Title: Daily Tracking App - Database Schema and Stack Planning Document

Summary: This document defines the full database schema and recommended stack for the MVP (Minimum Viable Product) of the Daily Tracking App. It covers table structures, field definitions, relationships, and technical choices to ensure clean development and future scalability.

Database Schema Design

1. DailyReports Table

Field	Type	Notes
id	UUID / Primary Key	Unique identifier
date	Date	YYYY-MM-DD format
mood_rating	Integer (1–10)	Single or segmented mood ratings
notes	Text	Optional user notes
created_at	Timestamp	Auto-filled
updated_at	Timestamp	Auto-filled

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2. Trackables Table

Field	Type	Notes
id	UUID / Primary Key	Unique identifier
name	String	e.g., 'Workout', 'Golf', 'Sleep'
type	Enum ('boolean', 'time', 'number', 'text', 'multi-select')	Input type definition
is_daily	Boolean	Daily vs Non-Daily flag

order	Integer	Sort order on dashboard
archived	Boolean	Soft delete (future feature)
created_at	Timestamp	Auto-filled

3. SubPages Table (Mini-Reports)

Field	Type	Notes
id	UUID / Primary Key	Unique identifier
parent_trackable_id	UUID (FK to Trackables)	Trackable that owns this subpage
title	String	Subpage title (e.g., "Golf Round")
fields_json	JSON	Field templates (dynamic structure)
created_at	Timestamp	Auto-filled

4. DailyReportEntries Table

Field	Type	Notes
id	UUID / Primary Key	Unique identifier
daily_report_id	UUID (FK to DailyReports)	Linked daily report
trackable_id	UUID (FK to Trackables)	Linked trackable
value	JSON	Actual entered data
subpage_entry_id	UUID (optional FK to SubPageEntries)	Linked subpage data if applicable
created_at	Timestamp	Auto-filled

5. SubPageEntries Table

Field	Type	Notes

id	UUID / Primary Key	Unique identifier
subpage_id	UUID (FK to SubPages)	Template it belongs to
fields_data_json	JSON	Actual entered subpage field values
created_at	Timestamp	Auto-filled

6. Insights Table

Field	Type	Notes
id	UUID / Primary Key	Unique identifier
daily_report_id	UUID (FK to DailyReports)	Insight linked to a specific day
insight_text	Text	AI-generated insight text
ai_version	String	Model/version used (e.g., GPT-4-turbo)
user_feedback	Enum ('agree', 'disagree', 'none')	User's response
user_feedback_text	Text	Optional user comment if disagreed
created_at	Timestamp	Auto-filled

Relationships Overview

- **DailyReports** link to **DailyReportEntries** (1-to-many).
- **DailyReportEntries** link to **Trackables** and optionally to **SubPageEntries**.
- **SubPages** define the templates used by **SubPageEntries**.
- **DailyReports** link directly to **Insights** (1-to-1).

Recommended Technology Stack

Layer	Recommendation	Reason
Local Database	SQLite	Reliable, offline-first, simple setup
ORM (Optional)	TypeORM (React Native support)	Cleaner queries, migrations
UUID Generation	`uuid` npm package	Offline ID generation
Cloud Backup (v2)	Firebase Firestore	Scalable, cross-device sync
JSON Handling	Native JSON fields	Flexibility for SubPages and custom inputs
Timestamping	SQLite/TypeORM native	Consistent created_at/updated_at fields

Key Notes

- SQLite supports large local datasets; no need for server hosting in MVP.
- JSON fields in entries/subpages keep custom form designs flexible.
- Future cloud backup integration requires no schema redesign.
- Using UUIDs ensures clean future syncing between devices.