Journ.ie

"Memory is the diary we all carry about with us." – Oscar Wilde

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Abstract

This report serves to document the process of '*Journ.ie*' from concept to the final product, highlighting critical aspects of each development phase. It includes a summary of product management, web application design principles, and software quality testing methodologies applied, as well as seamless deployment strategies and the utilisation of various technologies and programming languages. Additionally, a demonstration video showcasing the functionality and features of *Journ.ie* is provided via a YouTube link.

Please find further information about the web application's project plan, code and documentation on GitHub at the following links:
  (1) *Code and Development:* https://github.com/Journ-ie/Application
  (2) *Documentation:* https://github.com/Journ-ie/Documentation
  (3) *Project Planning:* https://github.com/orgs/Journ-ie/projects/1/views/1

About Journ.ie

Product Vision

Journ.ie is a unique web application designed as a journaling platform where individuals can document moments they wish to preserve and treasure—a digital archive for capturing significant milestones and memories. This platform supports the art of personal posting and offers tools for organising life's moments meaningfully.

Unlike traditional social media platforms, Journ.ie prioritises providing a safe environment for individuals to focus on their achievements, growth, and reflections without the pressure of public exposure.

With Journ.ie, users can track their personal growth over time, revisit memories, and reflect on their experiences in a meaningful way. Journ.ie empowers individuals to connect with themselves at a deeper level—supporting users through personal healing, fostering personal growth, and actively pursuing their life goals.

Focus Group

The primary users are adults between the ages of 20 and 35, who are navigating the early stages of their lives and seeking self-growth and development. They have a strong desire for purpose, self-improvement, and a significant emphasis on traveling.

"Nearly 3 in 5 young adults (58%) reported that they lacked "meaning or purpose" in their lives in the previous month. Half of young adults reported that their mental health was negatively influenced by "not knowing what to do with my life... Forty-five percent (45%) of young adults reported that a general "sense that things are falling apart" was

impairing their mental health." - (On Edge: Understanding and Preventing Young Adults' Mental Health Challenges, 2023)

Product Management

Identity

"*Journ.ie*" originates from the concept of journaling one's thoughts throughout their journey. The "ie" is a play on words, referencing Ireland, where the website was developed from. Additionally, Celtic designs are incorporated to honour the country's rich history and cultural heritage.

Palette

To create a calming and serene colour palette for Journ.ie, supporting its mission of inner reflection and journaling, soft pastel shades and earthy tones have been chosen. This palette evokes a sense of calm, serenity, and positivity, enhancing the therapeutic experience of journaling and emotional exploration.

Figure 01. Colour Palette (Suggested by ChatGPT)

Requirements

Functional	
***Additional Features to consider if time permits**	
User Authentication and Authorisation	Enable users to create personalised accounts to securely store and access their journal across devices.
Digital Journaling Tools	Create and manage journal entries, incorporating text, photos, videos, and various multimedia elements.
Mood Tracking*	Add mood or emotional state on journal entries.
Timeline and Progress Tracker*	Track personal growth and achievements over time using timeline and goal-setting tools.
Search and Organisation Tools	Navigate and manage entries efficiently with tags, categories, and filters.
Non-Functional	
Usability	▪ Aim to create a user-friendly interface – UI is a high importance to improve UX. ▪ Accessible to users with different technology skills

	– Technical Skills Levels – Accessibility Types
Compatibility	▪ The website should be dynamic and work on major screen types, with a primary focus on mobile and web screens.
Security	▪ User data should be secured and sensitive data to be encrypted where necessary.

Project Management

In my project planning and management approach, I utilise Agile methodologies, conducting bi-weekly Friday reviews and employing SCRUM practices. This strategy ensures continuous improvement, effective task prioritisation, and a steady workflow.

Milestones

Figure 02. Milestones (Miro)

Project and Product Planning	08 July – 15 July
Web Application Design	16 July – 20 July
Product Development	21 July – 03 August
Testing	04 August – 05 August
Product Development Review	06 August – 09 August
Testing 2	10 August
Product Development Final Review	11 August
Deployment	12 August – 13 August
Documentation, Code & Video Submission	14 August – 18 August
Deadline	31 August

Task Distribution

GitHub Issue Boards offer a flexible platform for managing development workflows and task distribution through a visual interface that aligns with agile project management methodologies.

See *Figure 03* for an overview of how I effectively distributed and tracked tasks:

To Do (Backlog)	In Progress
All tasks and stories for the upcoming iteration are added to this column. It acts as the planning area where tasks are sorted by priority.	Tasks are moved to this column when they are being worked on. This helps keep track of active tasks and ensures focus on the goal of completing the iteration.
Review & Testing	**Done**
Testing whilst developing is crucial as it catches early errors, reducing the burden during the testing phase. This stage ensures the work meets the desired standards and functions as intended.	Completed tasks are moved to this column. 'Done' provides a clear view of the project's progress and achievements, helping maintain motivation and momentum.

Figure 03. Issue Board (GitHub Project)

Web Application Design
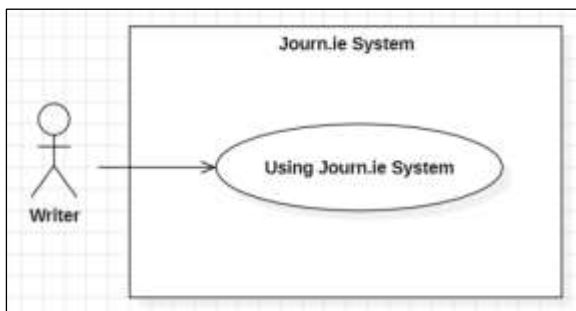
Use Case Diagrams

Figure 04. Use Case 1 Journ.ie System (StarUML)

Use Case 1: Using Journ.ie System	
Goal	The writer can login and journal
Preconditions	Writer needs a verified account
Postconditions (Success)	Writer can journal and log their day
Postconditions (Failed)	Writer is unable to access their account, therefore, unable to access Journ.ie
Actors	Writer – the main user of the website
Trigger	Writer wants to access their journal
Description	Writer logins or register/create an account and journals using Journ.ie features

Main Flow (MF)		
Step	**Action**	**Alternate**
1.1	System prompts for user access details (username/email, password)	
1.2	Writer inputs their user details	EF.1.2
1.3	System verifies user details are correct	EF.1.3
1.4	System gives access to the user and directs the page to their journal	
1.5	Writer accesses their journal and logs their day	End of MF
Exceptions or Error Flows		
Exception/Error Flow 1.2: MF.1.2 Writer does not have an account		
1.1	Writer chooses register option and creates an account	MF.1.1
Exception/Error Flow 1.3: MF.1.3 Writer input incorrect user details		
1.1	System prompts user of the error – *'Incorrect email/username or password'*	
1.2	Writer re-enters their user details	MF.1.3
Non-Functional Requirement	**Priority:** High	

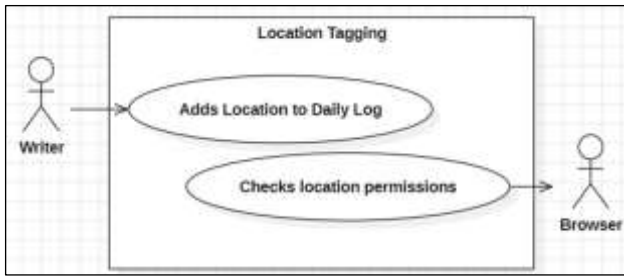| Product Security	Adhere to GDPR standards on processing data
Regulation and Law	Users should meet the standard age to access the website.

Figure 05. Use Case 2 Location Tagging (StarUML)

Use Case 2: Adding a Location Tag to a Log	
Goal	Location Tag is added to the Journal Log
Preconditions	Location Permissions is enabled
Postconditions (Success)	Writer can add a Location Tag
Postconditions (Failed)	Writer is unable to add a Location Tag
Actors	Writer, Browser
Trigger	Writer adds location to the journal log
Description	Writer adds their location on the journal log

Main Flow (MF)		
Step	**Action**	**Alternate**
2.1	Writer adds a log on the journal and adds their location tag	
2.2	System verifies if Location Permissions are allowed	EF.2.2
2.3	System verifies the address is valid	EF.2.3
2.4	System adds the location tag on the log	End of MF

Exceptions or Error Flows		
Exception/Error Flow 2.2: MF.2.2 Location Permissions are disabled		
2.1	System prompts user to enable Location Permissions	AL.2.1
2.2	Writer enables Location Permissions	MF.2.2
Exception/Error Flow 2.3: MF.2.3 Location is invalid		
2.1	System prompts user of the error – *'Location is invalid'*	
2.2	Writer updates the address or adds a different address	MF.2.3

Alternative Flows		
Alternative Flow 2.1: EF.2.2.1 User does not enable Location Permission		
2.1	System prompts user of the error – '*Unable to add location'* and returns to log draft	End of MF

Non-Functional Requirement		**Priority:** High
Product Reliability	Location Tag is accurate	
Product Safety	Location Permissions enabled where only necessary	
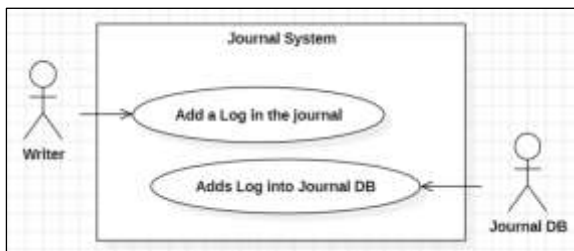
Figure 06. Use Case 3 Journal System (StarUML)

Use Case 3: Journal System	
Goal	Writer adds a log to their journal
Preconditions	Writer has a verified account
Postconditions (Success)	Log is added into the Journal/Journal database (DB)
Postconditions (Failed)	Log is not added into the Journal/Journal DB
Actors	Writer, Journal DB
Trigger	Writer saves a Log
Description	Writer drafts a log into the journal and saves it into the DB by submitting it through the system

Main Flow (MF)		
Step	**Action**	**Alternate**
3.1	*Use Case 1 runs here...*	
3.2	Writer adds a log into the journal and adds location tag (*Use Case 2 runs here...*)	

3.3	Writer saves log	EF.3.3
3.4	System checks all mandatory fields and requirements have been completed	EF.3.4
3.5	System adds the log into the Journal database	
3.6	System closes log and from the database display into journal page	End of MF
Exceptions or Error Flows
Exception/Error Flow 3.3: MF.3.3 Writer does not save the log
3.1	System disregards user log details and returns to journal page	End of MF
Exception/Error Flow 3.4: MF.3.4 Mandatory fields are not filled
3.1	System prompts user the fields that are not filled – *'Input X' or underline red.*	
3.2	Writer completes the empty fields	MF.3.3

Non-Functional Requirement		**Priority:** High
Product Performance	Notification to update user when the log is saved and uploaded	
Product Security	Logs can only be added but should not be able to access other functions of the database	

Class Analysis
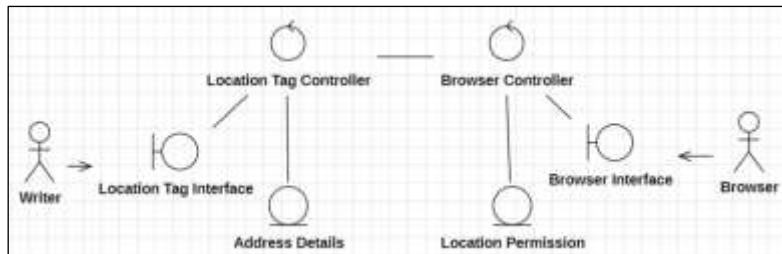
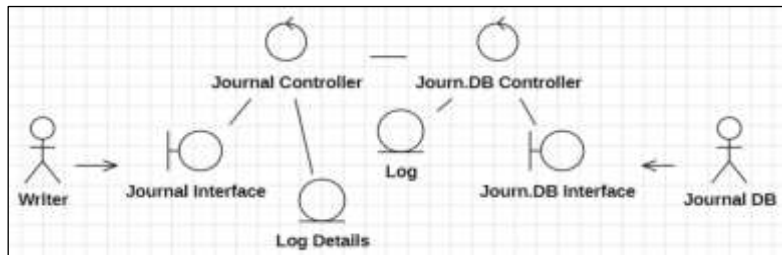*Figure 07. Class Analysis Location Tag. (StarUML)*

Figure 08. Class Analysis Journal (StarUML)
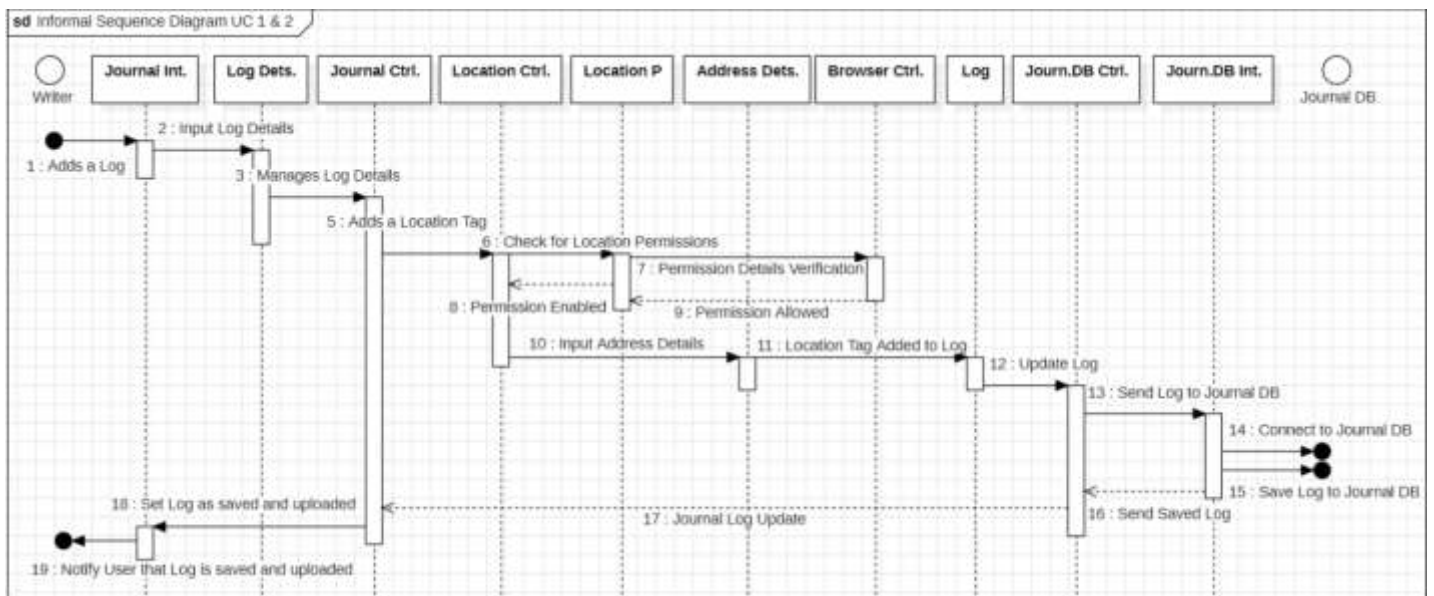
Class and Sequence Diagram

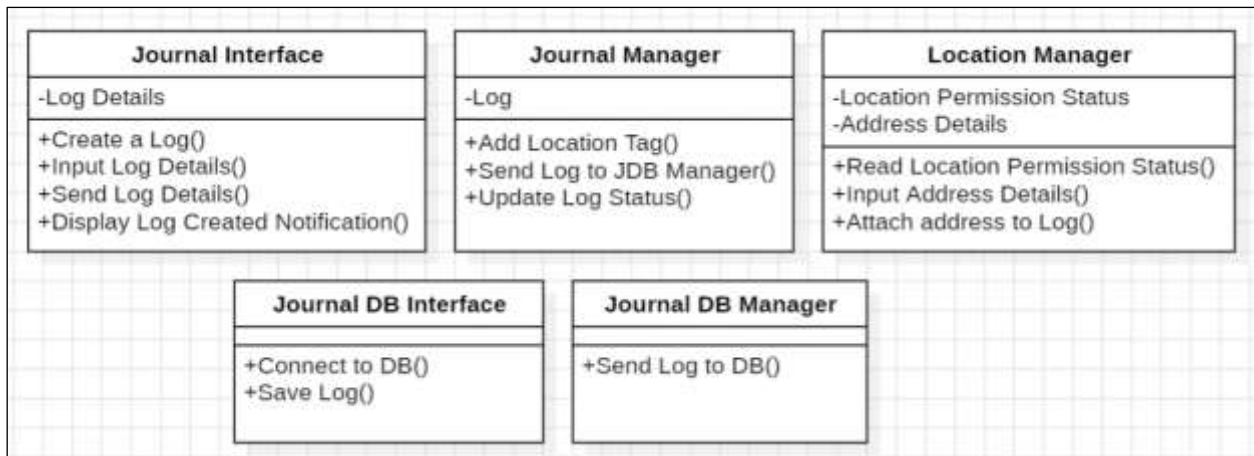*Figure 09. Informal Sequence Diagram UC1-2 (StarUML)*
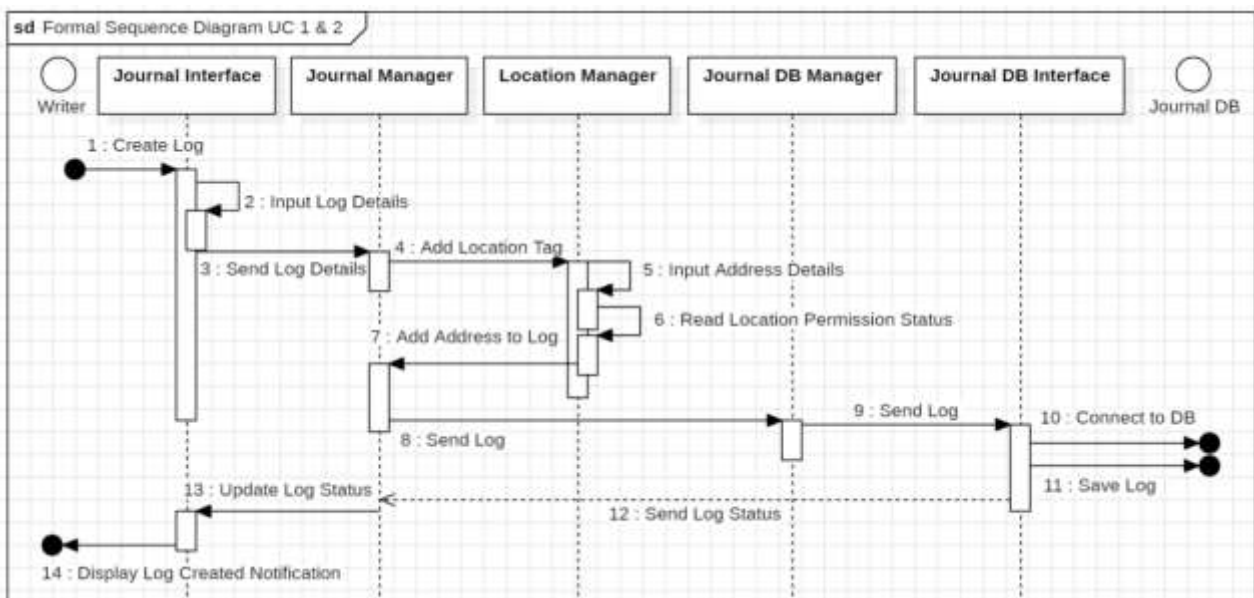
Figure 10. Class Diagram (StarUML)

Figure 11. Formal Sequence Diagram UC1-2 (StarUML)
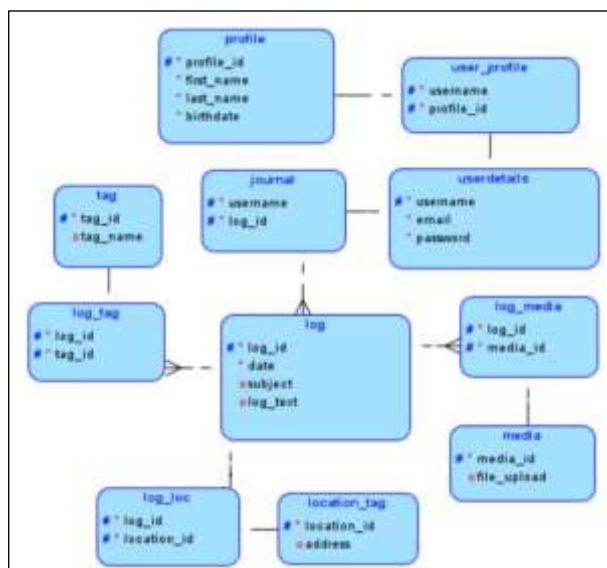
Database Diagram (ERD)

Figure 12. Logical ERD (Oracle DB)

Summary of Relationships

1. **User Profile and User Details**: Each user profile has corresponding user details (one-to-one)
2. **Log and Log Tag**: Each log can have multiple tags (many-to-many)
3. **Log and Log Media**: Each log can be associated with multiple media files (many-to-many)
4. **Log and Log Location**: Each log can only be associated with one location (one-to-one)

Sitemap

In *Figure 13*, the sitemap is provided, highlighting the main pages, which include the *Home Landing Page, Journal Page, Settings Page, Help Page, and Log In/Sign Up Page.*
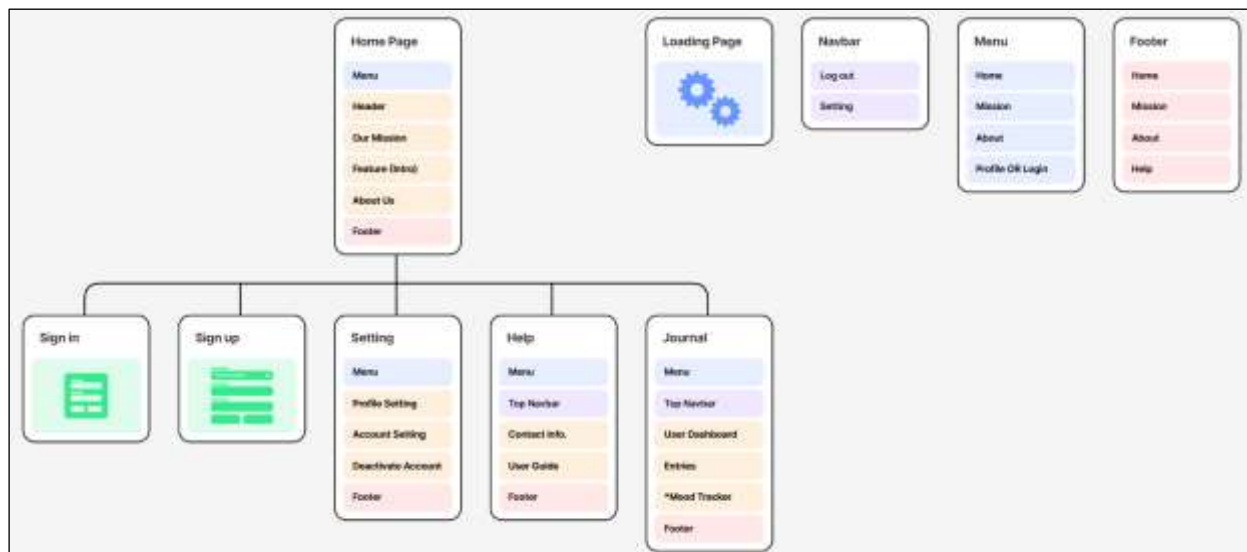

Figure 13. Sitemap (Flowmapp)

GUI Prototype

In *Figure 15*, a visual prototype is created for the *Home Page, Journal Page, and Entry Log Page,* respectively. More at *Documentation (2), GUI Prototype Folder.*

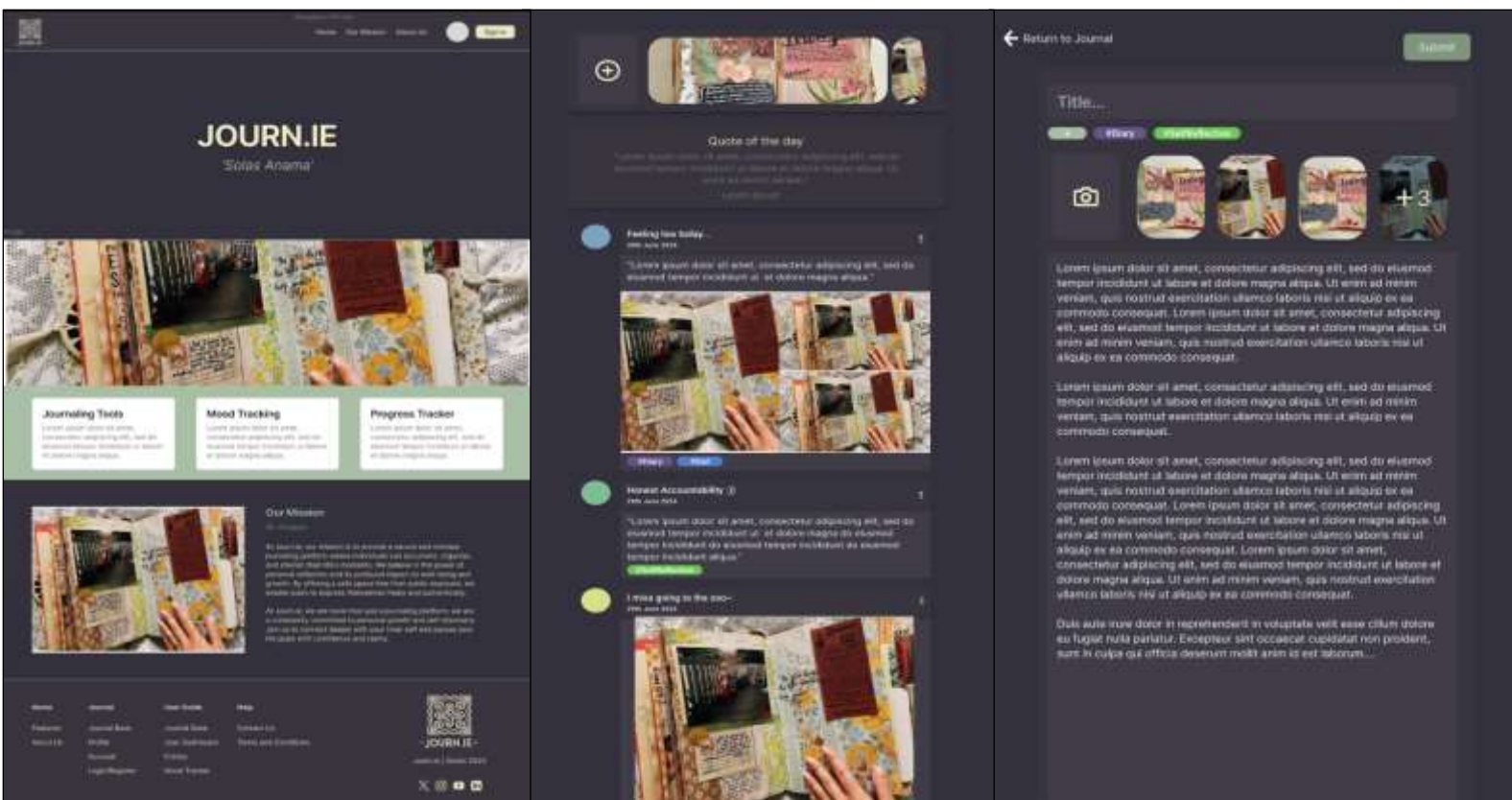Figure 14. GUI Prototype (Figma)

Software Quality Testing

User Testing Instructions

Scenario 01	Creating an Account, Update Information, Log Out

Register an account, go to settings to update your account information and log out of the account.

1	Create an account	
2	Enter your details for your profile	
3	Navigate to the settings page	
4	Edit your profile information and save the changes	
5	Log out of the account	

Scenario 02	Sign In, Create 2 Posts, Edit 1 Post, Delete 1 Post

Sign back into the account and create two journal posts. With one of the posts, edit the details of the log and save the changes. Lastly, delete of the two posts available.

1	Sign in with the account you just registered	
2	Create a Post	
3	Add details to your post, attach videos or images and choose an appropriate label(s)	
4	Submit and create another post	
5	Edit one of the post, update the title and save the changes	
6	Delete one of the posts	

Scenario 03	Deactivate Account

Go to settings and deactivate your account

1	Navigate to the settings page	
2	Click Delete Account	
3	Re-confirm your action	
4	Attempt to sign back in with the same account information	

Interview & Questionnaire				
How do you rate your experience with Journ.ie?				
(1) Bad	(2) Not too bad	(3) Okay	(4) Good	(5) Great
How easy was it to register an account?				
(1) Very Easy	(2) Easy	(3) Okay	(4) Hard	(5) Difficult
How easy was it to add a journal log?				
(1) Very Easy	(2) Easy	(3) Okay	(4) Hard	(5) Difficult
Do you have any further feedback?				

Results from User Testing

User Tester Information	1	A 27-year-old male college student with a computer science background, actively engages in coding projects.		
Technical Level		High		
Rate Experience	4	Difficulty of Register Process	1	Difficulty of Journal Log	2
Feedback		Light mode requested.		
Observation Notes		- Uses the FR translation of the website (Success) - Password restriction (1 cap/non-cap, special letter with x length.) - Naturally gravitated to the submit when wanting to add a media. Suggestion for UI to swap the buttons?		

User Tester Information	2	A 38-year-old female user with no technical background, but she is familiar with common media platforms and regularly engages with digital content for communication, entertainment, and staying informed.		
Technical Level		Mid		
Rate Experience	3	Difficulty of Register Process	2	Difficulty of Journal Log	2
Feedback		Would like to see timestamps on posts.		
Observation Notes		- Looking for register button as Sign is only visible - Put the date of today - age restriction to be applied. (At least 13<90(?) years of age)		

Testing Conclusion

Key Findings

Registration Process

- The registration process was straightforward, with the difficulty rated between "1" (Very easy) and "2" (Easy).
- The visibility of the registration button was a minor issue, with some users having trouble to find it as Sign In is only visible.

Journal Logging Experience

- The difficulty of logging journal entries was rated as "2" (Easy), indicating a generally user-friendly process but room for improvement.

- One of the users subconsciously gravitated to the submit button to add medias which suggests UI adjustments to improve UX.

Feedback on User Interface and Features

- Light Mode Requested
- Timestamps on Posts

Suggested Enhancements

➢ Consider swapping buttons between media submission and log submission to better align with user expectations.

➢ Enhance the visibility or clarity of the registration button to avoid confusion with the "Sign In" option. Instead of "Sign In", update this to "Sign In/Register".

➢ Implement a light mode option to accommodate varying user preferences for visual themes.

➢ Incorporate timestamps on journal posts to provide clearer chronological information.

➢ Apply age restrictions in adherence to the law or a common basic application of 13<80+ years of age rule.

➢ Clarify age restrictions during the registration process to ensure that users understand the eligibility requirements.

Programming Technologies and Languages

Project/Product Management	GitHub		
Front-End	HTML5	CSS	JavaScript
Back-End	Java	Firebase	
Web Development	Figma	flowmapp	StarUML
Deployment	Firebase Hosting		

Set Up Instructions

This is also available in the *README.md* file of Application Repository:
https://github.com/Journ-ie/Application

Installation

1. Requires having nodeJS(npm) and git to set up the project locally.
2. Install Firebase SDK (Run Terminal as Admin):

   npm install firebase
   npm install -g firebase-tools
   Set-ExecutionPolicy RemoteSigned

3. Go to the Application Repo of Journie and Clone the repository:

   git clone https://github.com/Journ-ie/Application.git
   cd Application

4. Log into Firebase Account:

   firebase login

   Request to be added as a collaborator needed

Open Project Locally

1. Open terminal to run the website locally:

   firebase serve

Deployment

1. Check the following link to try the website online: https://journie-d4114.web.app/
2. For deployment:

   firebase deploy

   Admin purposes only.

Demonstration

In this demonstration, I will guide through the various components of the application as depicted in the flowchart below in *Figure 15*. The process starts at the *Home* page, then proceeds to *Register an Account* where a new user can sign up. After registration, the *Journal* section is explored, where entries can be logged. The *Settings* section allows for managing the user's profile. Finally, the *User Guide & Help* section offers assistance and guidance within the app for first-time users. This walkthrough will clarify how each part of the application connects and functions together.
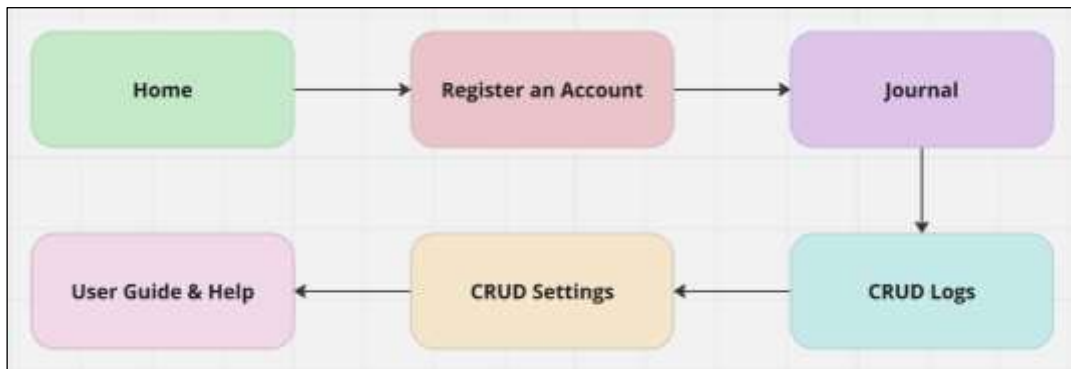

Figure 15. Demonstration Flow (Miro)

Please find the demonstration video on YouTube via the following link:

https://youtu.be/JF_TQtBxIns

References

❖ Education, H. G. (2023). *On Edge: Understanding and Preventing Young Adults' Mental Health Challenges*. Retrieved from Making Caring Common Project: https://mcc.gse.harvard.edu/reports/on-edge