

# Gen AI Exchange Hackathon

Team Name : Code flash

Team Leader Name : Nithish S

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

## About the prototype:

### **Calmixy – Youth Mental Wellness App**

#### Objective:

- Support daily mental wellness for youth with AI companionship, stories, exercises, and progress tracking.

#### Key Features:

- **All-in-One AI Chat:** Positive, context-aware AI for mood check-ins and suggestions.
- **Story Page:** Pre-made + AI-generated stories with TTS and library saving.
- **Relief / Mini-Exercises:** Pre-made & AI-generated exercise packages with timers and progress tracking.
- **Me / Progress Page:** Mood tracker, CRUD journal, points & stars, weekly AI insights.

#### Navigation & UI:

- **Bottom navigation bar:** Chat | Story | Relief | Me
- Clean, calming interface with Lilita One font

#### Hackathon Focus:

- Functional MVP with core features
- Built using Flutter, Firebase, Gemini AI API, TTS, YouTube/Reddit API

## Opportunity :

### 1. How is it different from other existing solutions?

- Most wellness apps give generic meditation or exercise routines. Our solution is AI-driven, mood-adaptive, and interactive — meaning the experience changes based on how the user feels right now. Instead of “one-size-fits-all,” it gives personalized relief packages + calming stories in real-time.

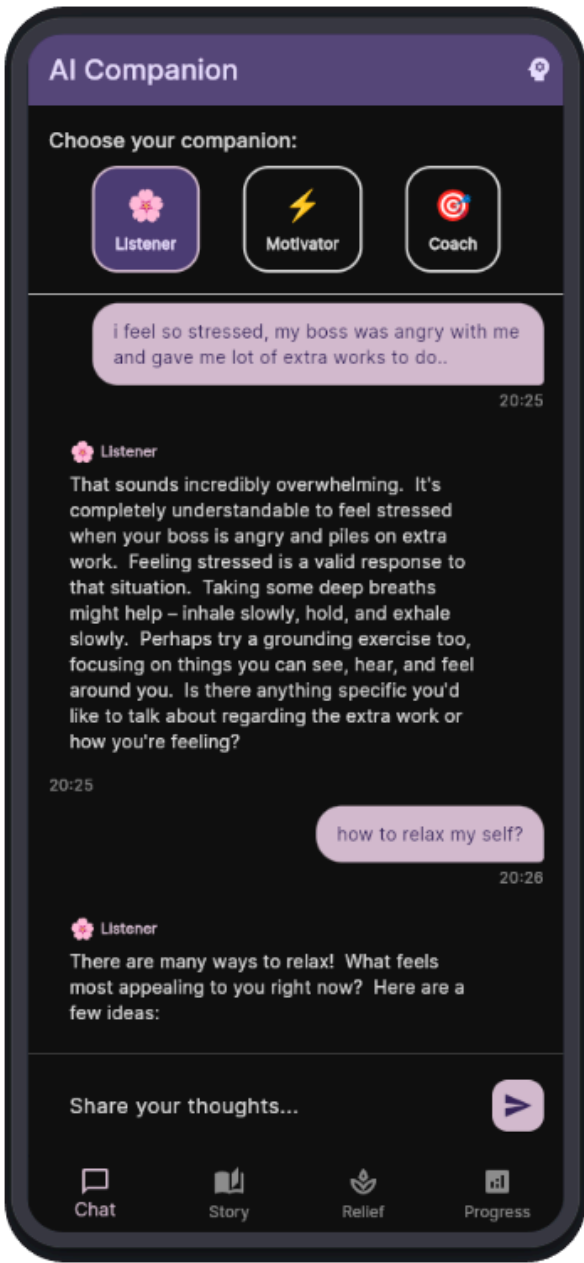
### 2. How will it solve the problem?

- Helps users express emotions easily through AI chat.
- Provides step-by-step relief exercises (like breathing, walking, journaling) matched to their mood.
- Uses calming AI stories (5 min with TTS voice) to guide reflection and relaxation.
- Encourages daily engagement through points, badges, and a simple dashboard.
- This creates a safe, positive, and practical outlet for youth mental wellness.

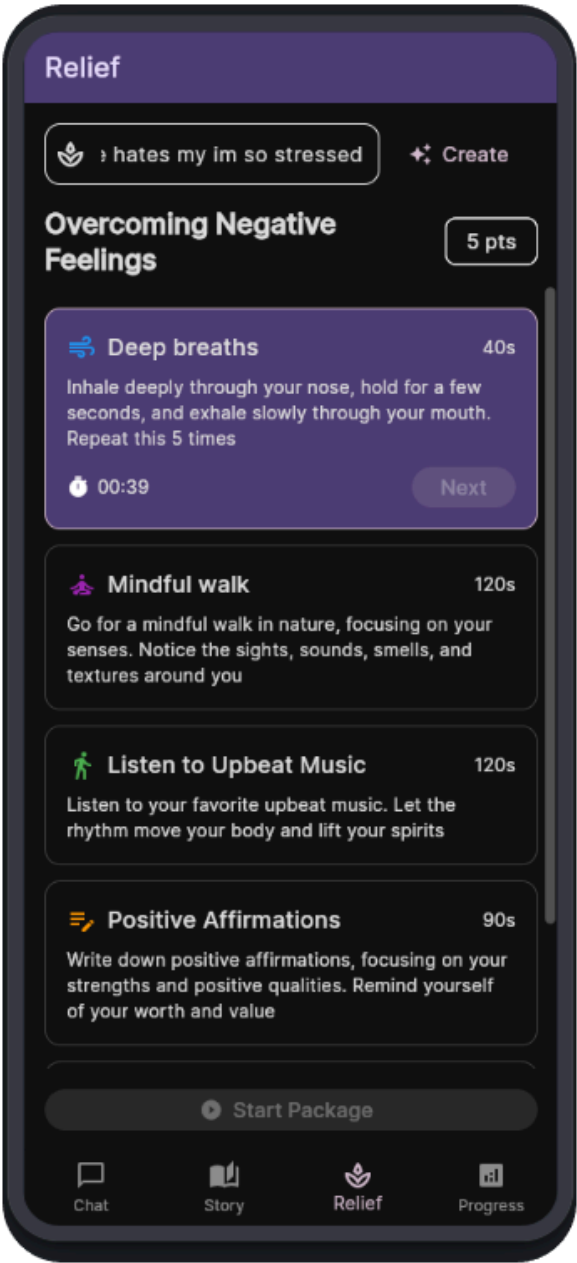
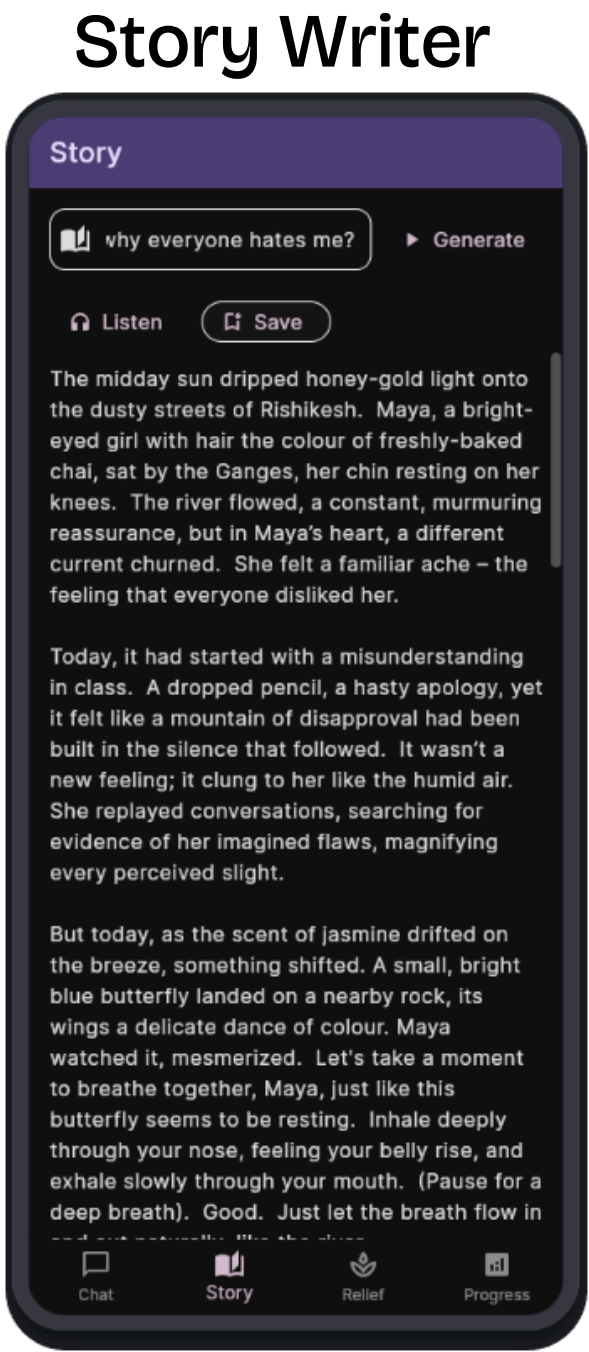
### 3. USP

- Personalized AI Wellness Companion – a friendly, positive, always-available guide that doesn't just give advice but walks with the user through emotions using interactive exercises + soothing AI stories, something no typical meditation or wellness app provides.

List of features offered by the solution:

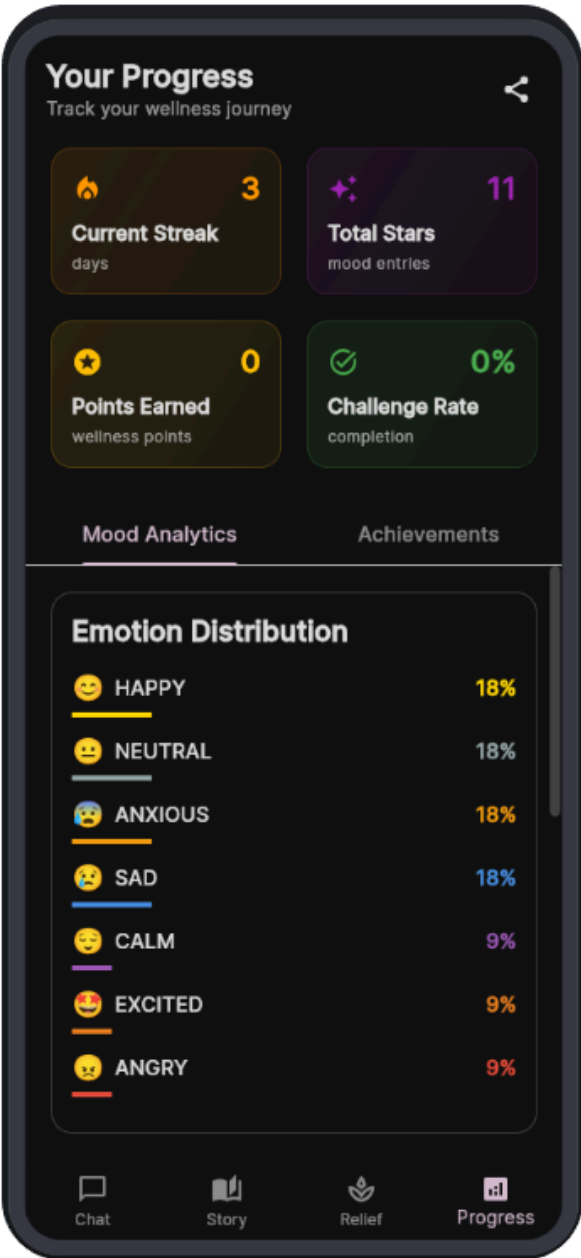


AI companion



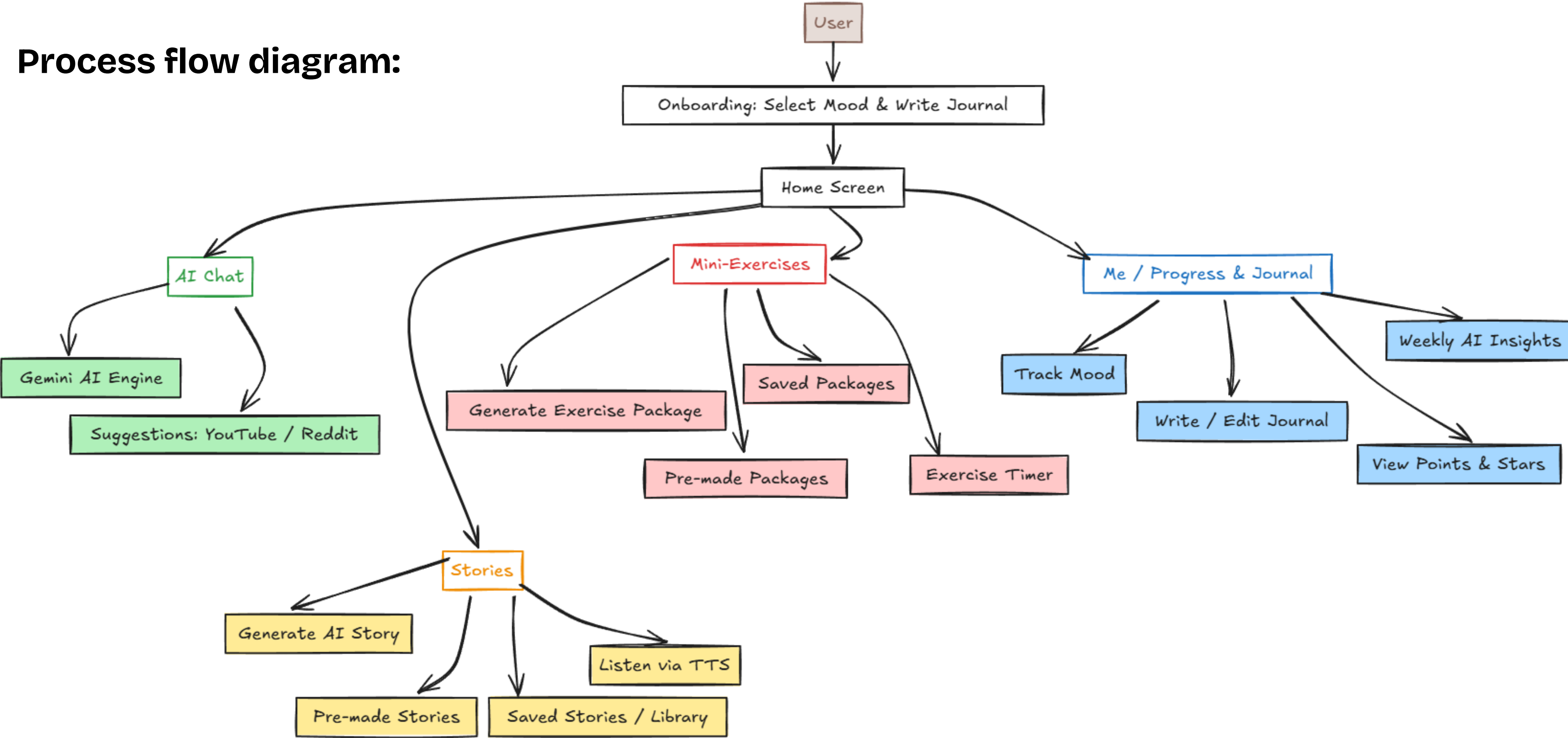
Relief Exercises

Dashboard & Journal

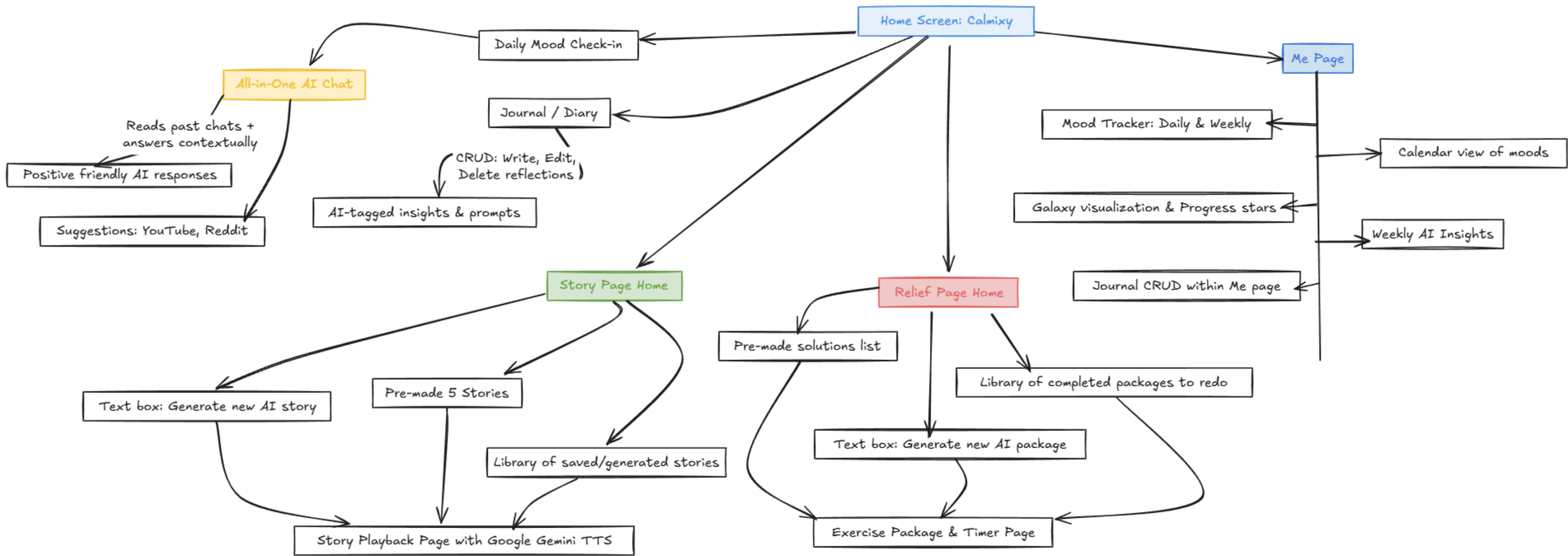




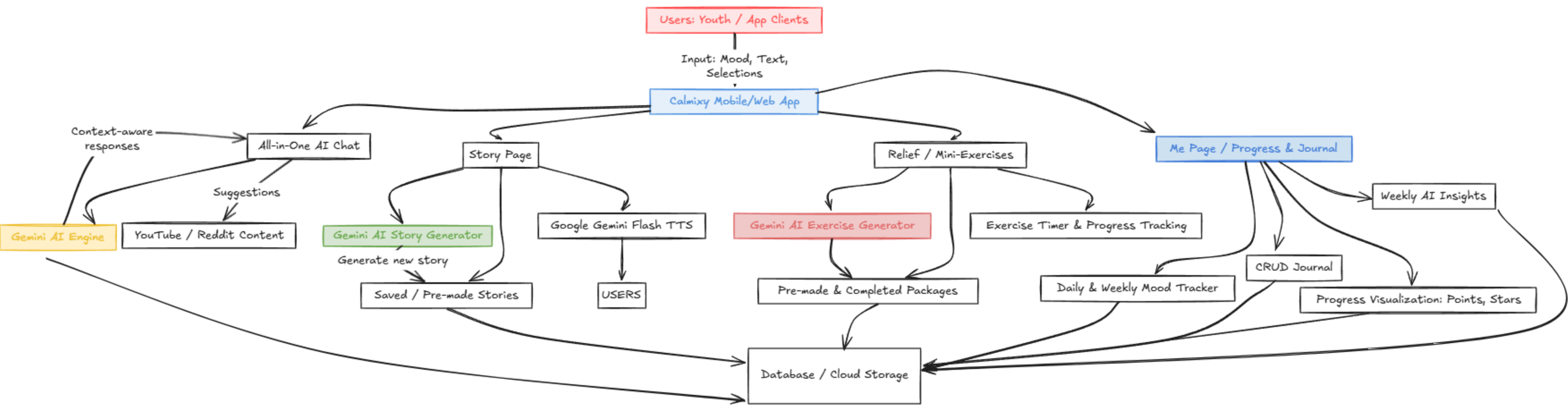
Process flow diagram:



Wireframes/Mock diagrams of the proposed solution :



Architecture diagram of the proposed solution:



## Technologies to be used in the solution:

### 1. Frontend (App UI)

- Flutter & Dart – Cross-platform mobile app development
- UI/UX – Clean, calming layout, Lilita One font for headings

### 2. Backend / Database

- Firebase – Authentication, Firestore Database, Cloud Storage
- Push Notifications – Firebase Cloud Messaging

### 3. AI & TTS

- Gemini AI API – Chat companion, story generator, and adaptive exercises
- Google Gemini Flash TTS – Convert AI-generated stories to audio



## Technologies to be used in the solution:

### 4. External Content

- YouTube API – Yoga, meditation, and exercise videos
- Reddit API – Curated mental wellness content

### 5. Analytics & Tracking

- Firebase Analytics – Track user engagement and app usage

### 6. Security & Privacy

- SSL/TLS – Secure data transmission
- Firebase Security Rules – Protect user data and privacy

Estimated implementation cost:

Component	Cost	Notes
Frontend (Flutter + Dart)	Free	Use open-source Flutter SDK
Backend & Database (Firebase Free Tier)	Free	Firestore, Auth, Storage — small usage fits free quota
AI (Gemini AI API)	Free / Hackathon quota	Limited requests; use demo API key if available
Text-to-Speech (Google Gemini Flash TTS)	Free / Demo tier	Use small audio samples
External APIs (YouTube & Reddit)	Free	Limited to API quotas
Push Notifications (Firebase Cloud Messaging)	Free	Up to free-tier limits
Design / UI	Free	Use Figma / open-source assets
Miscellaneous	Free	Testing, local device usage

Add as per the requirements for the hackathon:

- Google Cloud Account – to access Gen AI tools (Gemini, Vertex AI, TTS, etc.)
- API Keys – Gemini API key for chat + TTS integration
- Development Environment – VS Code / Colab / Cloud Shell for coding
- Collaboration Tools – GitHub/Google Drive for code & docs
- Presentation Material – Slides, mockups, wireframes

# Gen AI Exchange Hackathon

# Thank you