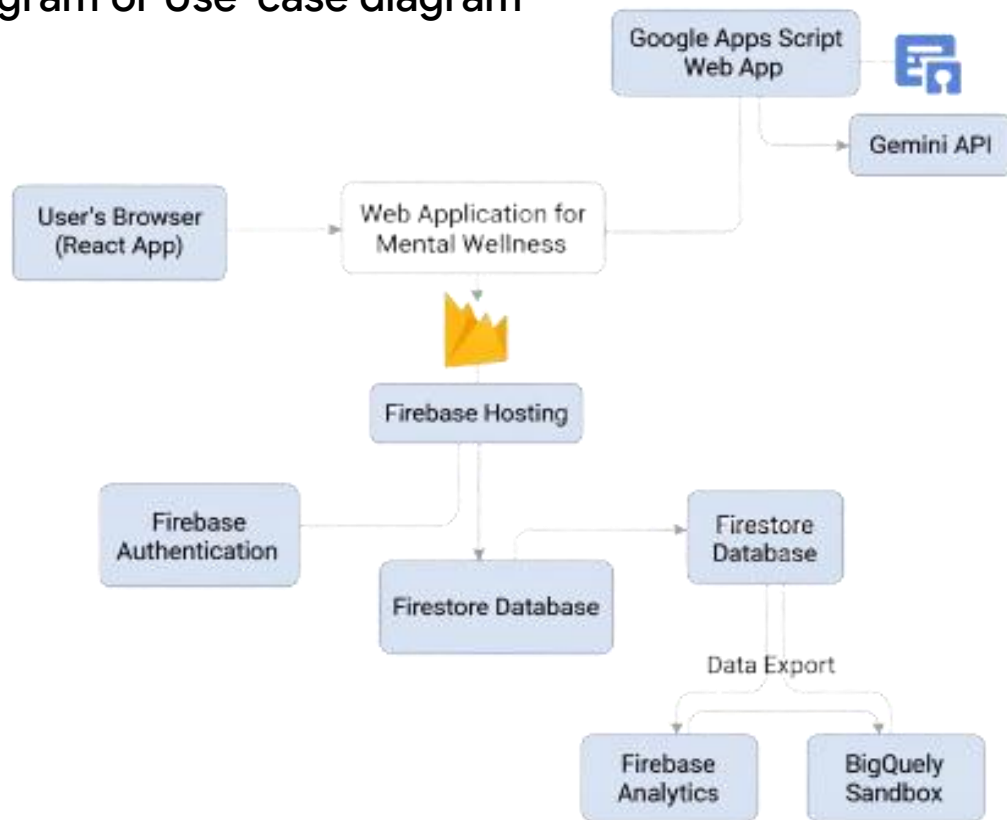
USP of the proposed solution
The unique selling point is its blend of **technology + psychology + cultural sensitivity**. It is **anonymous by default**, **free to use**, and **hosted entirely on Google's ecosystem**—ensuring reliability, privacy, and scalability. Unlike typical wellness apps, it is designed specifically for **Indian youth**, with empathetic, localized conversations, stigma-free design, and a confidential environment that empowers students to start addressing mental wellness in a way that feels safe, relatable, and judgment-free.

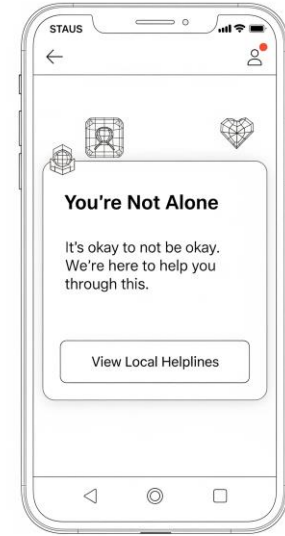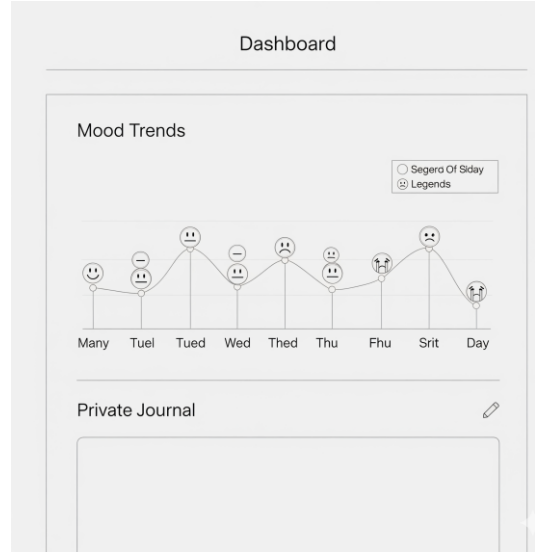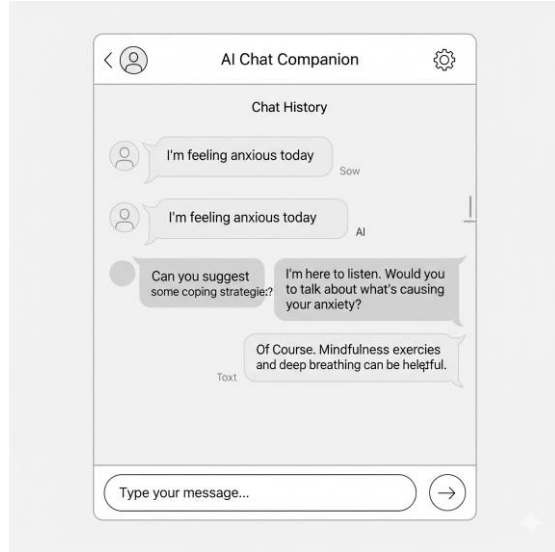# List of features offered by the solution

1. Anonymous AI-powered empathetic chat support
2. Multilingual support (English, Hindi, and regional languages)
3. Daily mood check-ins with emoji/scale-based logging
4. Private journaling with optional AI prompts
5. Personalized wellness toolkit (coping strategies, breathing exercises, affirmations)
6. Culturally sensitive mental health education content
7. Crisis support pathway with helplines and resources
8. Gamified self-care nudges (streaks, reminders, badges)
9. Mood trend insights and visualizations for self-reflection
10. Secure, anonymous login with encrypted data storage and "delete my data" option
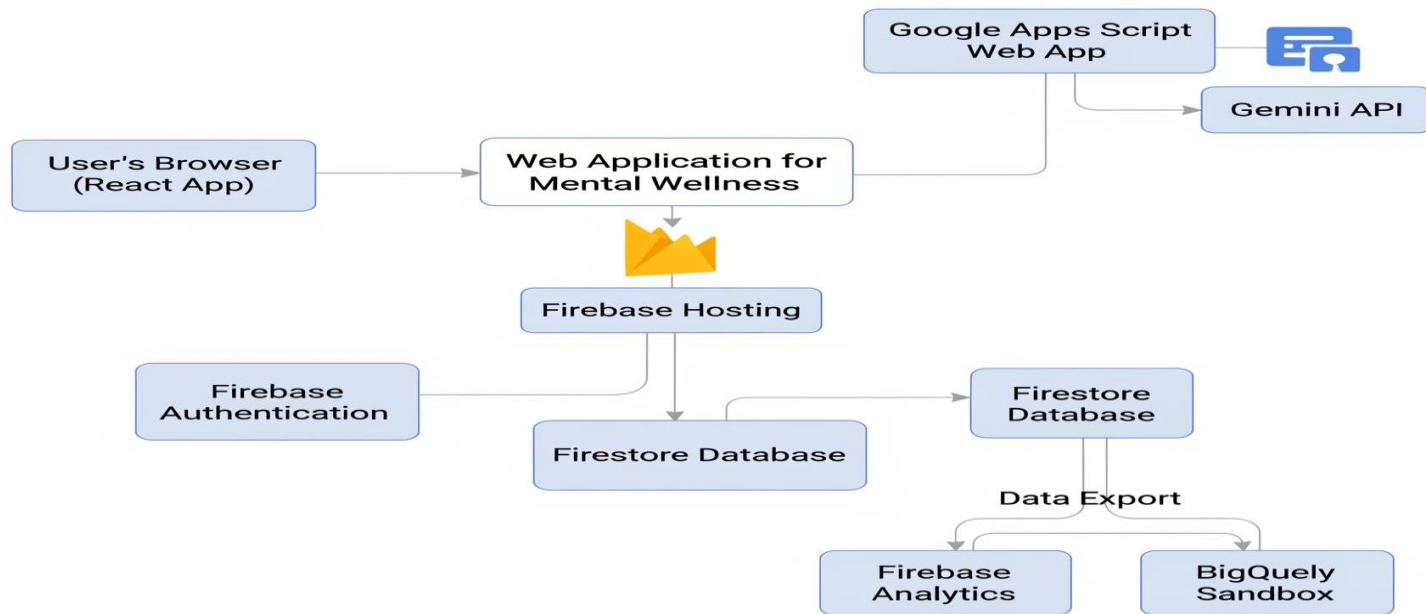

Wellness Journey

Process flow diagram or Use-case diagram

Wireframes/Mock diagrams of the proposed solution (optional)

Architecture diagram of the proposed solution

Technologies to be used in the solution:

Frontend (User Interface)
- **HTML, CSS, JavaScript** – Core web technologies for building the UI.
- **React.js (optional)** – For creating a smooth, responsive, and modular web app.

Backend & Infrastructure (Google Cloud)
- **Firebase Hosting** – To host the web application.
- **Firebase Authentication (Anonymous Login)** – Enables secure, identity-free access.
- **Cloud Firestore** – For storing mood logs, journals, and user data securely.
- **Firebase Functions (Serverless)** – To handle AI API calls, process journaling prompts, and integrate backend logic.

- **Google Gemini API** – For empathetic, natural conversations in multiple languages.
- **Vertex AI (optional upgrade)** – For fine-tuning models, if customization is needed.
- **Translation API (Cloud Translation)** – For multilingual support in regional languages.
- **Natural Language API** – For sentiment and mood analysis in user text.

Estimated implementation cost (optional):

Frontend (React / Web App)
　Cost: **Free** (open-source, runs locally before deployment).
Firebase Hosting
　Free tier: **1 GB storage + 10 GB/month bandwidth**.
　Enough for early-stage prototypes and pilot use.
　Cost: **$0**.
Firebase Authentication (Anonymous Login)
　Free tier: **10k authentications/month**.
　Cost: **$0**.
Cloud Firestore
　Free tier: **50k reads, 50k writes, 1 GB storage/month**.
　More than sufficient for MVP.
　Cost: **$0**.
Google Gemini API (via Vertex AI Studio / MakerSuite)
　Free tier: **limited free tokens for prototyping & testing**.
　For small-scale pilots: **$0**.
　For scaling: approx. **$0.0005–$0.002 per query**, depending on model.
Translation API (optional, multilingual support)
　Free tier: **500k characters/month**.
　Cost: **$0**.
Analytics (Firebase + Looker Studio)
　Free tiers available.
　Cost: **$0**.

Add as per the requirements for the hackathon:

Prototype / MVP (within hackathon)
- **Frontend (React / Web App)** – Free (open-source)
- **Firebase Hosting** – Free tier (1 GB storage, 10 GB/month bandwidth)
- **Firebase Authentication (Anonymous Login)** – Free tier (10k authentications/month)
- **Cloud Firestore** – Free tier (50k reads, 50k writes, 1 GB storage/month)
- **Google Gemini API (via Vertex AI Studio / MakerSuite)** – Free credits available for prototyping
- **Translation API (for multilingual)** – Free tier (500k characters/month)
- **Firebase Analytics + Looker Studio** – Free
 Total Cost during hackathon: $0 (covered in free tiers/credits)

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Thank you