



VIT[®]

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

MEMOIR-A collaborative memory keeper

**CSI1007 – Software Engineering Principles
Laboratory**

22MIC0009

MAHALAKSHMI BALAN

Memoir- Collaborative Memory Keeper

Description of the Project

The Memoir App is an innovative platform designed to capture, share, and relive daily memories in structured and collaborative manner. This app allows users to log personal moments, including photos, tasks, text notes, and music, directly into a calendar-based interface. By integrating with the Google Calendar API, the app provides a seamless way to organize and visualize memories on specific dates or years.

In addition to memory keeping, the Memoir App introduces a Mood Analysis Feature, allowing users to track their emotional state over time. This feature analyzes user input, including journal entries, emoji reactions, and self-reported moods, to generate insights about emotional patterns. Users can visualize their mood history through charts and receive personalized suggestions, such as music recommendations, relaxation techniques, or journaling prompts, to enhance their well-being

Key features:

Daily Memory Logging – Users can save and categorize personal memories with multimedia support (photos, notes, music, and tasks).

Calendar View – Memories are displayed in an interactive calendar for easy access and organization.

Collaborative Sharing – Friends, family, or colleagues can contribute and edit shared memories using **shared login access** or **unique access codes**.

Authentication via MongoDB – Secure and personalized access with user authentication and account management. **Google Calendar Integration** – Users can sync memories with specific dates and years for structured recall.

Mood Analysis Feature – Tracks emotional states over time based on user inputs, providing insights and personalized well-being recommendations.

Scope of the Memoir App

The **Memoir App** is a collaborative platform for capturing, organizing, and sharing daily experiences while promoting emotional well-being. It integrates **Google Calendar API** for structured memory management and includes **AI-powered mood analysis** for tracking emotional trends.

Aim:

To provide a dynamic and secure space where individuals and groups can **log, organize, and share meaningful memories** while fostering emotional awareness and deeper connections.

Objectives:

1.Daily Memory Logging: Users can document experiences with **photos, text, tasks, and music** in a **calendar-based interface** for easy retrieval.

2.Calendar Integration: Memories are **organized by date/year** with **Google Calendar API**, allowing reminders for past events.

3.Collaboration & Sharing: Users can **share memories with family, friends, or teams** using **shared login access and unique access codes** for real-time collaboration.

4.Mood Analysis: AI-powered **mood tracking** allows users to log emotions, view **trends and insights**, and receive **personalized well-being suggestions** such as music recommendations and relaxation techniques.

5.User Authentication & Security: **MongoDB-based authentication** ensures **data privacy, secure access, and role-based permissions** for memory sharing.

Impact of the Memoir App

The **Memoir App** creates a meaningful space for users to **preserve memories, enhance emotional well-being, and foster stronger connections** through technology-driven storytelling.

1. Personal Impact

Structured Memory Preservation: Users can relive special moments with a well-organized calendar-based memory system.

Enhanced Self-Reflection: Mood tracking helps users understand emotional patterns and triggers.

Personalized Well-Being Support: AI-powered suggestions encourage mindfulness, relaxation, and self-care.

2. Social & Emotional Impact

Strengthened Relationships: Shared access enables families and friends to collaboratively log and cherish memories.

Bridging Long-Distance Gaps: The app fosters meaningful connections despite physical distances through shared storytelling.

Support System for Mental Health: Users gain insights into their emotional well-being, helping them seek timely support when needed.

3. Technological & Community Impact

Seamless Digital Memory-Keeping: Integrating Google Calendar API provides an intuitive and structured way to store and revisit memories.

Data Privacy & Security: Secure authentication ensures safe collaboration without data breaches.

Potential for Expansion: The app can evolve into a comprehensive **wellness and journaling platform**, integrating more AI-driven insights.

4.Social Impact

Strengthens relationships through **shared memory collaboration**.

Bridges long-distance gaps with **shared access codes**.

Supports **mental health awareness** via **mood tracking**.

Encourages **community engagement** for teams and families.

5.Technological Impact

Uses **AI-powered mood analysis** for emotional insights.

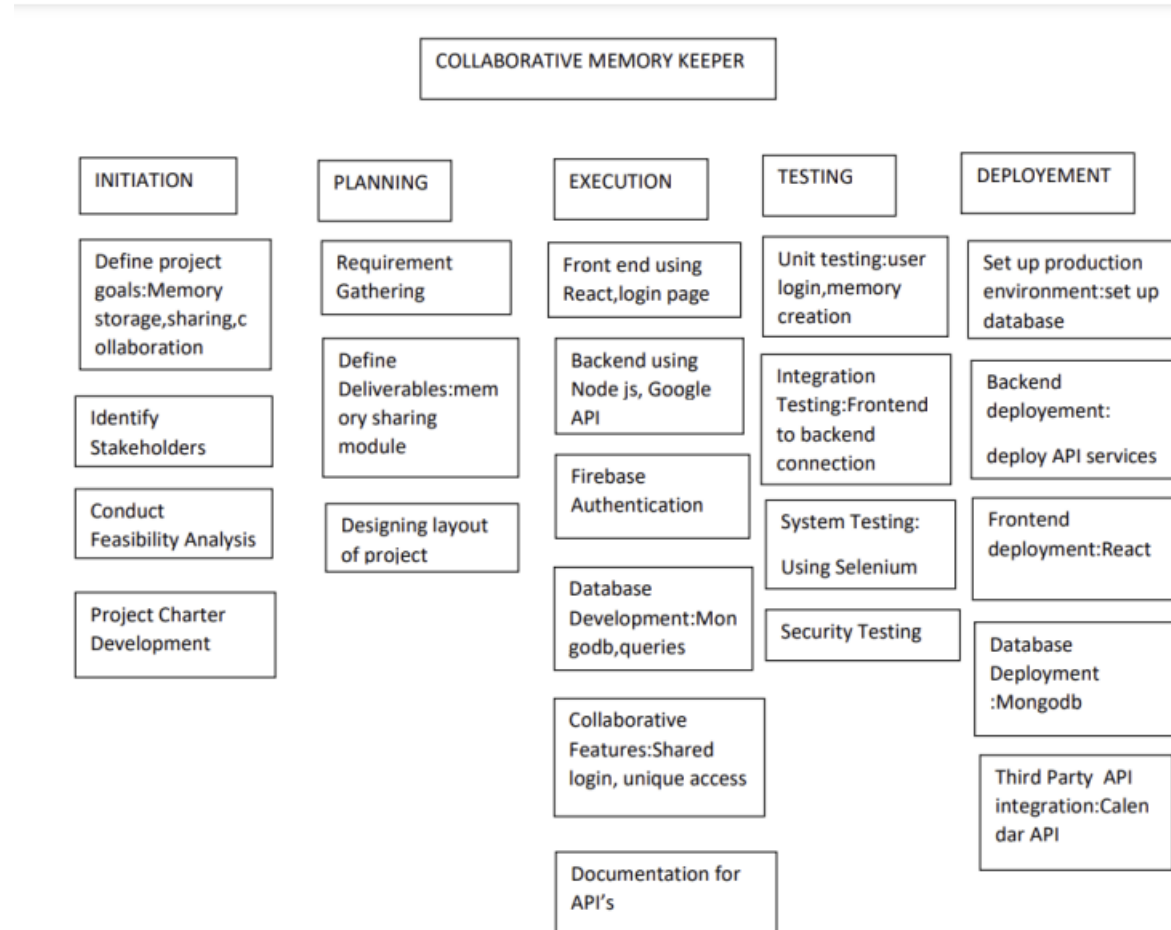
Integrates **Google Calendar API** for seamless memory tracking.

Ensures **secure data storage** with **MongoDB authentication**.

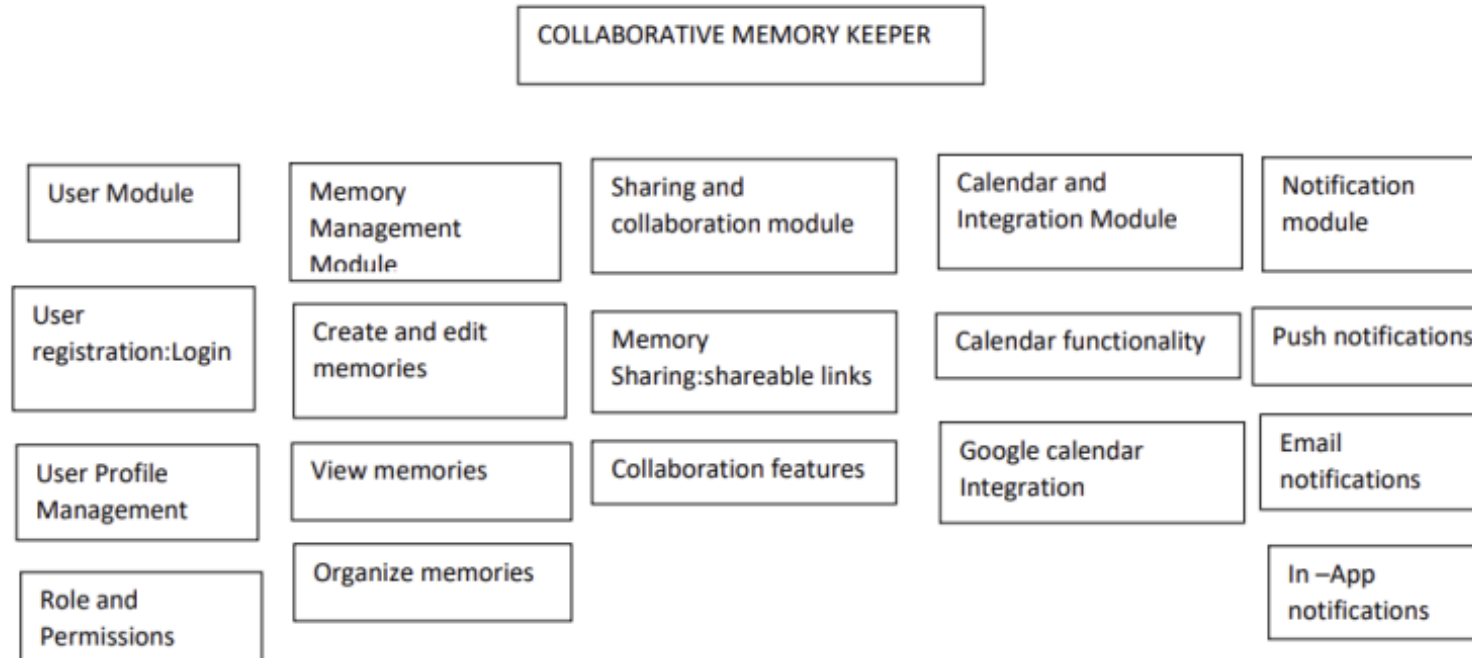
Scalable for **future innovations** like voice notes and emotion detection

Work Breakdown Structure

Process-Based Work Breakdown Structure



Product-Based Work Breakdown Structure



SRS Document

Functional Requirements of the Memoir App

1. User Authentication & Access Control

1. Secure **registration, login, and logout** using **MongoDB authentication**.
2. Provide **password reset and account recovery options**.

2. Memory Logging & Organization

1. Users can **log daily memories** with text, photos, tasks, and music.
2. A **calendar interface** organizes memories by date and year.
3. Memories can be **edited, deleted, and updated**.

3. Collaboration & Sharing

1. Enable **shared login access** for families, friends, or teams.
2. Provide **unique access codes** for controlled sharing.
3. Allow multiple users to **view, edit, and add** shared memories.

4. Mood Analysis & AI Insights

1. Implement **AI-powered mood tracking** based on user inputs.
2. Display **mood trends visually** over time.
3. Offer **insights and recommendations** for emotional well-being.

5. Google Calendar Integration

1. Sync memories with **Google Calendar API**.
2. Provide **event reminders** based on stored memories.

6. Security & Privacy

1. Ensure **end-to-end encryption** for secure data storage.
2. Allow users to **control memory visibility settings**.

Non-Functional Requirements of the Memoir App

1.Performance

1. The app should provide a **smooth user experience** with minimal load times.
2. Memory retrieval should take **less than 2 seconds** per query.

2.Scalability

1. The system should support **an increasing number of users** without performance degradation.
2. Should allow **future integration with wearable devices** for real-time mood tracking.

3.Security

1. **End-to-end encryption** must protect user data.
2. Only **authorized users** should access private memories.

4.Usability

1. The UI should be **simple, intuitive, and easy to navigate**.
2. Users should require **minimal training** to use the app effectively.

5.Availability

1. The app should maintain **99.9% uptime** for uninterrupted access.
2. Cloud-based storage ensures **data availability** even in case of failures.

6.Compatibility

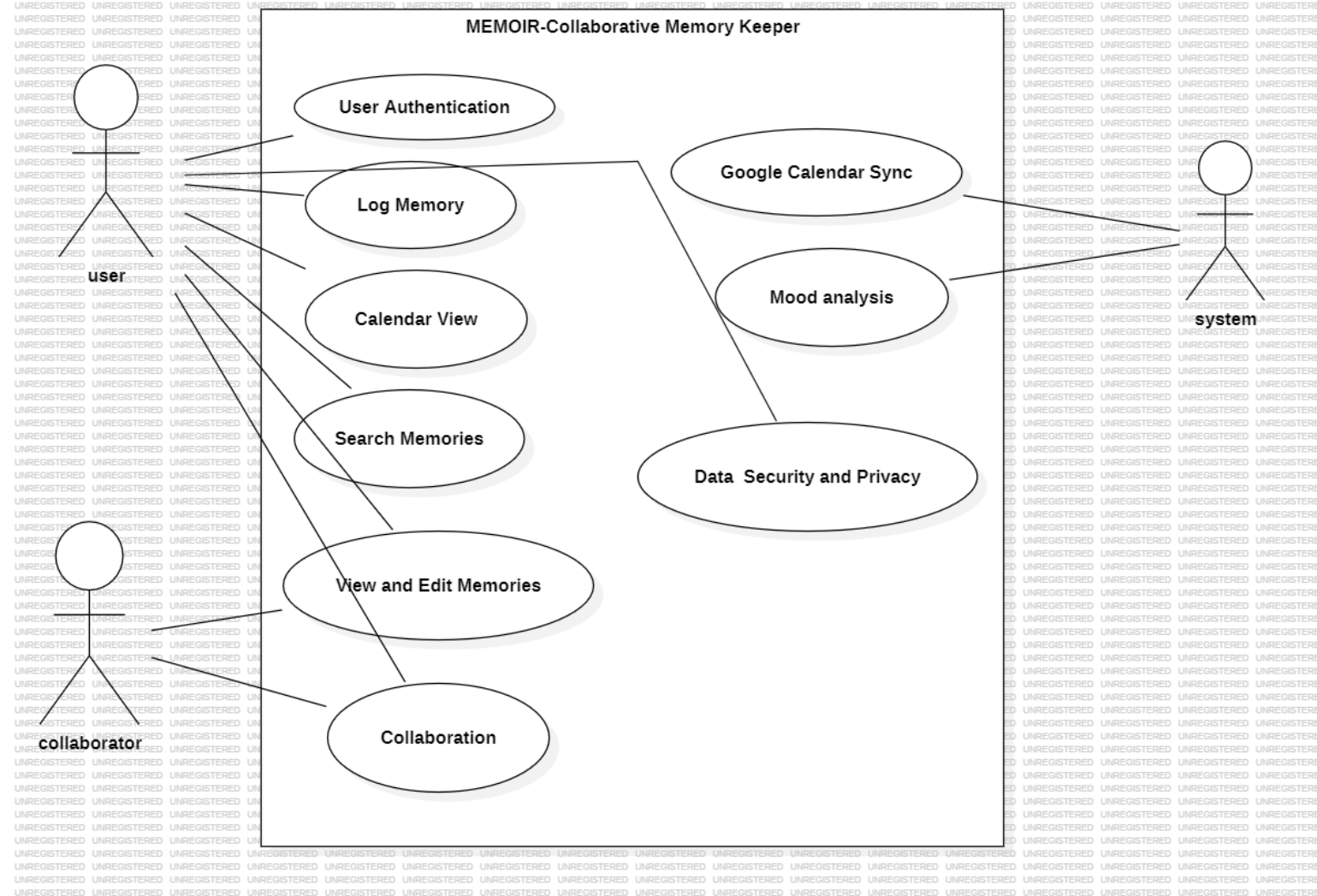
1. The app should be accessible on **mobile, tablet, and desktop**.
2. Support **all major browsers and operating systems**.

7.Maintainability & Updates

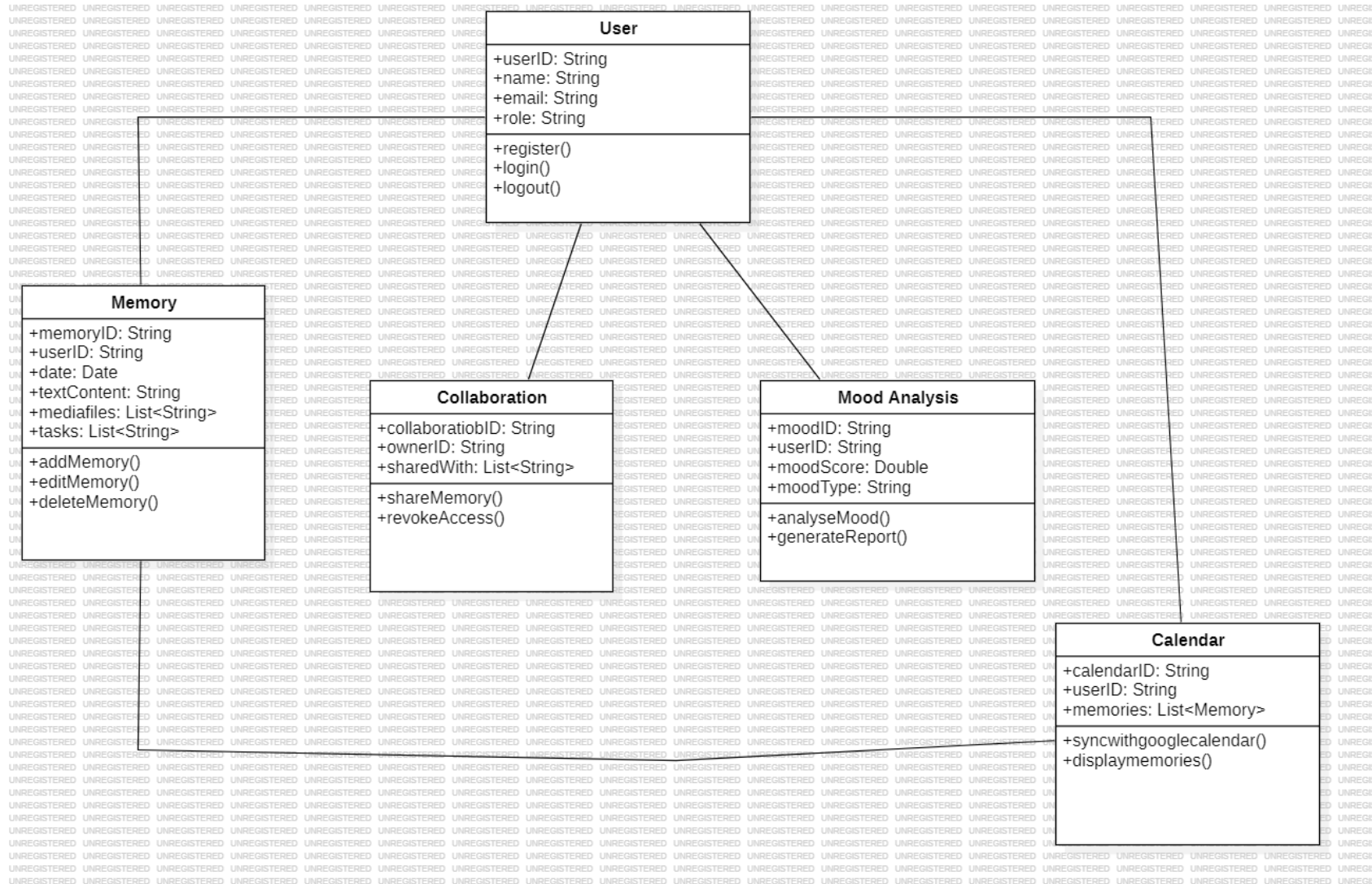
1. The system should allow **easy updates and bug fixes**.
2. Code should follow **modular architecture** for maintainability.

UML - Diagrams

use-case diagram

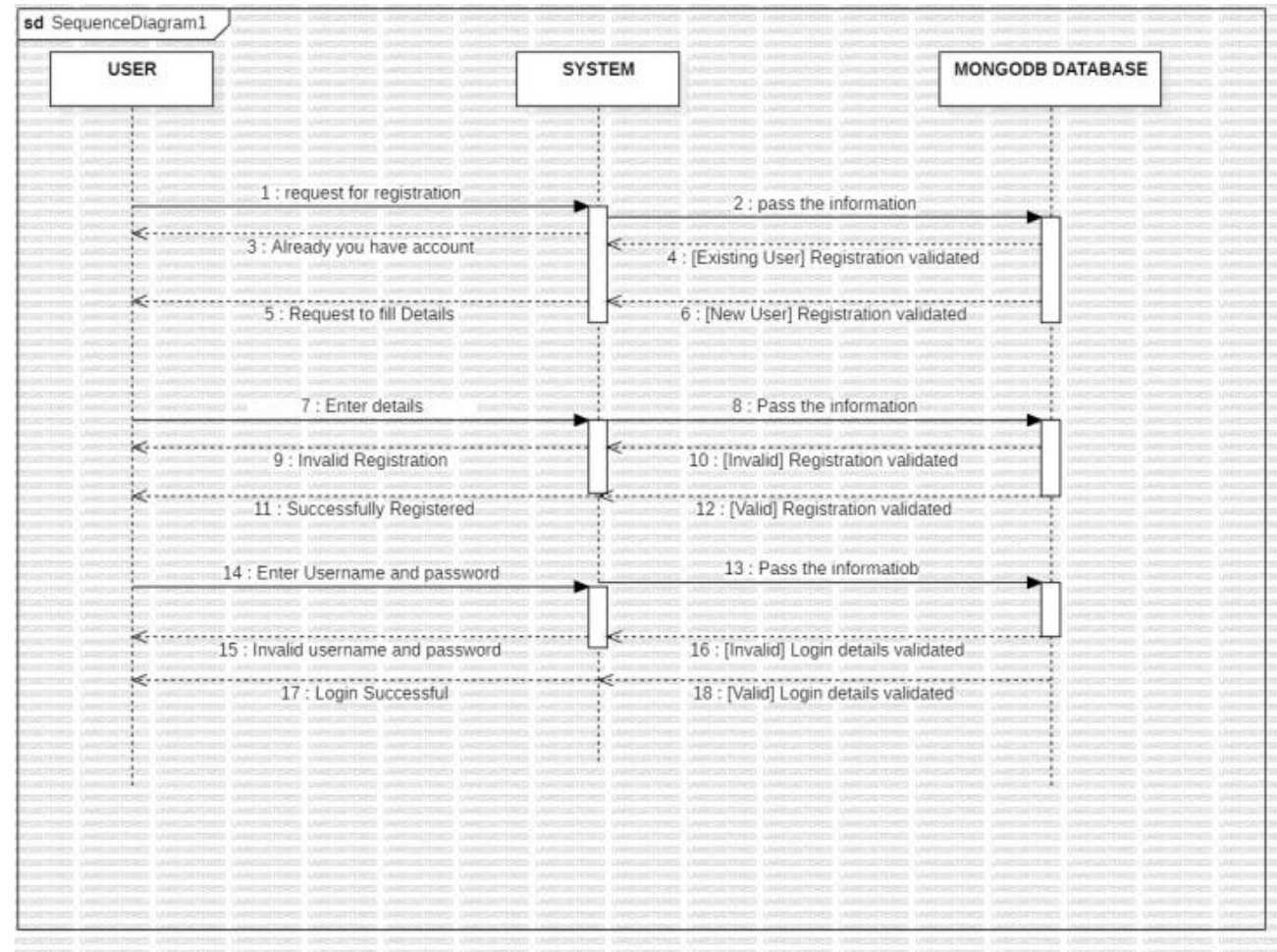


class diagram

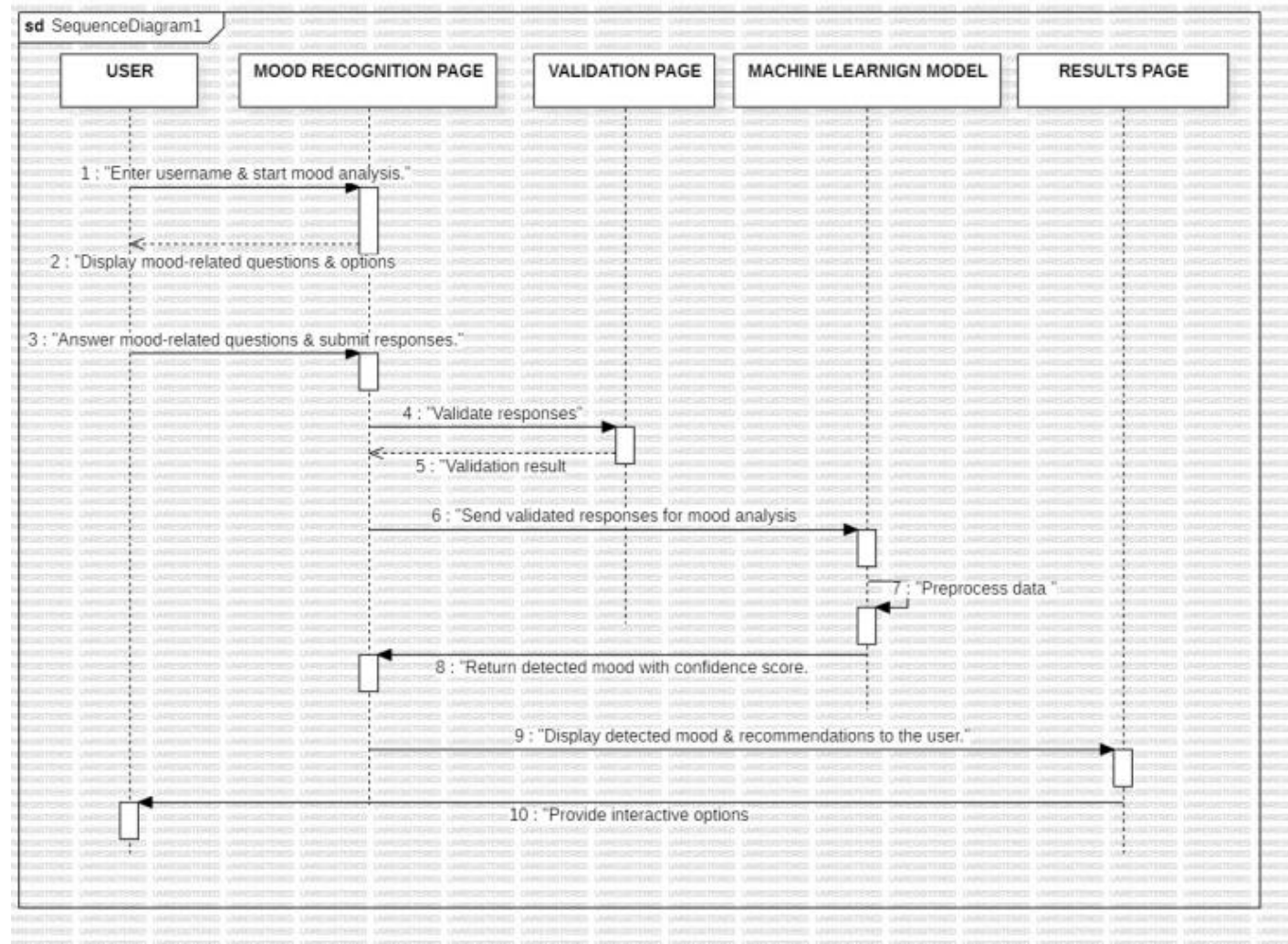


Sequence diagram

LOGIN PROCESS:



ML-Based Mood Recognition Sequence Diagram



Testing

Test Case 1: Memory Upload Functionality

Test Case ID: TC001

Test Scenario: Verify that a user can upload and view a memory successfully.

Test Case Description: Ensure that users can upload an image, text, or task to the memory section and view it correctly.

Test Steps:

1. Open the Memoir Dashboard.
2. Click on the "Add Memory" button.
3. Upload an image (review.jpg).
4. Enter text ("Software Engineering Lab").
5. Click the "Save" button.
6. Navigate to the selected date on the calendar.
7. Verify if the uploaded memory appears correctly.

Test Data:

Image: review.jpg

Text: "Software Engineering Lab"

Test Expected Result:

The uploaded memory (image and text) should be visible on the selected date in the calendar.

Actual Result:

Memory was successfully uploaded and displayed on the calendar

Test Case 2: Memory Sharing Feature

Test Case ID: TC002

Test Scenario: Verify that a user can share a memory with another user.

Test Case Description: Ensure that shared memories can be accessed by users with the correct link.

Test Steps:

1. Open the Memoir Dashboard.
2. Click on an existing memory.
3. Click "Share Memory" and copy the generated link.
4. Open the shared link in a new browser/tab.
5. Verify that the memory is accessible.
6. Try accessing the memory with an incorrect or expired link.

Test Expected Result:

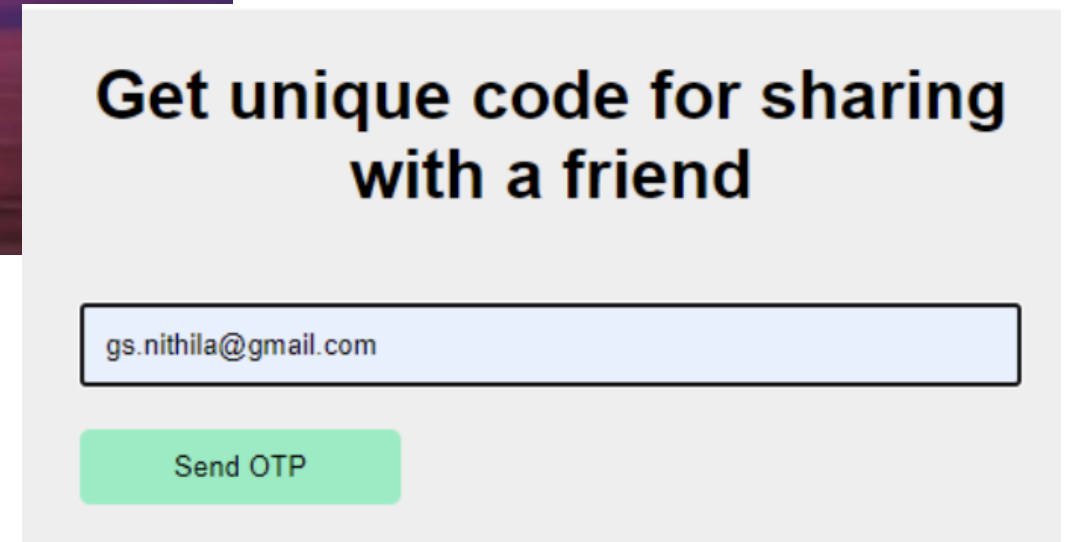
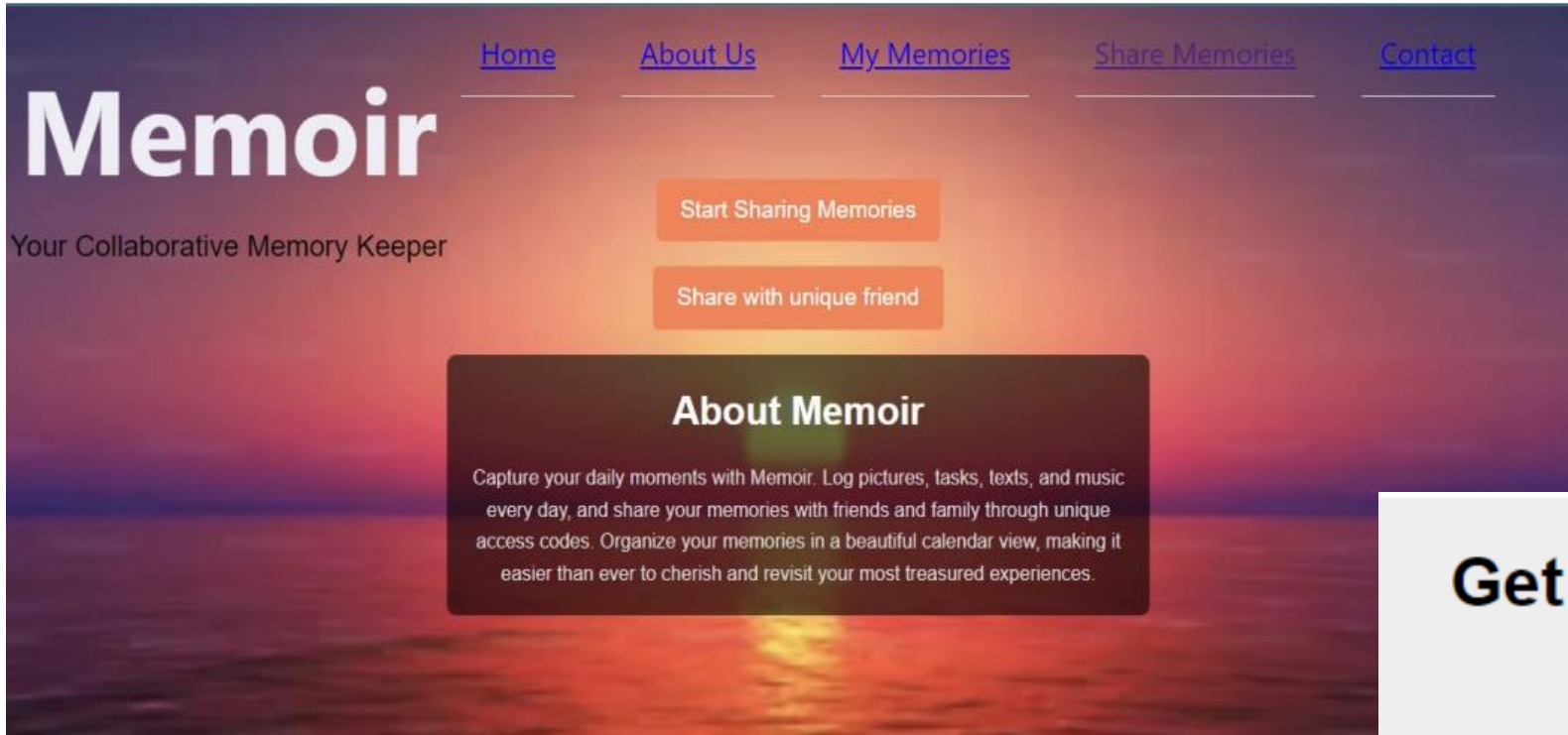
- Users with the correct link should be able to view the shared memory.
- Users with an incorrect or expired link should receive an error message.

Actual Result:

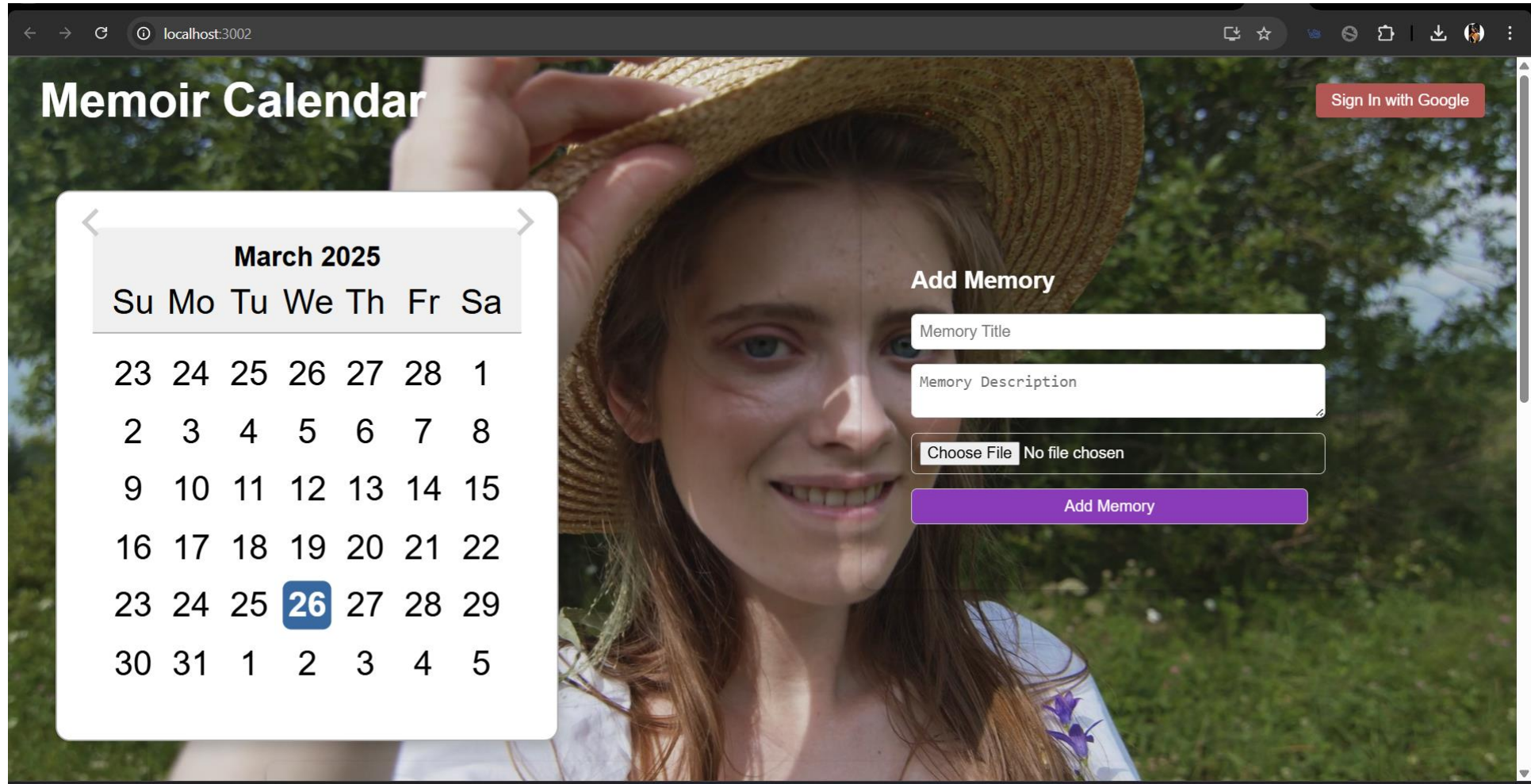
- The memory was accessible using the correct link.
- An incorrect or expired link displayed an error message: "Memory not found or expired".

Pass/Fail: Pass

Project – UI Screenshots



Project – UI Screenshots



← → ↺

localhost:3002

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Memor Calendar

Signing In...

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March 2025

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9 10 11 12 13 14 15

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Sign in - Google accounts - Google Chrome


accounts.google.com/o/oauth2/auth/oauthchooseaccount?response_t...


Sign in with Google


Choose an account


to continue to isa-domain-sel.firebaseio.com

 Mahalakshmi Balan
lakshmi23m2004@gmail.com

 Swathi B
sriswathi31@gmail.com

 Mahalakshmi Balan
mahalakshmibalan2301@gmail.com

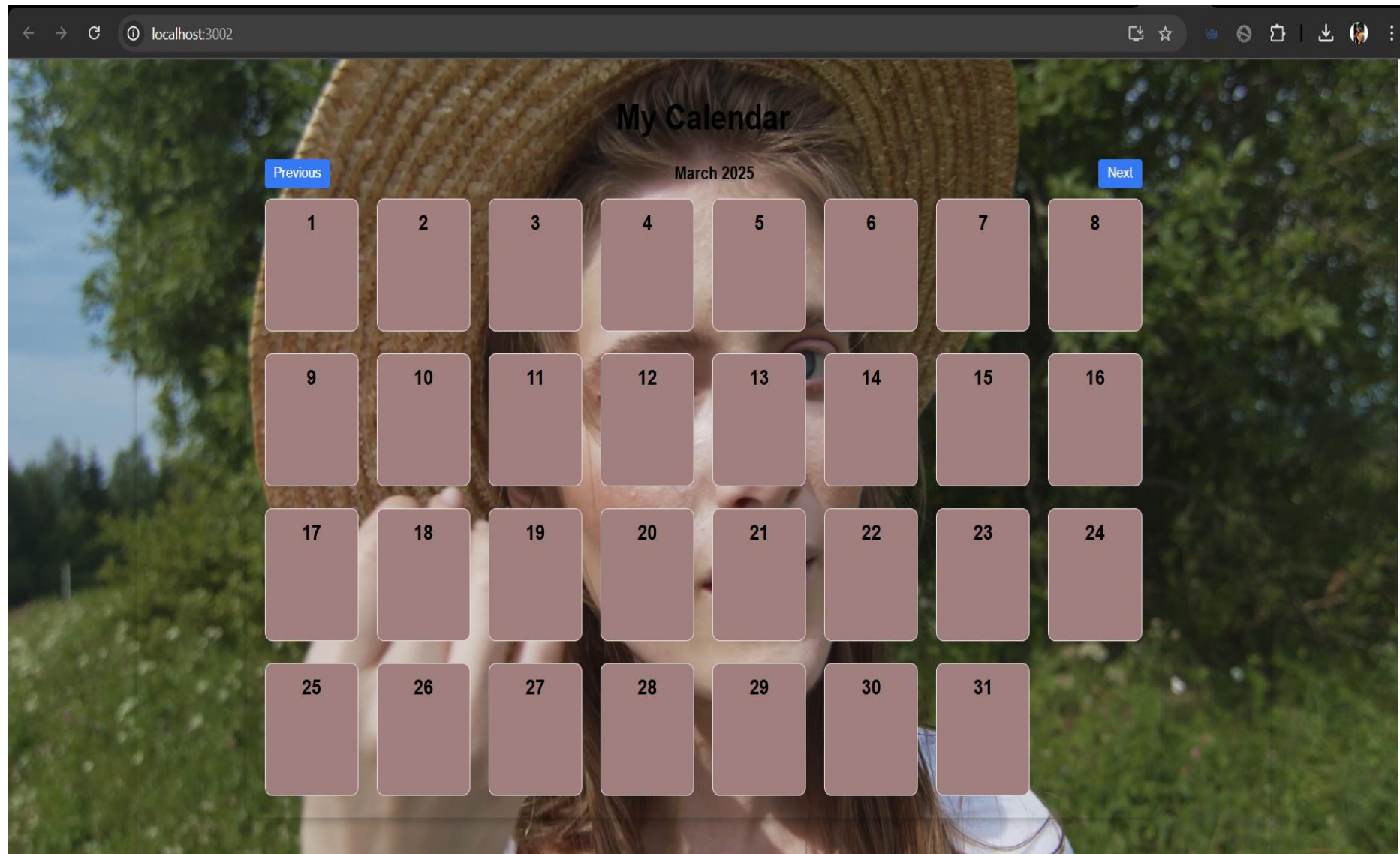
 Mahalakshmi B 22MIC0009
mahalakshmi.b2022a@vitstudent.ac.in

 Use another account

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26-03-2025



Add Memory

Software Engineering

Project Review

Choose File UseCaseDiagram1.png

Add Memory



THE REUNION

After years apart, they finally met at the cozy little café where their laughter once echoed. The moment their eyes met, time seemed to rewind. Stories spilled over steaming cups of coffee, every word stitching together the years they'd missed. It felt like nothing had changed, yet everything had grown more precious. After years apart, they finally met at the cozy little café where their laughter once echoed. The moment their eyes met, time seemed to rewind. Stories spilled over steaming cups of coffee, every word stitching together the years they'd missed. It felt like nothing had changed, yet everything had grown more precious.

Date: 11/15/2024, 9:45:39 PM



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