Project ITCS259_Mobile Application Development

Daily Mood Journal Application

Submitted by

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1. Introduction & Background

People increasingly want to understand their emotions for better mental health, focus, and productivity. However, many mood-tracking apps require accounts, internet, or have complex interfaces.
This project presents **Daily Mood Journal**, a simple and lightweight application that helps users record their emotions each day through a clean UI and offline-first design.

2. Related Works

Popular mood apps like **Daylio**, **Moodflow**, and **Reflectly** offer journaling and emotional tracking. However, they often:

- require logins,
- include ads or paid features,
- store data online,
- or feel overwhelmed for new users.

Our app focuses on **privacy, offline usage, minimalism**, and **speed of entry**.

3. Methodology

1. System Architecture

- **Frontend:** Flutter
- **State Management:** Provider
- **Database:**
    - Mobile/Desktop → SQLite (sqflite)
    - Web → SharedPreferences (localStorage)
- **Charts:** fl_chart

2. Tools

- Flutter SDK, Dart, Android Emulator, Chrome DevTools, VS Code/Android Studio.

3. Application Workflow

- User opens app
- Today screen loads today’s data
- User selects mood + adds a quick note
- Data saved to device
- User reviews history & statistics

4. Results

Completed Features

Feature	Done
Add mood & note	✔
History list	✔
Search & filter	✔
Statistics chart	✔
Dark/Light mode	✔
Offline web support	✔
Local storage	✔

5. Limitations

- LocalStorage on web resets if origin (port) changes
- No cloud sync
- SQLite is available only on mobile/desktop

6. Conclusion

Daily Mood Journal successfully demonstrates a clean, offline-first emotion-tracking app. It works across platforms, stores data locally, and keeps user experience simple and intuitive.

7. Responsibilities

6688121	Documentation writing, Flutter coding, state management, local database logic, integration, do README.md, and preparing github.
6688193	Ux/Ui design, statistics page, video presentation, testing, preparing github, debugging across platforms.

8. References

Flutter & Dart

1. Flutter Documentation: https://docs.flutter.dev

2. Dart Language Documentation: https://dart.dev/guides

3. Flutter Material 3 (M3) Guidelines: https://m3.material.io

Packages Used in the Project

Provider

4. Provider (State Management): https://pub.dev/packages/provider

SQLite (Mobile/Desktop via sqflite)

5. sqflite (SQLite plugin for Flutter): https://pub.dev/packages/sqflite

6. sqflite Documentation (GitHub): https://github.com/tekartik/sqflite

Web Storage (SharedPreferences Web implementation)

7. shared_preferences: https://pub.dev/packages/shared_preferences

IndexedDB / Web FFI

8. sqflite_common_ffi_we: https://pub.dev/packages/sqflite_common_ffi_web

9. IndexedDB API (MDN Web Docs): https://developer.mozilla.org/en-US/docs/Web/API/IndexedDB_API

Charts

10. fl_chart (Bar chart & visualization): https://pub.dev/packages/fl_chart

11. fl_chart GitHub Repo: https://github.com/imaNNeo/fl_chart

Miscellaneous Tools

12. Path Provider (finding OS paths) https://pub.dev/packages/path_provider

13. intl (Date formatting) https://pub.dev/packages/intl

Flutter Web Deployment

14. Flutter Web — Local Storage https://docs.flutter.dev/platform-integration/web/renderers#accessing-browser-apis

15. Browser localStorage (MDN) https://developer.mozilla.org/en-US/docs/Web/API/Window/localStorage

Design Guidelines

16. Material Design Components: https://m3.material.io/components

17. Material Icons: https://fonts.google.com/icons

General App

18. Daylio — Mood Tracker: https://daylio.net

19. Moodflow: https://moodflow.app

20. Reflectly: https://reflectly.app