RainyDays

Emergency Fund Manual Tracker

**Background**

Managing shared emergency savings across individuals, families, or small groups is often prone to error when using spreadsheets or ad-hoc notes. A mobile-first app that supports manual, transparent, and collaborative tracking with real-time sync and offline-first capabilities will reduce friction and increase trust among participants.

This design targets working individuals (18+), families, and small saving groups who want a private, manual tracker for joint emergency funds without bank integrations (at least for now).

**Requirements**

**Must Have**

* User Registration & Profiles – secure accounts, profile data, avatars.
* Emergency Fund Creation & Participation – create multiple funds, invite participants (keeper, contributor)
* Manual Transactions – deposits, withdrawals, edit with notes and categories
* Group Statistics – Member rankings who contributed the most, progress, most active, and total this month
* History – All activities like withdraw/deposit
* Goal Tracking – target amount, dynamic progress visualization
* Offline-first – local write queue, sync-on-contact, conflict handling
* PIN/Biometric Lock – device-level quick lock for app.

**Should Have**

* Push / in-app notifications (contribution reminders, low-balance alerts, group member contributes)

**Could Have**

* Expense Categorization and tagging
* Savings insights / tips
* Theming / Dark mode
* Bank integration
* Investment features

**Method**

**High-level approach**

* Mobile client: React Native (Typescript). Use react-query (TanStack Query) for REST data caching and a Socket.IO client for real-time events and presence.
* Backend: Spring Boot exposing REST APIs + WebSocket. Server is authoritative: client send events, server validates and persists.
* Database: PostgreSQL. Use JPA and Liquibase.