<Group 05>

<SoulNote>
Vision Document

Version <1.1>

Revision History

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03/06/2025	1.0	Prepare Introduction in Vision Document	Nguyen Tan Van
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12/06/2025	1.1	Add “Location Integration” in User Task and Environment	Nguyen Tan Van
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Vision (Small Project)

1. Introduction

This Vision document outlines the overall goals and higher-level requirements of the SoulNote system. It serves to gather and present the essential needs of stakeholders and users, explaining the reasons behind these needs. While this document focuses on what the system must achieve, the how will be addressed in the use-case and supplementary specification documents. This document also includes the purpose and any relevant references used during the project planning phase.

2. Positioning

2.1 Problem Statement

The problem of	lack of a platform for users to save and reflect on personal memories in a meaningful and organized way
affects	users' ability to recall past events, track emotions over time, and connect with their own life experiences
the impact of which is	memories become scattered, forgotten, or emotionally distant, reducing personal reflection and emotional well-being
a successful solution would be	building a memory app that lets users save notes, photos, voice, and emotions in a timeline view using AI to suggest titles, detect emotions, and remind users of past memories like "This day last year" helping users better preserve and relive meaningful moments in their lives.

2.2 Product Position Statement

For	Individuals who want to preserve and reflect on personal memories, especially: • Students • Journal lovers • Emotionally reflective users
Who	seek an easy and meaningful way to capture, organize, and revisit life experiences
The SoulNote	is a web application
That	allows users to store notes, photos, and voice recordings with tags, emotions, dates, and locations provides timeline and emotional filtering features to revisit past moments
Unlike	basic note-taking apps or social media platforms
Our product	integrates AI to suggest titles, detect emotions, and recall old memories offers an emotionally engaging and organized memory-keeping experience

3. User Descriptions

3.1 Stakeholder Summary

Name	Description	Responsibilities
Development Team	A team of students actively engaged in creating the software, taking charge of every phase from gathering requirements to final release.	- Performs tasks such as analyzing requirements, designing architecture, coding, testing, and deploying the software. - Make sure all development work fulfills the defined objectives and expectations of the project. - Works together to resolve issues, implement improvements, and complete each stage on time.
Theory Lecturer *(Nguyễn Văn Vũ)*	The instructor offers mentorship and expert advice throughout the development process, delivering both theoretical concepts and real-world perspectives.	- Instructs students on theoretical principles and best practices in the field of software development. - Oversees the team's work to ensure it meets academic and industry development standards. - Evaluates students' grasp and use of theoretical concepts in practical tasks.
Teaching Assistant *(Mã Anh Tuấn)*	A TA who regularly interacts with students, offering assistance, answering questions, and supporting them throughout the project.	- Serves as the main contact point for resolving student concerns and offering feedback. - Continuously advises students to ensure their work aligns with grading criteria. - Checks student progress and gives helpful recommendations before the final submission.

3.2 User Summary

Person	Description	Goals & Needs	Skills & Experience	Frequency of Use	Limitations
Young User	*Teenagers and young adults (aged 15–25) who enjoy expressing themselves and tracking personal growth*	*- Write daily thoughts and feelings- Use themes, emojis, or emotions to personalize memories- Shareable memory options (private or with friends)*	*- Very comfortable with mobile apps and modern UIs- Frequent users of social media and journaling tools*	*Daily or several times a week*	*- May prefer fun, visually appealing interfaces- Might lose interest with too many steps or complex features*
Traveler	*Individuals who often travel for leisure or work and want to capture meaningful experiences on the go*	*- Record travel experiences with photos, audio, and notes- Tag locations, create memory collections by trips- Access memories easily by date or map*	*- Intermediate to advanced tech users- Frequently uses smartphones, cameras, cloud apps*	*During or after trips(weekly/monthly)*	*- Often on mobile network, not always strong connection- Needs lightweight, responsive design*
Memory Keeper	*Sentimental users who value memories and emotional reflection, regardless of age*	*- Store important life moments (birthdays, anniversaries, milestones)- Use emotion tags and organize memories into personal categories*	*- Varies (can range from average to tech-savvy)- May have used note apps or printed albums before*	*A few times per week or after significant events*	*- Prefers simple UI- Needs assurance of privacy and long-term storage*

3.3 User Task and Environment

Task	*Description*	*Performed by*	*Environment*	*Frequency*	*Constraints*
Create a new memory	*Users can create a memory using text, images, voice recordings, and tag it with emotions and location*	*All types of users*	*Web-based platform on desktop, mobile, or tablet (modern browsers)*	*Daily or after specific events*	*Requires Internet connection*
Browse memory timeline	*View all memories sorted chronologically in a scrollable or calendar-based timeline*	*Personal users*	*Best on devices with larger screens; still responsive on mobile*	*Weekly or when reminiscing*	*None*
Search and filter memories	*Find specific memories using keywords, tags, dates, or emotions*	*Users who want to retrieve old entries*	*Any connected device with a browser*	*On demand*	*Depends on search performance and index structure*
Manage user account	*Update profile, change password, or delete account*	*Registered users*	*Web interface, any device*	*Occasionally*	*Identity verification may be required*
Set journaling reminders	*Configure daily or weekly notifications to remind users to journal*	*Users seeking consistency*	*Desktop or mobile device*	*Once or when preference changes*	*Optional; may require notification permissions*
Share memory	*Users can share their saved memories (text, images, voice, etc.) with others via link, email, or social platforms; optionally set visibility (public/private/friends-only)*	*All types of users*	*Web-based platform on desktop, mobile, or tablet with internet access*	*Occasionally, after creating or viewing a memory*	*Requires Internet connection; shared content respects privacy settings*

Location Integration	*Users can add a location to a memory during creation or editing, and later view all memories on an interactive map to recall where events occurred.*	*All types of users*	*Web-based platform on desktop, mobile, or tablet with map support and internet access*	*During memory creation/editing or when viewing memory distribution on map*	*Requires internet access; may need location permission; map may be unavailable on older devices or offline*

3.4 Alternatives and Competition

Currently, several alternatives exist for digital journaling and memory-keeping, including widely used tools and platforms. These include:

Google Keep

Strengths: Cloud-based, integrates with other Google services, supports voice notes and labels.

Weaknesses: Limited in emotional tagging, lacks advanced timeline or reflection features.

Day One (by Automattic)

Strengths: Rich journaling features, supports media, encryption, and mood tracking.

Weaknesses: Most advanced features are locked behind a paid version, less personalized emotion filtering.

Journey

Strengths: Cross-platform support, supports mood tracking and tagging, visual timeline.

Weaknesses: Paid plans required for some features, generic emotional tracking not deeply customizable.

Manual Journaling

Strengths: Fully personalized, no tech barrier.

Weaknesses: No searchability, no media support, lacks emotional filtering and data analysis.

SoulNote aims to differentiate itself by focusing deeply on emotional enrichment, with custom emotional tagging, a visual emotion-based timeline, and integration of multiple media types (voice, photo, text) to preserve memories holistically. It also emphasizes personal growth through reflective tools not commonly available in competitors.

4. Product Features

	Product Features	Brief description	Priority
1	**Memory Creation & Upload**	Allows users to create new memories by writing notes, uploading photos or voice recordings, and tagging them with emotions, dates, and locations.	High
2	**Timeline & Memory Browsing**	Displays all memories in a timeline format, enabling users to revisit past entries easily. Users can browse by date, tags, emotions, or content types.	High
3	**Advanced Search & Filtering**	Enables users to search memories by keyword, tag, date range, or emotion. Filters help users quickly find specific memories based on various criteria.	High
4	**Memory Editing & Deletion**	Allows users to edit memory details or remove entries. Includes confirmation prompts to prevent accidental deletion.	Medium
5	**Share Memory**	Allows users to share individual memories with others via generated links, social media, or direct messages. Includes options for setting memory visibility (public, private, friends-only).	Medium
6	**Emotion-Based Visualization**	Provides visual tools like emotion filters and statistics to help users reflect on emotional trends over time.	Medium
7	**User Authentication**	Supports secure user registration and login via email/password or Google account. Includes password recovery and reset functionality.	High
8	**Account Management**	Allows users to update personal information, change passwords, or delete accounts securely.	Medium
9	**Reminders & Notification Settings**	Enables users to receive browser-based reminders to journal daily or weekly. Also includes options for theme customization (dark/light mode).	Low
10	**Weekly/Monthly Reports** ***(Optional)***	Generates emotion statistics and activity summaries, such as "Your memories in May," using AI summarization.	Low
11	**Location Integration**	Allows users to tag a location to each memory and visualize it on an interactive map, helping recall where specific moments occurred.	Medium

5. Non-Functional Requirements

To ensure a smooth and meaningful experience for users preserving their memories, SoulNote must meet several key non-functional requirements:

- **Scalability:** The platform must handle many concurrent users saving and accessing memories without slowing down, especially during peak hours (e.g., evenings or weekends).
- **Security and Privacy:** Ensure user data (notes, photos, voice, emotional tags) is securely stored and transmitted with encryption, complying with data protection regulations.
- **Performance:** Memories (text, photo, or audio) should be uploaded, processed, and displayed smoothly, with minimal loading or lag time.
- **Usability:** Provide a clean, intuitive interface so even non-technical users can easily create, manage, and revisit their memories.
- **Compatibility:** Must run seamlessly on modern browsers (Chrome, Firefox, Safari) and devices (PCs, tablets, mobile).
- **Availability and Reliability:** Minimal downtime with backup and restore mechanisms to prevent memory loss.
- **Maintainability:** Easy to update features like AI suggestions or interface changes without rewriting the whole system.
- **Documentation:** Provide basic user help, tooltips in UI, and a simple user guide/manual. Internal code should be well-documented for developers.
- **Design Constraints:** The system is built as a web-based solution; therefore, all major features must be accessible without requiring installation.
- **Priority & Risk Considerations:**
    - **High priority**: Privacy, usability, and availability.
    - **Medium**: Scalability and maintainability.
    - **Low**: Future expansion to mobile app or public-sharing mode.

5.1 Detailed Requirements

1. Scalability

- **Description:**
  The system should handle increasing user load (e.g., thousands of users accessing and saving memories at the same time) without performance drops.

- **Implementation:**
    - Use optimized database indexing for fast query on tags, emotions, and dates.
    - Consider cloud-based solutions (e.g., Firebase, AWS) for horizontal scaling.
    - Cache frequently accessed memories for quicker load.

2. Security and Privacy

- **Description:**
  User memories often contain personal or sensitive data (emotions, locations, voice). The system must ensure full data protection during storage and transmission.
- **Implementation:**
    - Use HTTPS for all communications.
    - Encrypt memory data (e.g., using AES-256) at rest and in transit.
    - Apply user authentication and role-based access control.
    - Follow privacy laws such as GDPR for data rights and removal on user request.

3. Performance

- **Description:**
  The app must load memories quickly, respond to tag filters instantly, and process image/audio uploads efficiently.
- **Implementation:**
    - Use lazy loading and pagination for large timelines.
    - Compress media files before upload.
    - Optimize queries and use CDN for media delivery.

- **Performance Monitoring:**
    - Use tools like Firebase Performance Monitoring or Lighthouse to track loading times and API responsiveness.

4. Usability

- **Description:**
  The interface must be simple and user-friendly so that all types of users (especially emotional users) can interact with the app smoothly.

- **Implementation:**
  - Use consistent and clean UI/UX design patterns.
  - Provide onboarding tutorials for first-time users.
  - Support dark/light mode and readable fonts.

- **Usability Testing:**
  - Collect user feedback with short surveys.
  - Run A/B testing to improve layout, flow, and features.

5. Compatibility

- **Description:**
  The app must function well across popular browsers and devices.

- **Implementation:**
  - Test on Chrome, Safari, Firefox, Edge.
  - Use responsive design (e.g., Bootstrap) for desktops, tablets, phones.

6. Availability and Reliability

- **Description:**
  Memories must never be lost. The system must be highly available and recoverable in case of crash.

- **Implementation:**
  - Use cloud services with auto-backup and replication.
  - Create a disaster recovery plan with auto-restore.'

- **Reliability Monitoring:**
  - Use tools like Uptime Robot or New Relic for real-time system health tracking.

7. Maintainability

- **Description:**
  The system should be easy to maintain, allowing developers to fix bugs and add features quickly.
- **Implementation:**
  - Write modular, clean code following best practices.
  - Use version control (Git), continuous integration (CI/CD), and error logging.
- **Documentation:**
  - Maintain developer notes and update logs.
  - Provide API docs (if public sharing or export is added later).

8. Scalability for Future Growth

- **Description:**
  The system must be ready for new features such as public memory sharing, AI memory generation, or mobile app expansion.
- **Implementation:**
  - Use microservices or modular architecture.
  - Design with extensible APIs to allow integration with third-party tools (e.g., Google Photos, calendar sync).