LONDON METROPOLITAN UNIVERSITY

Islington college
(इस्लिङ्टन कलेज)

CS6004NI Application Development

30% Individual Coursework

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Credit: 30

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Module Leader: Mr. Bikram Poudel

Word Count: 946

Project File Links:

Drive Link:	Keep Drive URL of your Project Here with Anyone in Organization can View Option Enabled

I confirm that I understand my coursework needs to be submitted online via MySecondTeacher under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a mark of zero will be awarded.

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1. Project Title: Journal App

Maintaining a personal journal helps you think about your day, how you feel, or what is on your mind. The use of pen and paper makes it might be messy and also will be hard to find the past notes and many more. Instead of that hard work, JournalApp offers a digital space built into your computer, giving clear layout tools plus privacy so logging each day stays simple and safe.

The app lets people write and handle diary notes while sorting them by topics, feelings, or labels. Since info stays on your device, it keeps things private and works without internet. JournalApp aims to give an easy but solid way to help you keep journaling regularly and notice how you feel.

The main things this app does include:

- Create a note each day, or show what is already there - scrapping stuff if it feels off
- Rich text or markdown lets you write how you feel - flexible, clear, real
- Mood tracking helps you think about your feelings
- Sorting items by group type
- Filtering by tags or finding stuff using labels
- Write your thoughts by date to keep things organized

JournalApp helps people think clearly, stay organized, while making journaling better with a simple design along with smart info handling.

2. UI Design

UI stands for User Interface. That is where people interact with an app. Easy and good design here makes things easier to use, more reachable, while boosting how users feel about it.

The UI of JournalApp keeps things simple, clear, also straightforward. Its design helps people move through the app's parts smoothly, without getting lost. Below are the wireframes for JournalApp:

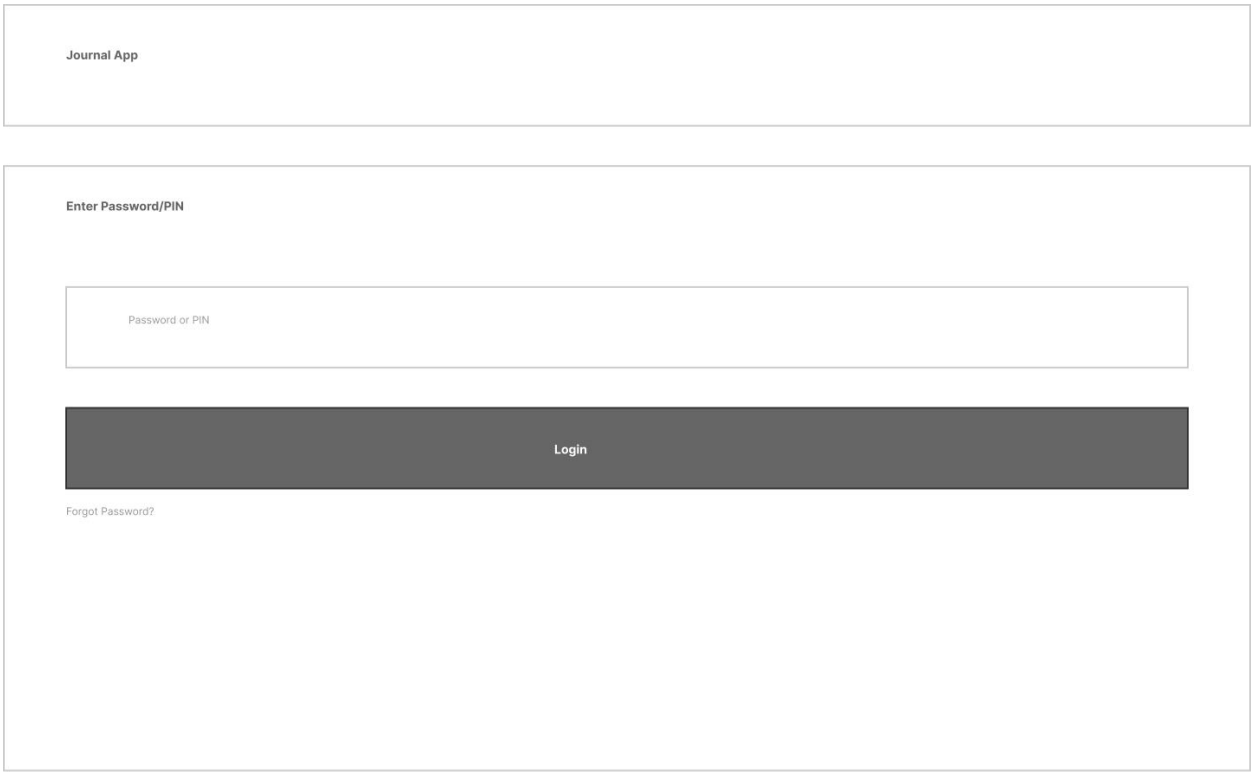

Figure 1: Login Wireframe

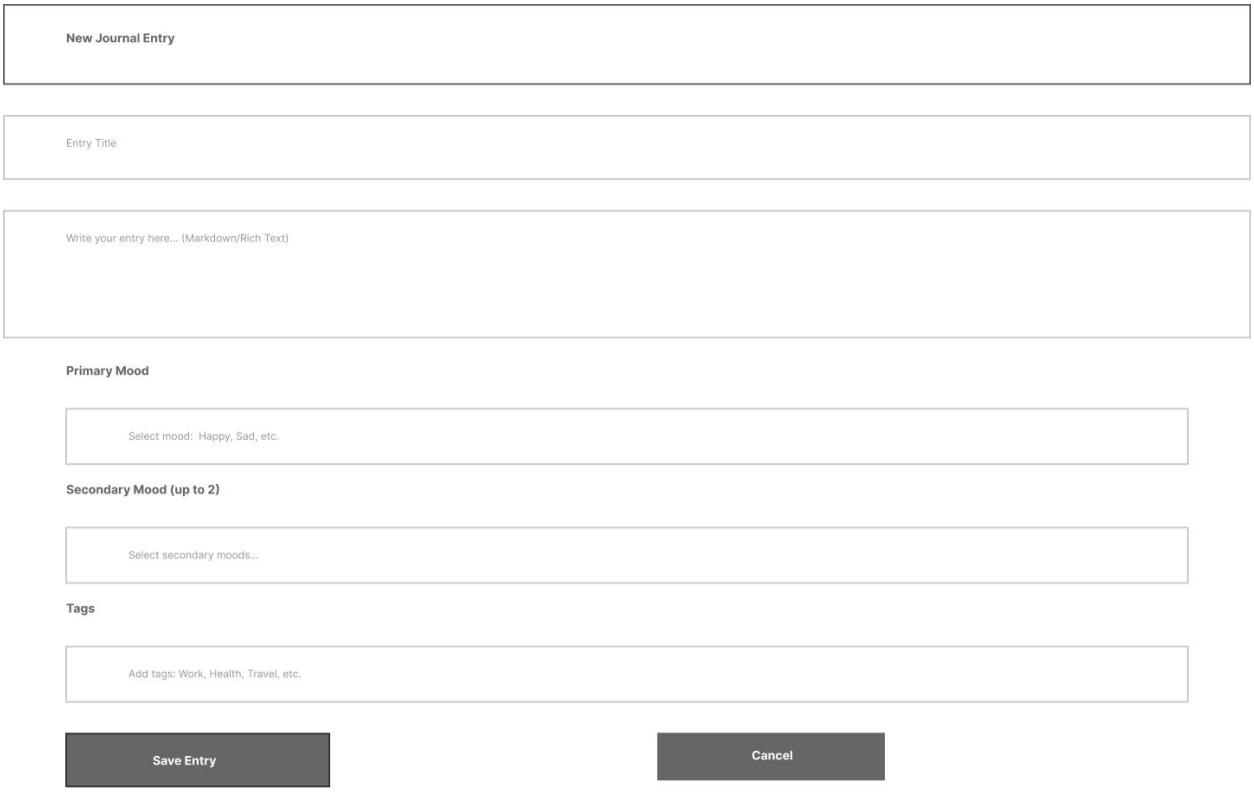

Figure 2: Journal Entry Wireframe

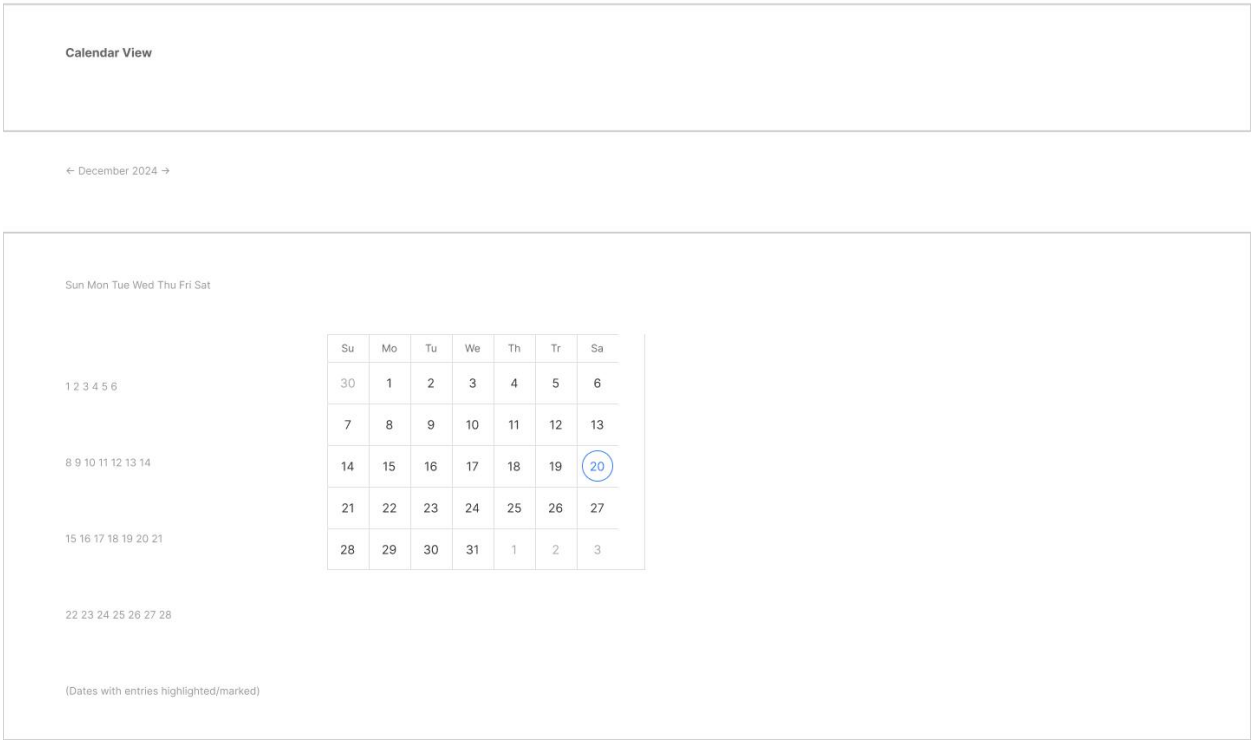

Figure 3: Calendar View Wireframe

PAGE 6: DASHBOARD/ANALYTICS

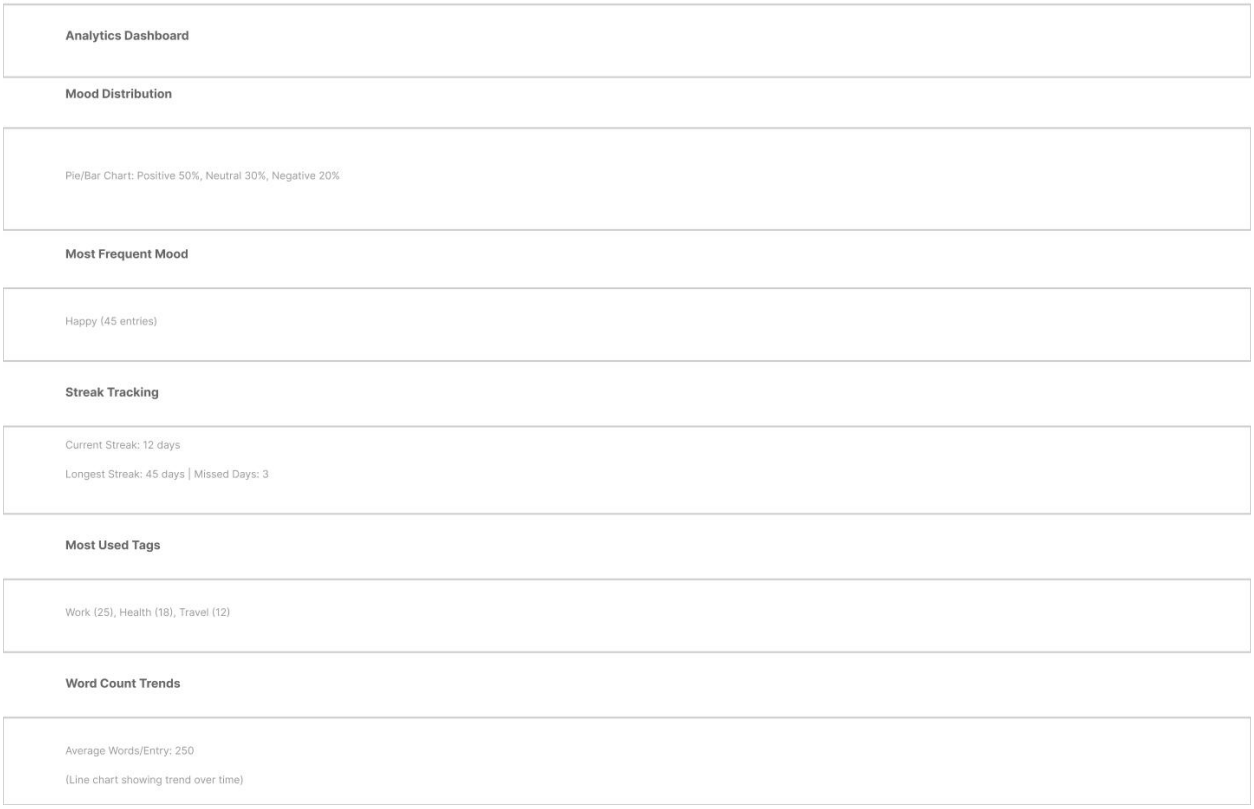

Figure 4: Dashboard Wireframe

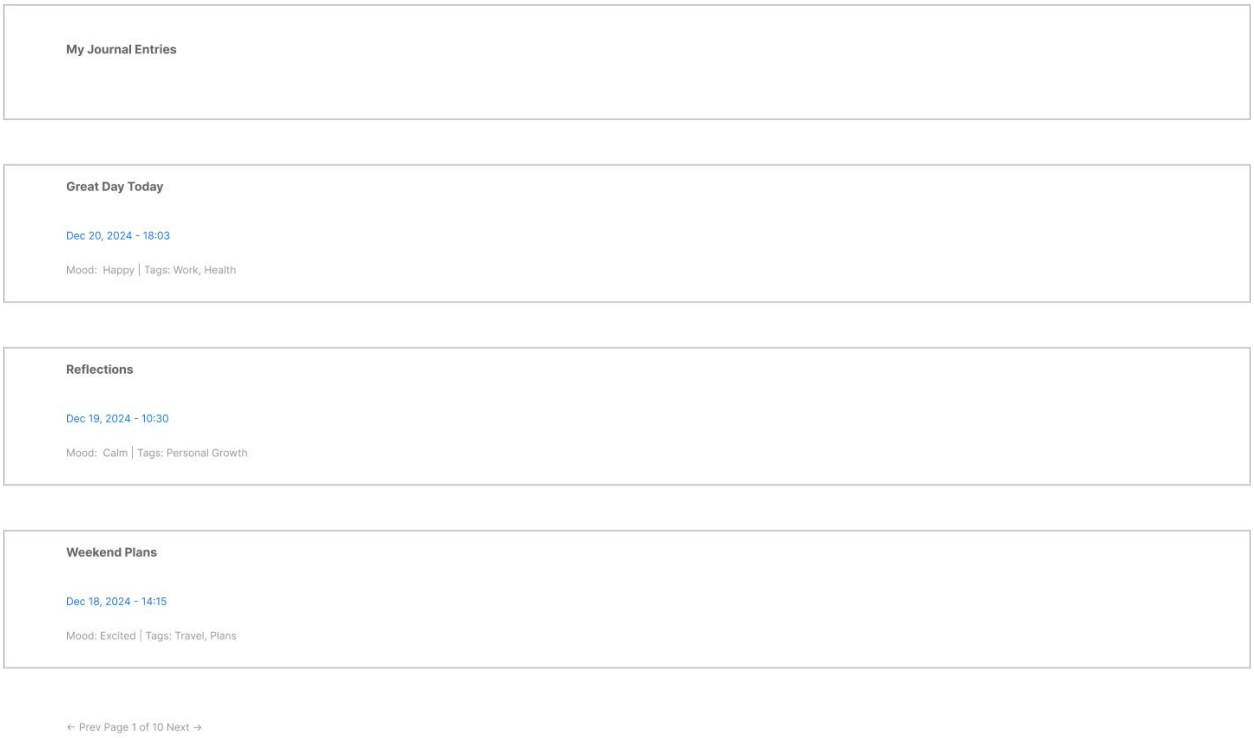

Figure 5: Journal Review Wireframe

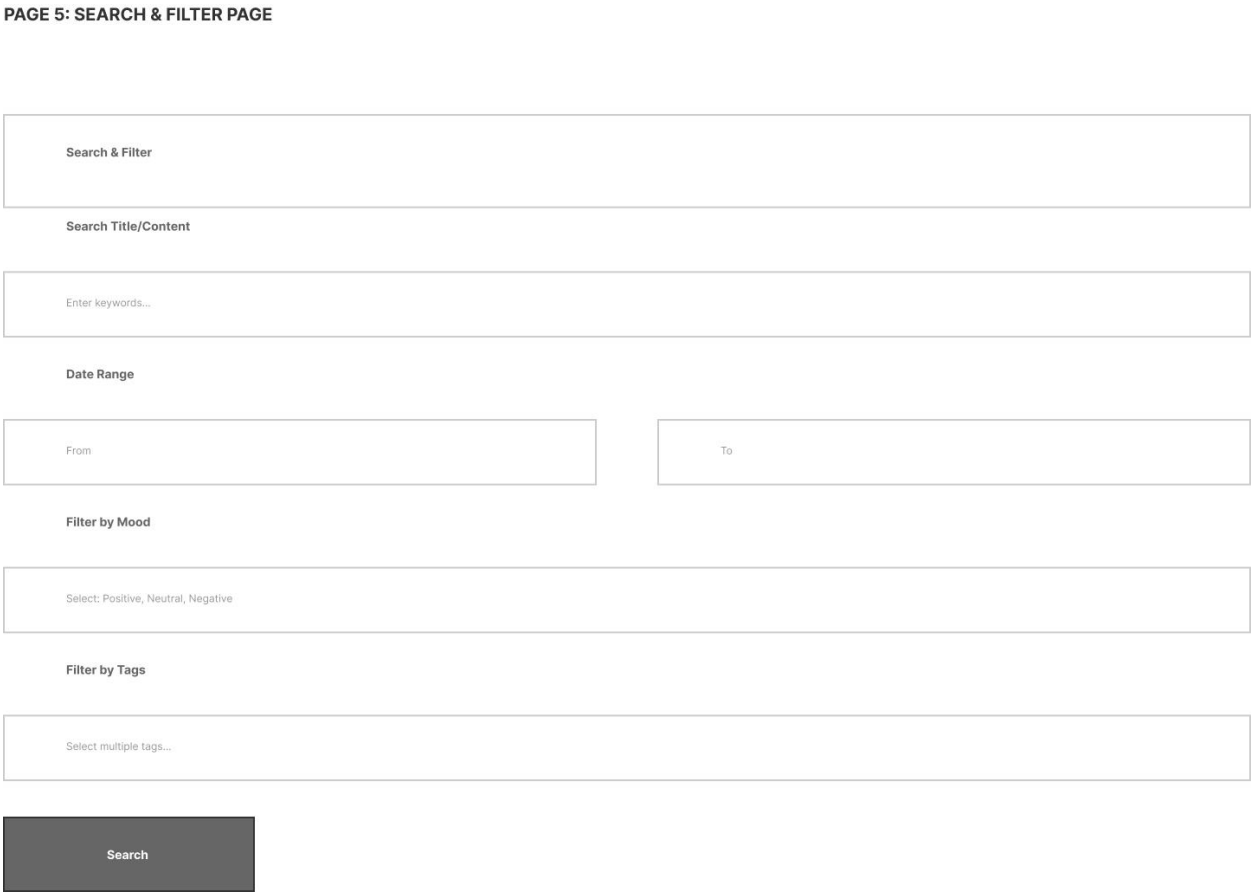

Figure 6: Search and Filter Wireframe

PAGE 7: SETTINGS/THEME PAGE

Figure 7: Settings Wireframe

3. Data Entity Modeling

The structure of JournalApp's data is shown through an Entity Relationship Diagram (ERD). This diagram shows how the information is flowed or organized inside the system.

The app includes these seven components:

- User
- JournalEntry
- Category
- Mood
- Tag
- EntryMood
- EntryTag

Each user can write multiple journal entries. Every journal entry belongs to one category and is associated with a mood. Tags are used to describe journal entries and allow flexible organization. Since a journal entry can have multiple tags and moods, EntryTag and EntryMood entities are used to manage many-to-many relationships.

This structure follows standard rules, removes repeated entries while also enabling fast access to information.

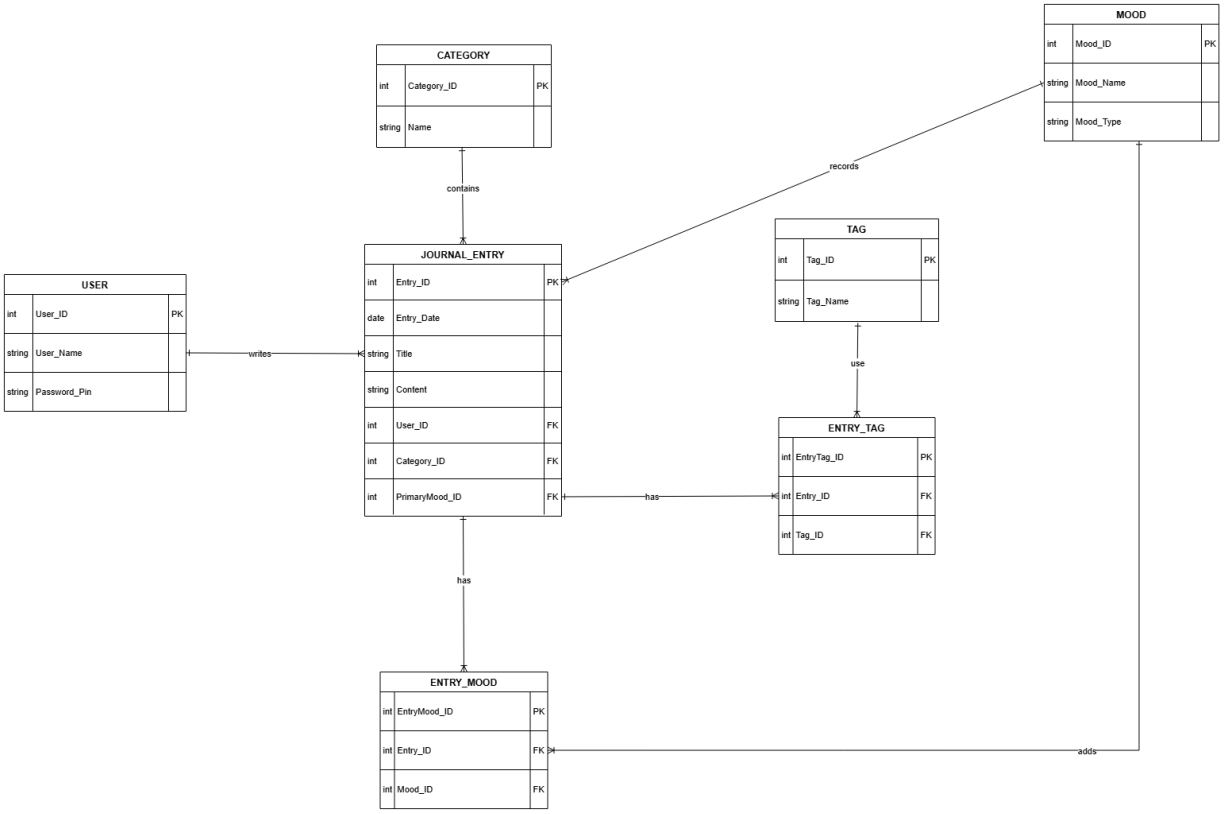

Figure 8: Entity Relationship Diagram

4. Technology Stack

4.1 Framework

JournalApp is developed using .NET MAUI Blazor Hybrid. It helps the developers to build simple desktop applications while making the user interface from Blazor. Instead of building separate fronts for each platform, it combines .NET MAUI's core strength while using the component made in Blazor. It helps to do the coding faster and makes the codes cleaner as well.

4.2 External Libraries

The following external libraries are used in the project:

- Entity Framework Core: It is used for the database operations and object-relational mapping.
- MudBlazor: It helps to build clean interface that follows the Material Design rules while staying flexible for any screen size.

These libraries help to make the coding easier while keeping the interface consistent and also helps to reduce the complexity.

4.3 Persistence Mechanism

SQLite is used for the database in JournalApp. It is small and fast so it works great for the desktop applications. It helps to store the data locally on the device of the user and helps for privacy and offline access to the data.

Entity Framework Core handles the management of the interaction between database which makes it easier to perform CRUD operations and maintain the relationships between the entities.

5. Git Repository

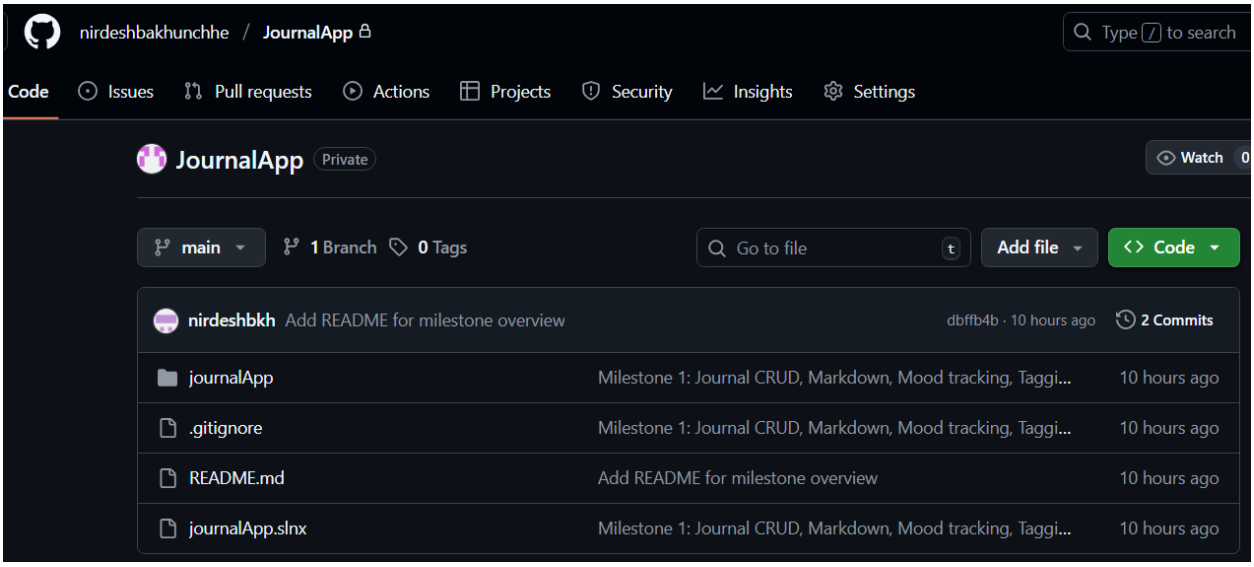

Figure 9: GitHub Repository

6. Conclusion

JournalApp makes it easy to keep a digital diary every day. With features like logging feelings, adding tags, or sorting entries, it helps users think deeper about their emotions. Because of this setup, people stay more aware of how they feel over time.

The .NET MAUI Blazor Hybrid works well alongside SQLite. Entity Framework Core helps keep things running smooth. JournalApp is built so it can grow later, maybe adding analytics or letting users use more settings, even exporting their own data down the line.

The whole thing shows solid planning, smart structure choices, also smooth execution with up-to-date methods and software.