
Software Requirements Specification

for

Serenity

Version 1.2 approved

Prepared by Jashua, Ajish, Nickoski, Nick, Osmany

Farmingdale State College

12/9/2023

Table of Contents	2
Revision History	3
1. Introduction	4
1.1 Purpose	4
1.2 Document Conventions	4
1.3 Intended Audience and Reading Suggestions	4
1.4 Product Scope	4
1.5 References	4
2. Overall Description	5-8
2.1 Product Perspective	5-6
2.2 Product Functions	6-7
2.3 User Classes and Characteristics	7
2.4 Operating Environment	7
2.5 Design and Implementation Constraints	7
2.6 User Documentation	7-8
2.7 Assumptions and Dependencies	8
3. External Interface Requirements	8-14
3.1 User Interfaces	8-13
3.2 Hardware Interfaces	14
3.3 Software Interfaces	14
3.4 Communications Interfaces	14
4. System Features	14-18
4.1 Safe Place	14
4.2 Self Assessment	15
4.3 Review	16
4.4 Emergency Resources	17
4.5 Meditate	17
4.6 Wellness Tips	18
4.7 Chart	18
5. Other Nonfunctional Requirements	19-20
5.1 Performance Requirements	19
5.2 Safety Requirements	19
5.3 Security Requirements	19
5.4 Software Quality Attributes	19
5.5 Business Rules	19-20
6. Other Requirements	20-21
Appendix A: Glossary	20-21
Appendix B: Analysis Models	21
Appendix C: To Be Determined List	21

Revision History

Name	Date	Reason For Changes	Version
Nick Gutierrez	10/22/23	Switched to MongoDB for database	V1.1
Nick Gutierrez	10/22/23	UI Section in original were placeholders	V1.1
Jashua Veerasammy	10/23/23	Ensuring document is consistent with technologies	V1.1
Jashua Veerasammy	12/9/23	Section 2 is updated with current features. Section 3 is updated with UI pictures. Section 4 is updated with current UI screens and features. Section 5 removed business rules.	V1.2

1. Introduction

1.1 Purpose

"Serenity" is a mental health application designed to support individuals in their journey towards improved emotional well-being and mental health and its software requirements are specified in this document. The release number is 1.2. It will explain the purpose, features, user interfaces involved in the system, what the system does, how it is supposed to operate, and how users will interact with it.

1.2 Document Conventions

This Document was created based on the IEEE template for System Requirement Specification Documents.

1.3 Intended Audience and Reading Suggestions

Stakeholders, testers, users, marketing staff, documentation writers, and developers are intended to read this document. The rest of this SRS contains how the product is supposed to work, the user interfaces, hardware included/used, system features, non-functional requirements, and any other requirements. It would be best suggested to read this document from sections one to six in order.

1.4 Product Scope

"Serenity" is a website that allows users to visualize their stress levels and counteract them through various mental health exercises and self-help programs. The benefits would be lowered stress levels, self-improvement habits, and higher confidence. The goal is to have improved mental health. The software relates to corporate goals by promoting employees balancing their mental health state (which essentially makes them work more productively and positively). With employees working at their best, they would be able to assist customers to the best of their abilities, which leads to the business receiving better reports from their customers.

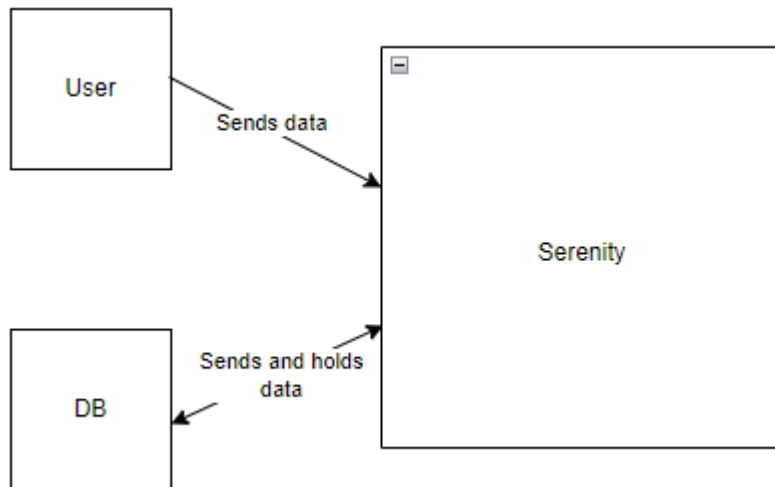
1.5 References

- https://www.linkedin.com/pulse/uxui-design-mental-health-beryl-mudeizi/?trk=article-ssr-frontend-pulse_more-articles_related-content-card
- <https://www.nimh.nih.gov/>

2. Overall Description

2.1 Product Perspective

“Serenity” is a new self-contained product. It is intended to be used by anyone who wants to visualize their stress levels and manage them actively. It is not an open-source project but has a developer team ready and willing to make any necessary changes.



SelfAssessment SelfAssessment() switchPage(ActionEvent, String) void handleClickEmergencyResources(ActionEvent) void initialize() void checkForSurvey() Boolean handleClickSafePlace(ActionEvent) void handleClickWellnessTips(ActionEvent) void handleBackToHome(MouseEvent) void handleSurveyCheckResult(boolean) void handleSubmitSurvey() void handleClickMeditate(ActionEvent) void switchToHome(String, MouseEvent) void	UserHome UserHome() handleClickSurvey(ActionEvent) void handleClickSafePlace(ActionEvent) void handleClickEmergencyResources(ActionEvent) void handleClickReviewPage(ActionEvent) void initialize(String) void handleClickMeditate(ActionEvent) void handleClickCharts(ActionEvent) void handleSignOut(ActionEvent) void handleClickWellnessTips(ActionEvent) void switchPage(ActionEvent, String) void	Login Login() doesEmailExist(String) CompletableFuture<Boolean> handleLogin(ActionEvent) void switchToHome(String, ActionEvent) void allFieldsFull() Boolean initialize() void handleClickToSignup(ActionEvent) void passwordMatch(String, String) CompletableFuture<Boolean> isValidEmailFormat(String) Boolean errorMessage String
Safeplace Safeplace() handleBackToHome(MouseEvent) void handleClickEmergencyResources(ActionEvent) void handleSendToFiles(ActionEvent) void handleClickWellnessTips(ActionEvent) void handleClickDailySurvey(ActionEvent) void handleClickMeditate(ActionEvent) void switchPage(ActionEvent, String) void switchToHome(String, MouseEvent) void	WellnessTips WellnessTips() handleClickWellnessTips(ActionEvent) void switchToHome(String, MouseEvent) void switchPage(ActionEvent, String) void handleClickEmergencyResources(ActionEvent) void handleClickDailySurvey(ActionEvent) void handleClickMeditate(ActionEvent) void handleClickSafePlace(ActionEvent) void handleBackToHome(MouseEvent) void	Meditate Meditate() handleClickWellnessTips(ActionEvent) void handleClickEmergencyResources(ActionEvent) void handleClickMeditate(ActionEvent) void switchToHome(String, MouseEvent) void handleClickSafePlace(ActionEvent) void handleBackToHome(MouseEvent) void switchPage(ActionEvent, String) void handleClickDailySurvey(ActionEvent) void
Signup Signup() openConn() MongoClient handleFinishSignup(ActionEvent) void isValidEmail(String) Boolean allFieldsFull() Boolean addUser(String, String, String) void handleClickToLogin(ActionEvent) void errorMessage String	Charts Charts() handleClickMeditate(ActionEvent) void updatePieChart(String) void handleClickSafePlace(ActionEvent) void switchPage(ActionEvent, String) void initialize() void addToPieChart(String, String) void handleClickEmergencyResources(ActionEvent) void	EmergencyResources EmergencyResources() handleClickWellnessTips(ActionEvent) void switchPage(ActionEvent, String) void handleClickDailySurvey(ActionEvent) void handleClickMeditate(ActionEvent) void handleClickSafePlace(ActionEvent) void handleBackToHome(MouseEvent) void switchToHome(String, MouseEvent) void
UserSession UserSession() email String instance UserSession openConn() MongoClient<Document> email String name CompletableFuture<String> instance UserSession	LandingPage LandingPage() handleClickLandingEmergencyResources(ActionEvent) void handleToAboutUs(ActionEvent) void switchPage(ActionEvent, String) void handleToLogin(ActionEvent) void handleToSignup(ActionEvent) void	ReviewPage ReviewPage() switchToHome(String, MouseEvent) void handleSendReview() void handleBackToHome(MouseEvent) void initialize() void
AboutUs AboutUs() handleBackToHome(MouseEvent) void switchToHome(String, MouseEvent) void switchPage(ActionEvent, String) void	App App() main(String[]) void loadFXML(String) Parent start(Stage) void	LandingEmergencyResource LandingEmergencyResource() handleToLanding(ActionEvent) void switchPage(ActionEvent, String) void

2.2 Product Functions

- Main page
 - allows user to sign up
 - allows user to log in
 - allows user to learn more about the website
- Self-Assessment
 - user takes a quiz on how they are feeling that day
 - data is captured from the quiz and used to make graphs for users
 - Charts are displayed via “charts” button in user home

- Safe-place page
 - allows users to vent about their daily struggles in a textarea that is saved to their local computer via a text document
 - “save to text file” allows form data to be captured and sent to their local machine. Developers will not be able to see form data to ensure privacy.
- Appearance
 - calming colors and soft edges that allow users to feel less stimulated (sensory)
- Meditate
 - Step-by-step guide on how to meditate
 - paired with visual chart on how to meditate
- Emergency Page
 - If a user feels like they need help at any moment, they can contact the proper emergency care.
- Wellness Tips
 - provides wellness tips from .edu sources in effort to create habits that aid in both physical and mental health

2.3 User Classes and Characteristics

- Typical users (people who want to manage their mental health)
- Developers (programmers who want to change an aspect of a section)
- Safe Place programs and staff (people who will provide further, in-person, help for the typical users)

2.4 Operating Environment

- Linux
- Windows 10
- Windows 8
- Mac OS X

2.5 Design and Implementation Constraints

Serenity is developed using Java, JavaFX. It is built using IntelliJ IDEA, MongoDB, and SceneBuilder. It uses a hybrid of integrated and modular design meaning every page is separate while some are tied together.

2.6 User Documentation

- API
 - <https://rapidapi.com/minasgadalla/api/advanced-emotions-detection-advemotions/>

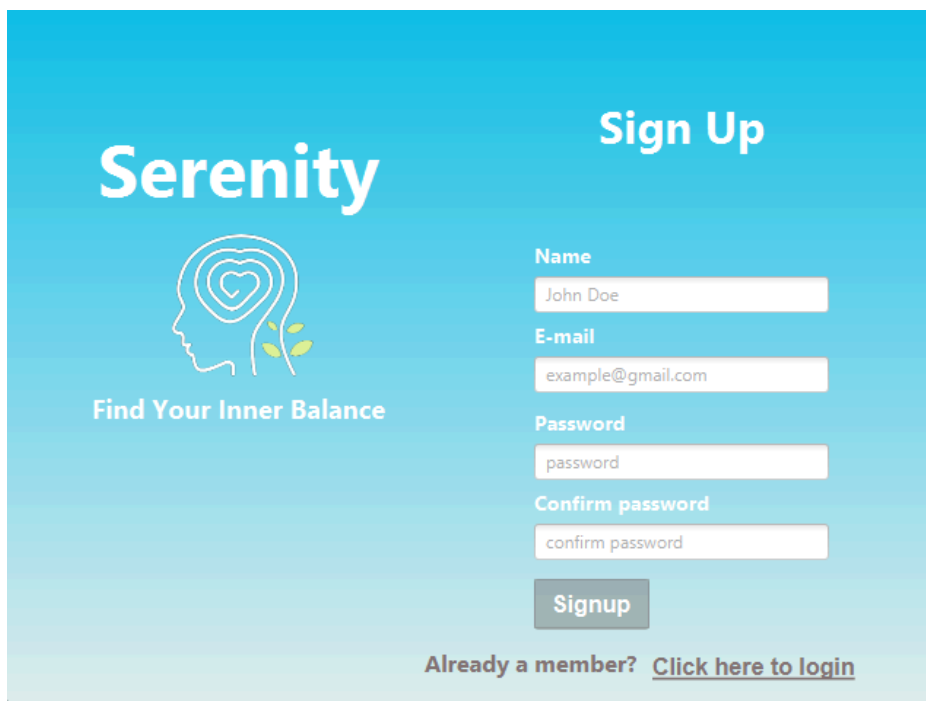
2.7 Assumptions and Dependencies

Serenity is developed in Java and requires a Java version to be installed on the user's system. Serenity will be using Java 18 in its Java code, which will be the expected version on the user's machines. This applies to Windows and Linux users. On Mac OS X, Java is bundled with the application.

3. External Interface Requirements

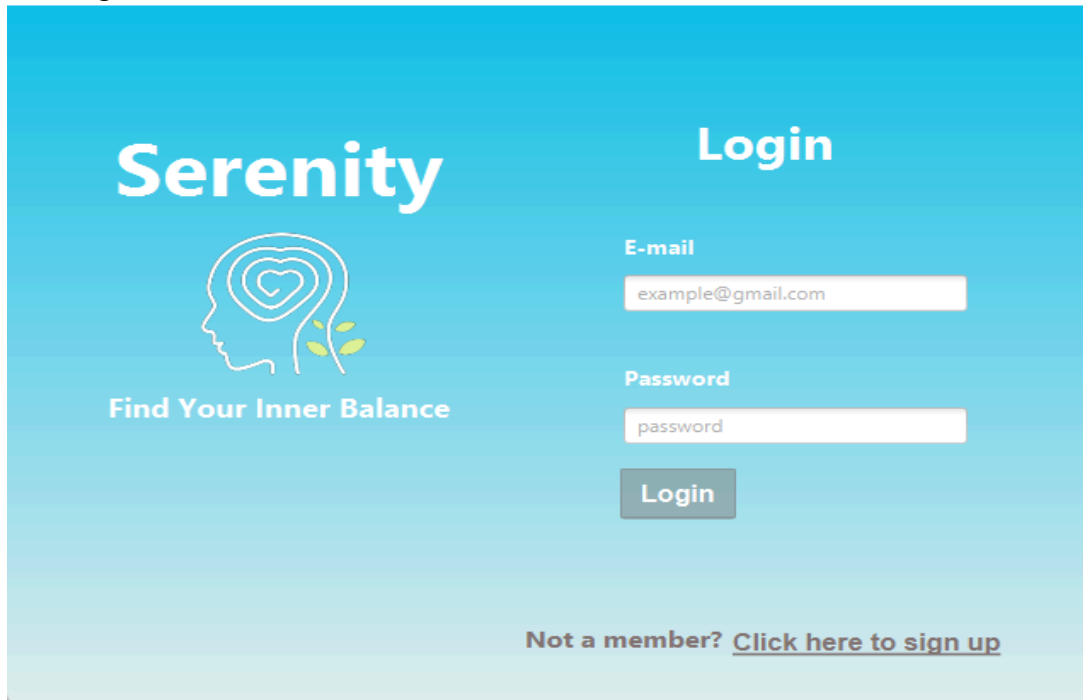
3.1 User Interfaces

1. Serenity example user sign up screen:



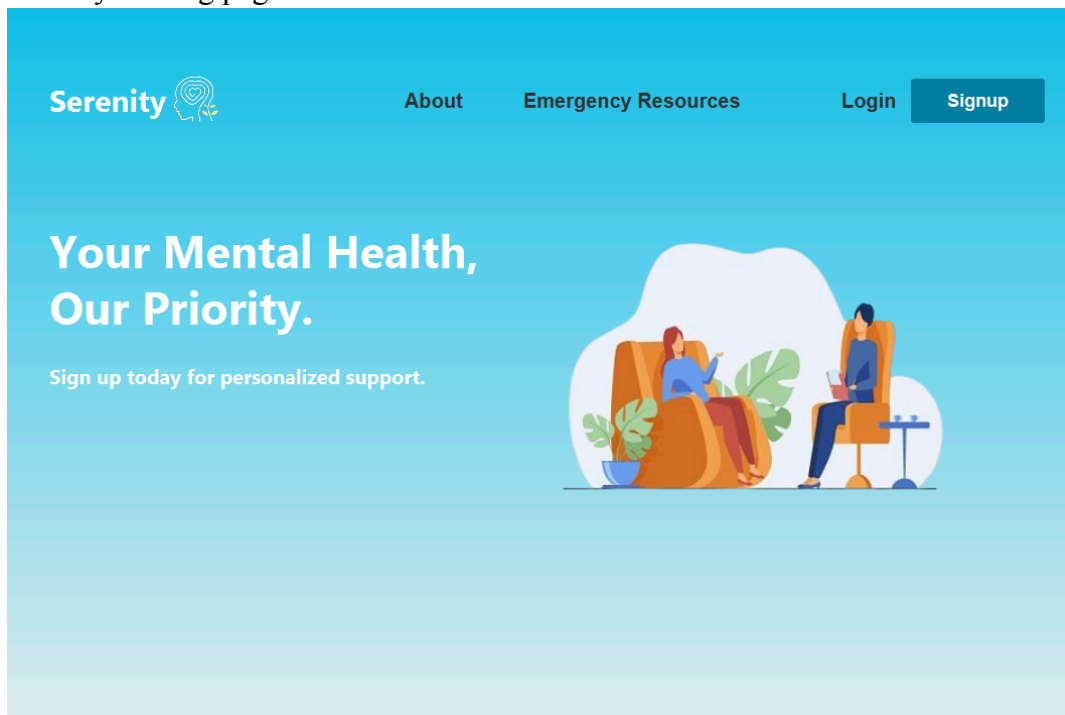
The image shows a user sign-up screen for an application named "Serenity". The background is a light blue gradient. On the left side, the word "Serenity" is written in a large, white, sans-serif font. Below it is a white line-art icon of a human head profile facing left, with a heart shape inside the head and two small green leaves on the right side. Underneath the icon, the text "Find Your Inner Balance" is written in a smaller, white, sans-serif font. On the right side, the text "Sign Up" is written in a large, white, sans-serif font. Below this, there are four input fields, each with a label above it: "Name" (with the text "John Doe" inside), "E-mail" (with the text "example@gmail.com" inside), "Password" (with the text "password" inside), and "Confirm password" (with the text "confirm password" inside). Below these fields is a grey button with the text "Signup" in white. At the bottom of the screen, the text "Already a member?" is followed by a link that says "Click here to login".

2. User login screen

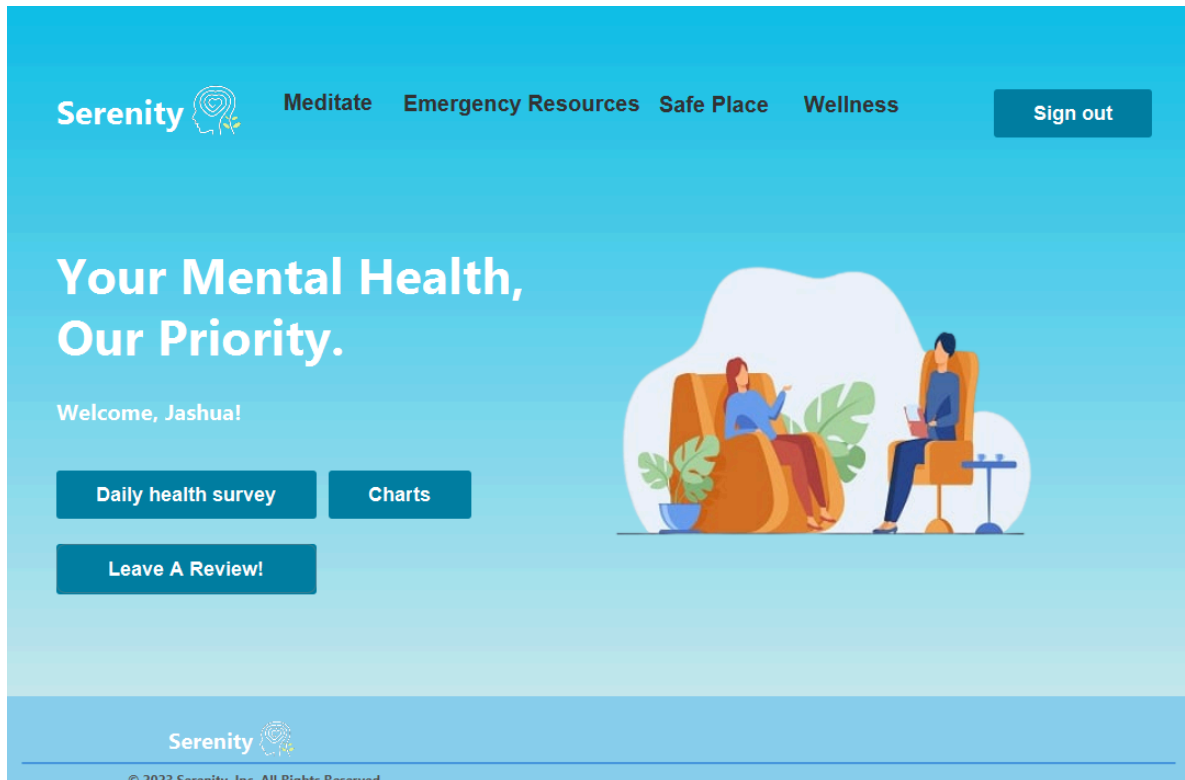


The login screen features a blue gradient background. On the left, the word "Serenity" is displayed in a large, white, sans-serif font. Below it is a white line-art icon of a human head profile with a heart inside, and the text "Find Your Inner Balance" in a smaller white font. On the right, the word "Login" is in a large, white, sans-serif font. Below it are two white input fields: the first is labeled "E-mail" and contains the text "example@gmail.com"; the second is labeled "Password" and contains the text "password". A grey "Login" button is positioned below the password field. At the bottom right, the text "Not a member? [Click here to sign up](#)" is displayed in white.

3. Serenity landing page:



4. User Home



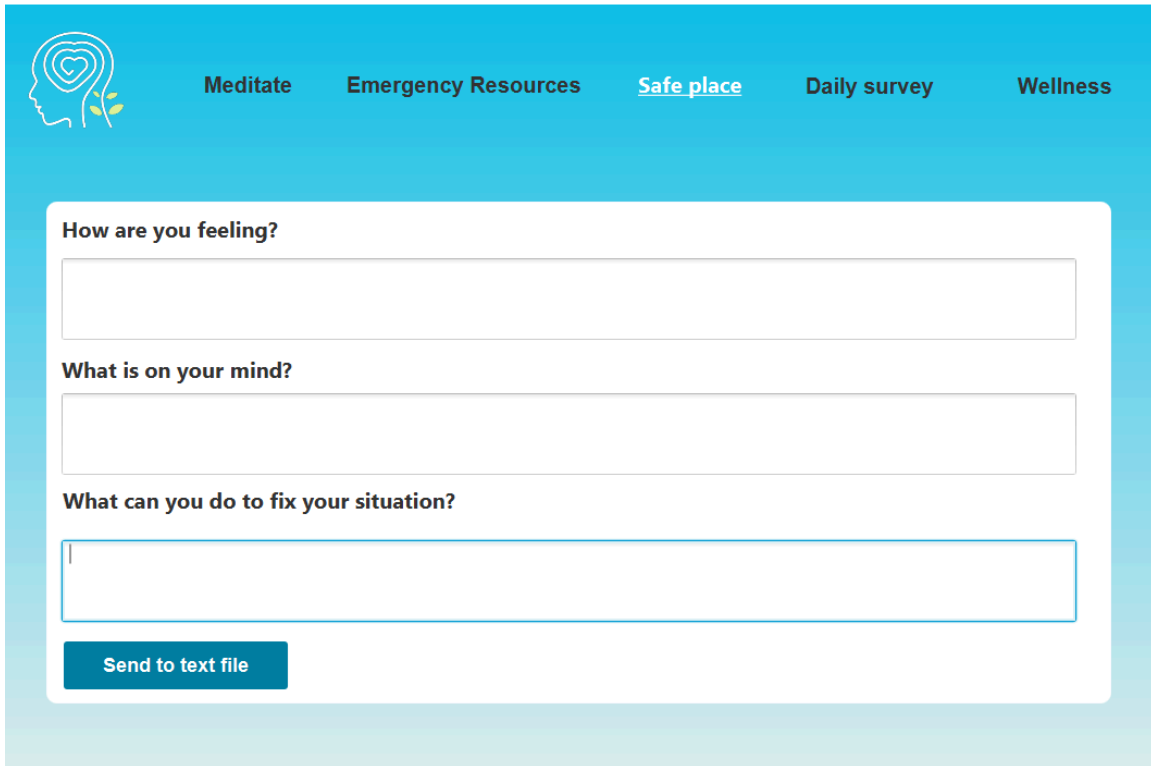
5. The daily survey is a mental health checkup form/quiz to be plotted in a graph for them to be able to view their mental health progression over time.

The screenshot shows the Serenity daily survey form. The header features the Serenity logo (a stylized head with a heart) and navigation links: Meditate, Emergency Resources, Safe Place, Daily survey, and Wellness. The form contains the following questions and input fields:

- How would you describe your emotional state?
- How well did you sleep last night?
- What best describes your energy level today?
- Did you practice any relaxation or self-care techniques today?
- What is your outlook for the rest of the day?
- Please enter today's date

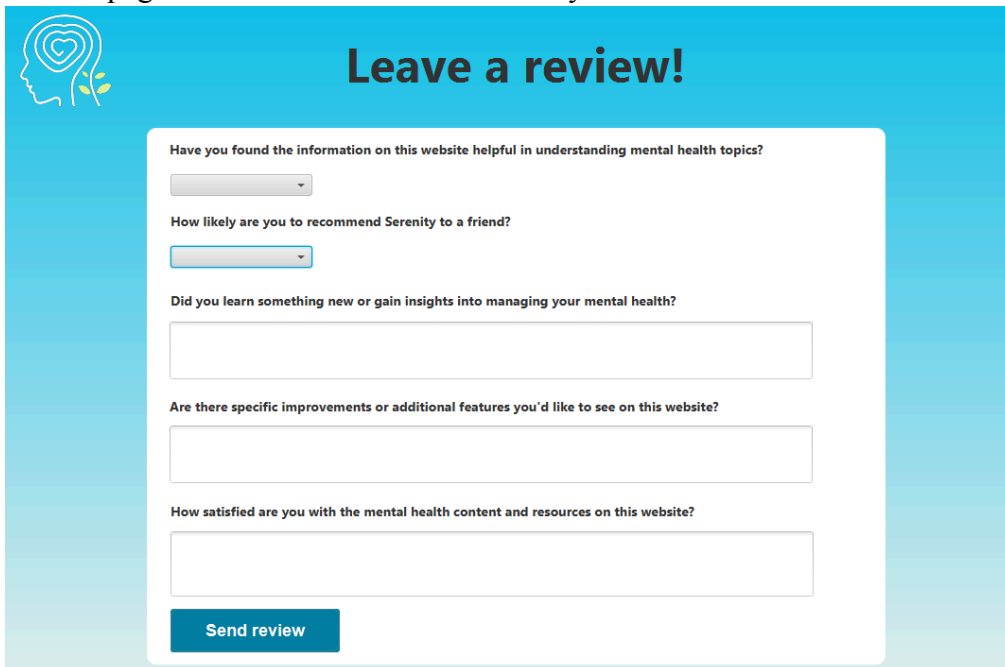
At the bottom of the form is a "Submit survey" button.

6. This is the safe-place page where users would be able to vent what is on their minds. The data will be captured but not able to be seen by developers (us) but saved on their local computer as a text file once they hit “Save to text file”.




The image shows a web form titled "Safe place" with a blue header. The header contains a logo of a head with a heart and the text "Meditate", "Emergency Resources", "Safe place", "Daily survey", and "Wellness". The form has three text input fields with the following labels: "How are you feeling?", "What is on your mind?", and "What can you do to fix your situation?". Below the third field is a blue button labeled "Send to text file".

7. Review page: allows users to review Serenity



The image shows a web form titled "Leave a review!" with a blue header. The header contains a logo of a head with a heart. The form has five sections, each with a label and a text input field or a dropdown menu: "Have you found the information on this website helpful in understanding mental health topics?", "How likely are you to recommend Serenity to a friend?", "Did you learn something new or gain insights into managing your mental health?", "Are there specific improvements or additional features you'd like to see on this website?", and "How satisfied are you with the mental health content and resources on this website?". Below the last section is a blue button labeled "Send review".

8. Emergency Resources




Meditate Emergency Resources Safe Place Daily survey Wellness

Emergency Assistance: 911

<u>Hotlines:</u>	<u>Phone Numbers:</u>
-National Suicide Prevention Lifeline.	988
-NYC WELL:	1-888-NYC-WELL
-Domestic Violence:	1-800-942-6906
-OASAS HOPEline	1-877-8-HOPENY

9. Wellness Tips



Meditate Emergency Resources Safe Place Daily Survey Wellness

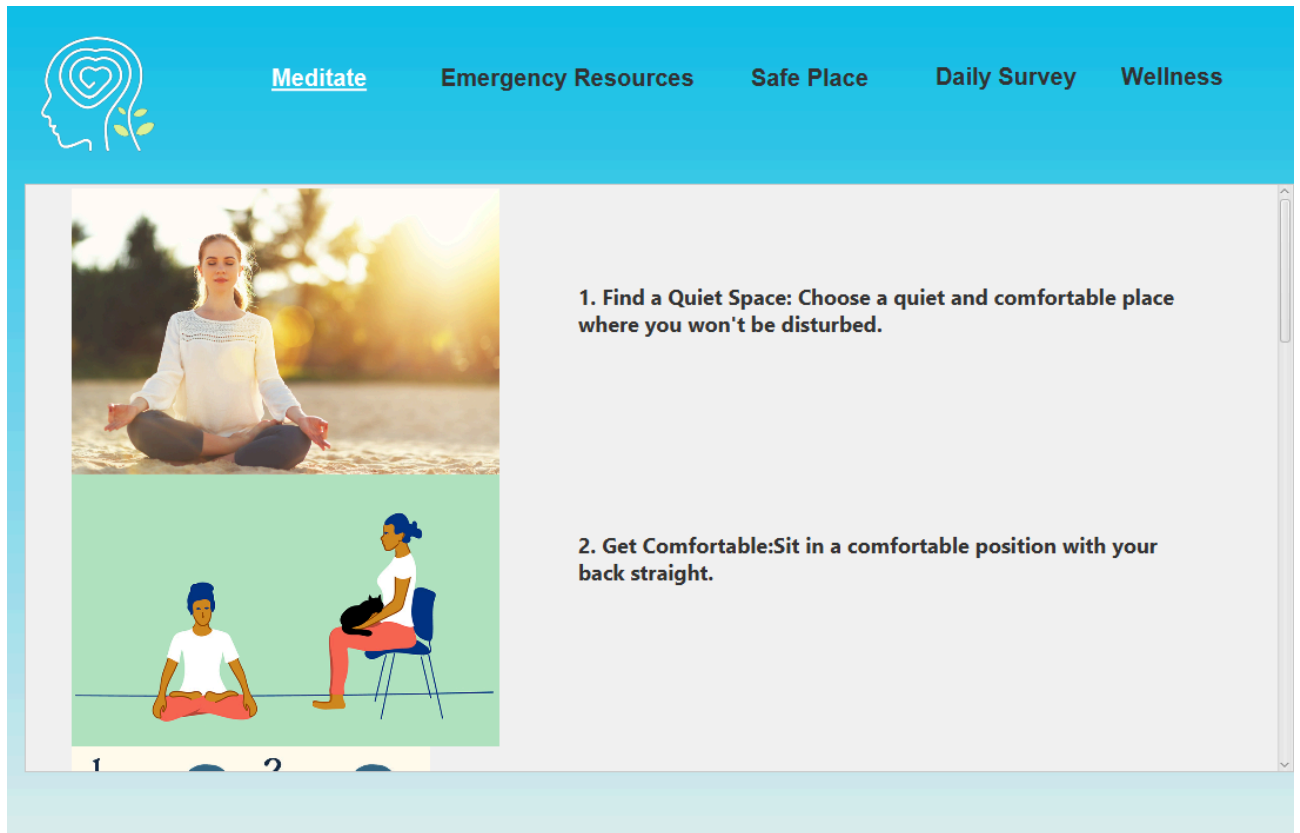
Prioritize Sleep: Aim for 7-9 hours of quality sleep each night, establish a bedtime routine, and create a comfortable sleep environment.

Stay Hydrated: Drink plenty of water throughout the day to support overall health and maintain proper bodily functions.

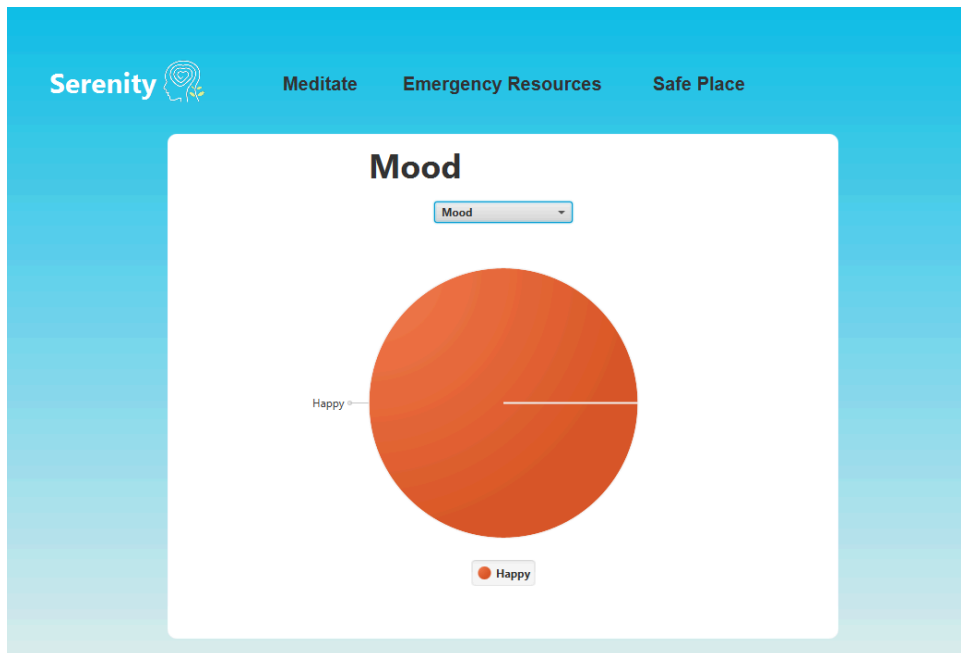
Balanced Nutrition: Consume a well-rounded diet with fruits, vegetables, whole grains, lean proteins, and healthy fats. Limit processed foods, sugar, and excessive caffeine intake.

Regular Exercise: Incorporate at least 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity exercise per week into your routine.

10. Meditate



11. Charts



3.2 Hardware Interfaces

The minimum hardware requirement for Serenity is to simply have a machine that can run a Java IDE. Serenity will not be a large-scale application, nor overly complex, thus it will not be strenuous on any machine's hardware.

3.3 Software Interfaces

Serenity requires Java to be installed on the system, preferably Java 21 as that is the current iteration of Java and it is the version the application is being developed on. Additionally, JavaFX and SceneBuilder must be installed as well.

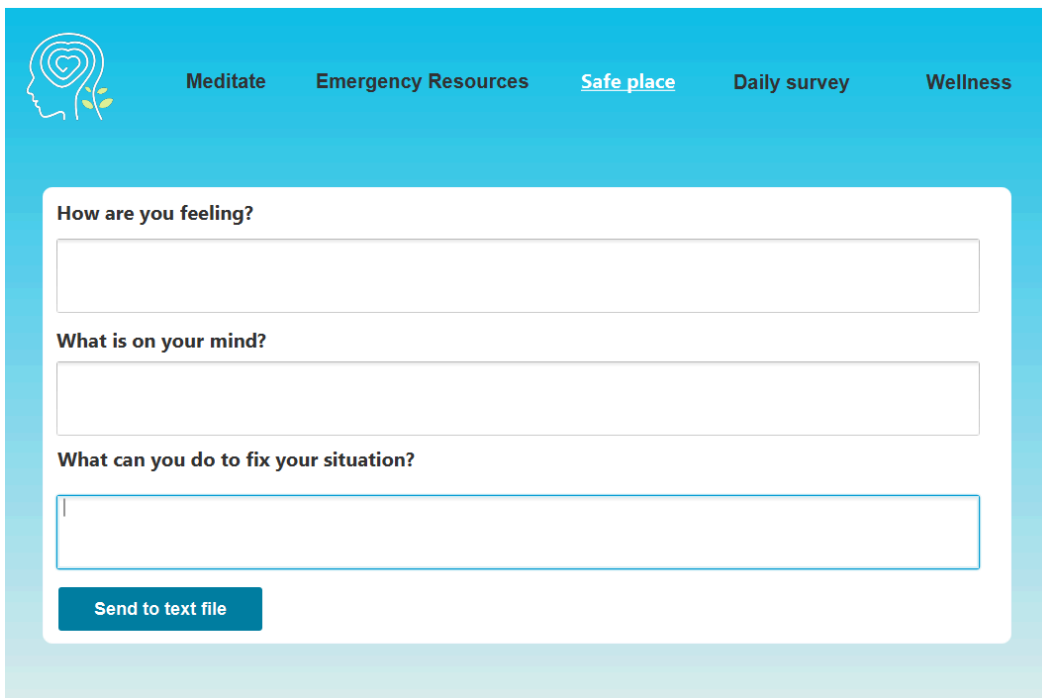
3.4 Communications Interfaces

Serenity will require an internet connection to interact with the MongoDB database, plus some API components.

4. System Features

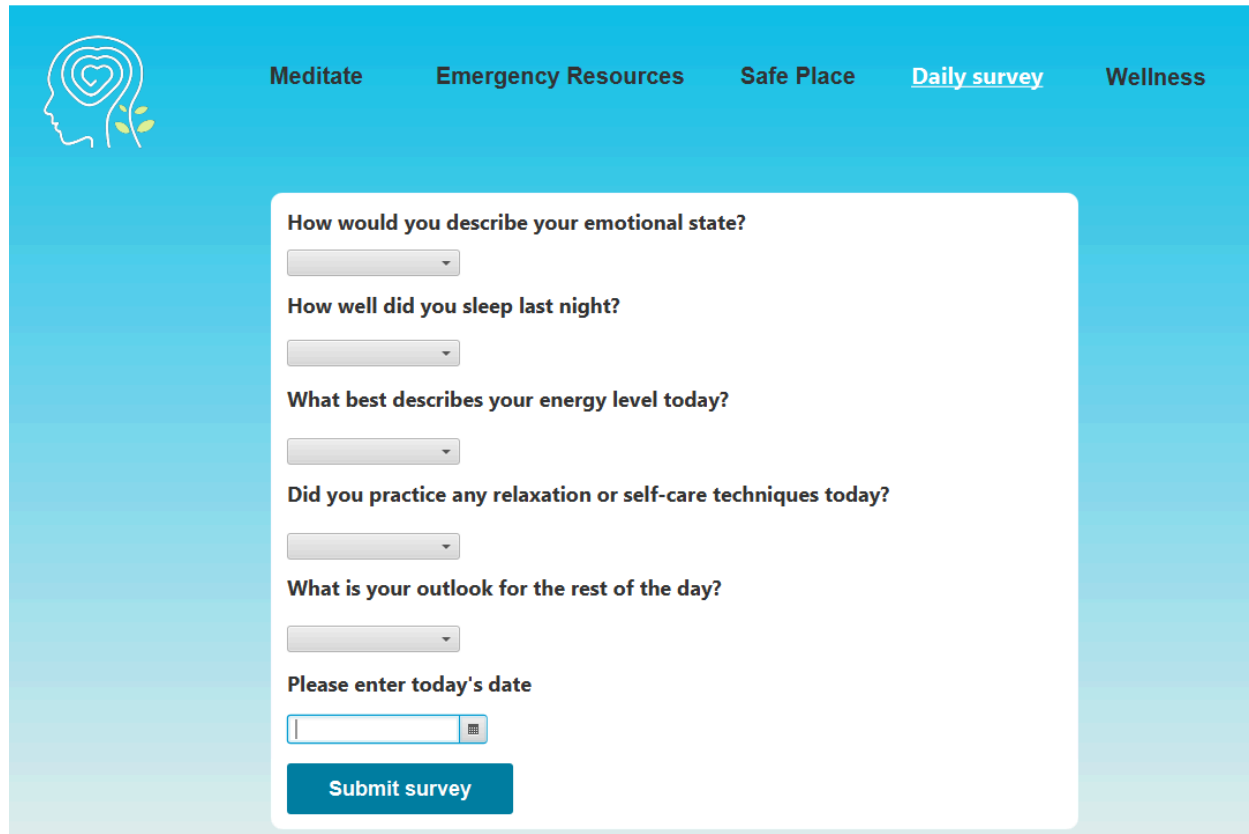
This section demonstrates Serenity's features and explains how they can be used.

4.1 Safe Place: A form that asks users to talk about anything on their mind and to submit it as a diary text file to their local machine. **How to use:** The user would click on the drop-down box for the first question and the other two accept written input from the user. When the user is done with their responses, they would click "submit to diary" at the bottom of the page to have their response saved.



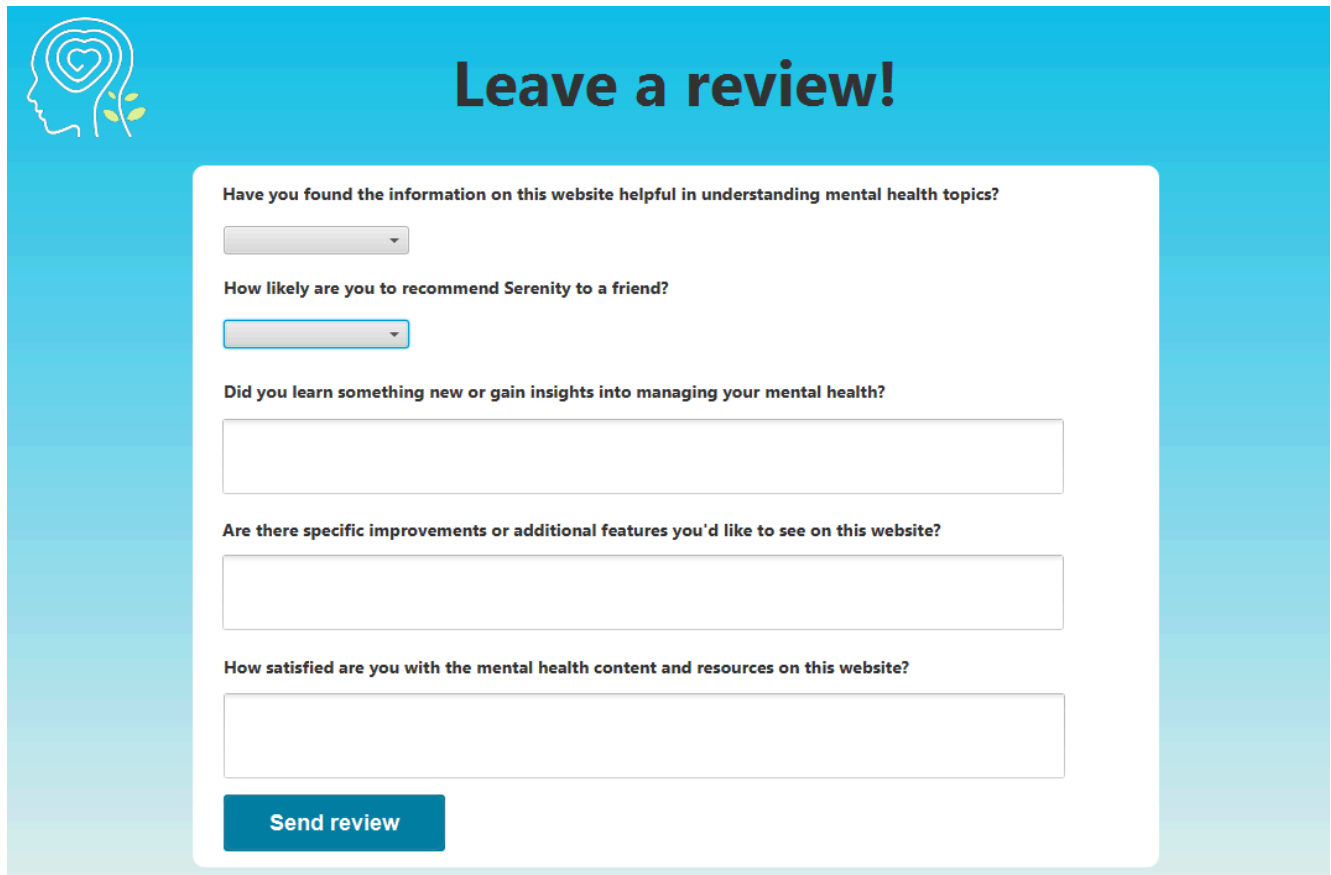
The screenshot shows the 'Safe place' form within a web application. The header is blue with a logo on the left and navigation links: 'Meditate', 'Emergency Resources', 'Safe place' (underlined), 'Daily survey', and 'Wellness'. The form itself is white with a light blue border. It contains three text input fields with the following labels: 'How are you feeling?', 'What is on your mind?', and 'What can you do to fix your situation?'. At the bottom of the form is a blue button labeled 'Send to text file'.

4.2 Self Assessment: A simple quiz that allows users to think about their feelings towards themselves when they login to their accounts. **How to use:** Users would click on the dropdown for each section and input their response. Once finished, they would click on “submit survey” to submit their data to our database. Once the data is in the database, it will be reflected in our charts.



The screenshot displays the 'Daily survey' form within a web application. The header is a solid blue bar containing a logo on the left (a white outline of a head with a heart inside) and five navigation links: 'Meditate', 'Emergency Resources', 'Safe Place', 'Daily survey' (which is underlined and highlighted in white), and 'Wellness'. The survey form itself is a white rectangular box with a light blue border. It contains six questions, each followed by a dropdown menu: 'How would you describe your emotional state?', 'How well did you sleep last night?', 'What best describes your energy level today?', 'Did you practice any relaxation or self-care techniques today?', and 'What is your outlook for the rest of the day?'. The final question is 'Please enter today's date', which is followed by a date input field with a calendar icon. At the bottom of the form is a blue button with the text 'Submit survey'.

4.3 Review: The form allows users to leave reviews about Serenity. **How to use:** Users would use the drop-down boxes for the first two questions and then write their answers in the textboxes for the other three questions. Once finished, they would click on “Send Review” to send their answers to our database.



The form is titled "Leave a review!" and features a logo of a head with a heart inside. It contains five questions with corresponding input fields and a "Send review" button.

Leave a review!

Have you found the information on this website helpful in understanding mental health topics?

How likely are you to recommend Serenity to a friend?

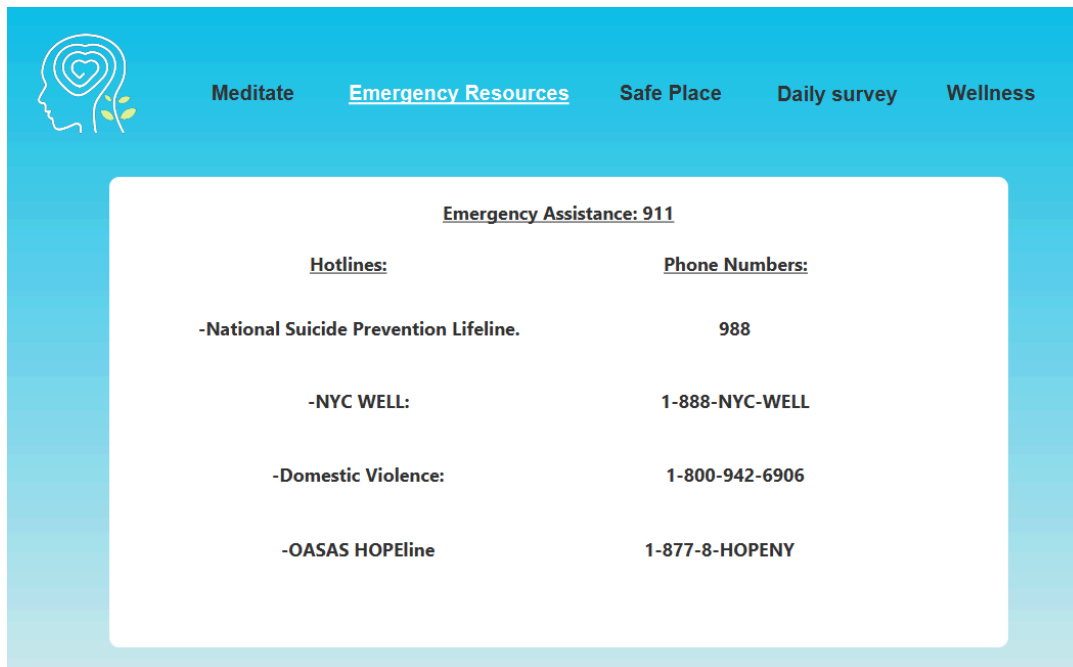
Did you learn something new or gain insights into managing your mental health?

Are there specific improvements or additional features you'd like to see on this website?

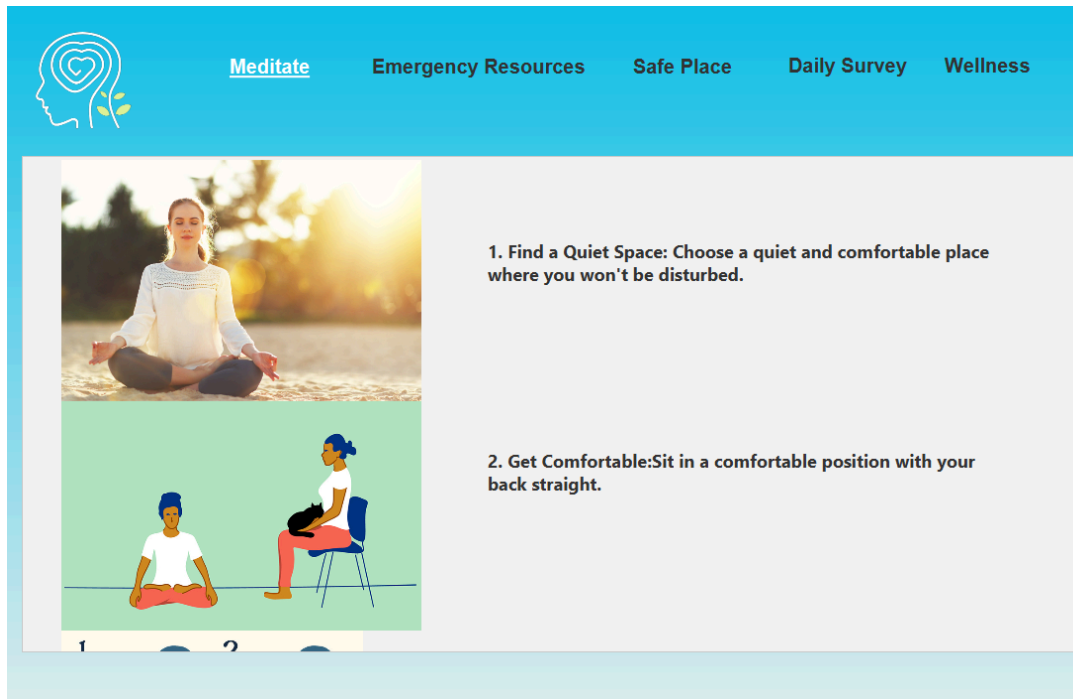
How satisfied are you with the mental health content and resources on this website?

Send review

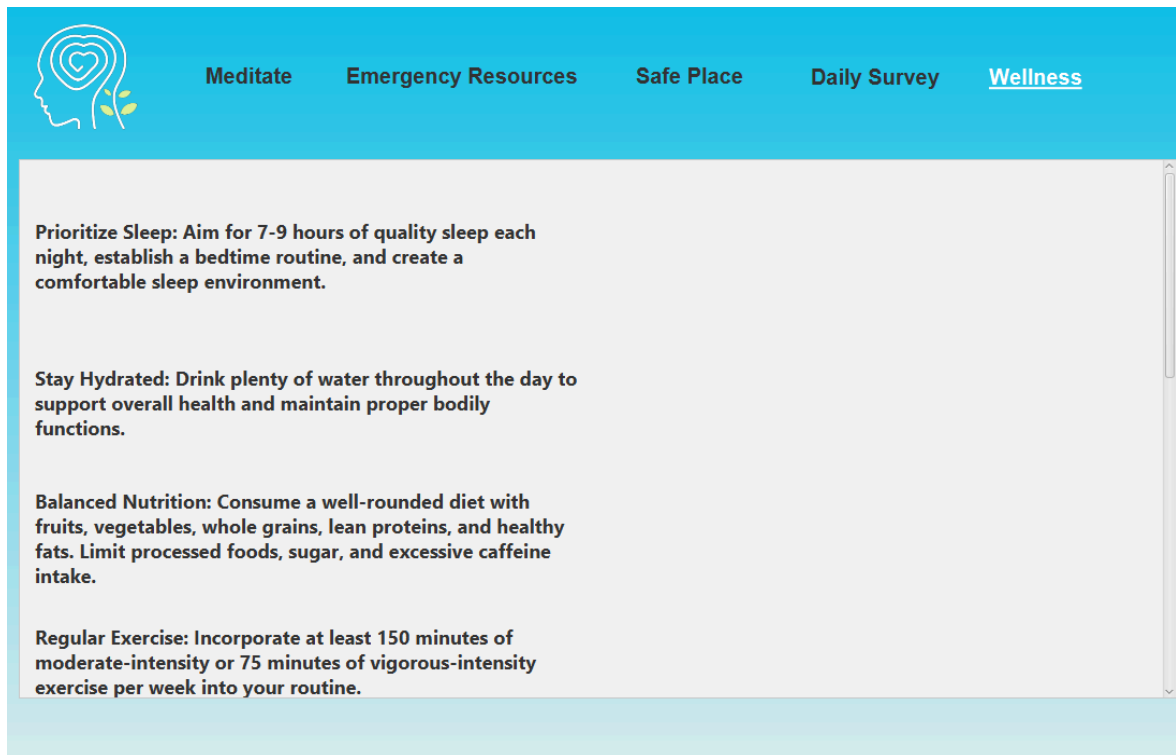
4.4 Emergency Resources



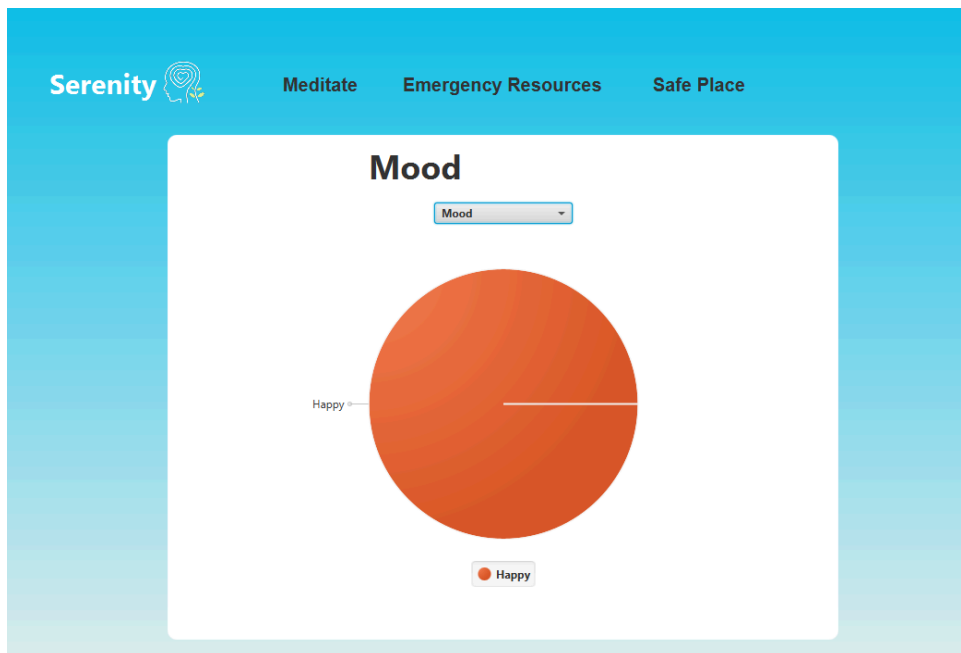
4.5 Meditate: This page allows users to view a very simple step-by-step guide on how to meditate. **How to use:** Scroll down to read the steps. At the bottom of the page is a visual to aid in more detail on how to meditate.



4.6 Wellness Tips: This page allows users to view wellness tips. **How to use:** Scroll as you read each wellness tip.



4.7 Chart: Allows users to see their stats about previous and current data from the daily survey. **How to use:** Click on “charts” in userhome.



5. Other Nonfunctional Requirements

5.1 Performance Requirements

We need the database to be read and written in a different background thread than our main thread to ensure our main page and the user experience aren't hindered by the loading and uploading phases of the program data.

5.2 Safety Requirements

We need to ensure that the users are not exposed to any sensitive information such as harmful health information that could mislead them in their journey towards positive health.

- Legal and Ethical Guidelines:
 - Observe the moral and legal principles that govern the provision of mental health care, such as the obligation to disclose damage, informed consent, and confidentiality.
- Data Retention and Deletion:
 - Establish data retention guidelines and provide users the option to cancel their accounts and the data they are associated with.
- Emergency Response Protocols
 - Implement procedures for dealing with emergencies and offering users in need of assistance right away access to crisis hotlines or nearby emergency agencies.

5.3 Security Requirements

User data is to be stored and only available to the Safe Place.

- Data such as name, age, phone number, and address. Is to be protected from public access.

5.4 Software Quality Attributes

The program functionality should be easy and fast to learn, an average user should be able to use the main function within the first use of the application. The program should be welcoming to every user by having a soft simple theme to ensure the best usability from the users-end. It should be available at all times for the user.

5.5 Business Rules

- Data security and user privacy:
 - Establish explicit procedures on how user data is gathered, stored, and shared, and make sure that data protection requirements (such as GDPR and HIPAA) are strictly followed.
 - To secure sensitive user data, put strong encryption and security measures in place.

- User authentication and authorization
 - Secure user authentication procedures should be used to guarantee that only authorized users have access to the app and the data it contains.
- User Support and Engagement:
 - Users should have access to clear instructions on how to use the app and contact assistance when necessary.
 - Include elements that promote using the app and good mental health behaviors.
- Crisis Resources:
 - Give users who are in serious distress quick access to crisis hotlines and resources.
- Continuous Improvement:
 - Based on user input and industry best practices, evaluate and update the app's features, content, and user experience regularly.

6. Other Requirements

The database we will be using is MongoDB and the requirements for the database are listed below.

- Establish data retention guidelines to make sure that information is kept just as long as is required and is safely removed when no longer required.
- As our website develops or if we decide to switch to a different database system, make plans for data migration and updates.
- For quick data retrieval, optimize database queries and indexes.
- As the website expands, we are designing our database to be scalable.
- Gather and save user comments and survey results to enhance our information gathering.
- Ensure the safety of user profiles that contain personal data (name, contact information), medical information, and any consent forms. To protect user data, make sure to take adequate security measures.

Appendix A: Glossary

- Data retention: keeping data stored in the database but developers are not allowed to see user sensitive data
- User action: any action, such as clicking a button, a user can do on the webpages
- Mental Health Website: The digital platform designed to provide information, resources, and support for individuals seeking assistance with mental health concerns.
- User: Individuals who access and interact with the mental health website, including those seeking help, mental health professionals, and website administrators.
- User Authentication: The process of verifying the identity of users through login credentials, often including usernames and passwords.
- User Profile: A personalized account for each user, where they can manage their preferences, track progress, and access personalized content.
- User Privacy and Security: Personal information that will be kept private only to the user registered.

- Mental Health Resources: Information, articles, videos, and tools designed to educate and support users in managing their mental health.
- Crisis Support: Emergency services and contact information for users experiencing severe mental health crises.
- Self-Assessment Tools: Interactive features that enable users to evaluate their mental health status, often through questionnaires or quizzes.
- User Feedback: Input, comments, and suggestions from users regarding their experiences and needs on the website.
- Accessibility: The website's design and features are inclusive and accessible to users with disabilities, such as visual or auditory impairments.
- Analytics: Tools and metrics used to track user behavior, traffic patterns, and website performance, often to make data-driven improvements.
- Responsive Design: A design approach that adapts the website's layout and content to provide a seamless experience on different screen sizes and devices.
- Feedback Surveys: Structured questionnaires or forms provided to users to gather their opinions and feedback on their experiences with the website.
- Homepage: The main landing page of the website, typically featuring key information, resources, and navigation options.
- Knowledge Base: A repository of articles, FAQs, and resources that provide in-depth information on mental health topics and common questions.

Appendix B: Analysis Models

- User Surveys and Feedback: Collect user feedback through surveys or feedback forms to assess the quality and relevance of the content.
- Assessment Tool Usage: Analyze how many users are using mental health assessment tools, what results they receive, and whether they take recommended actions.
- Emergency Contact Usage: Track whether users are accessing emergency contact information, crisis hotlines, or chat support in times of need.
- Assess the security measures and data privacy policies in place to ensure that user data is protected and confidentiality is maintained.

Appendix C: To Be Determined List

- https://www.linkedin.com/pulse/uxui-design-mental-health-beryl-mudeizi/?trk=article-ssr-frontend-pulse_more-articles_related-content-card
- <https://www.nimh.nih.gov/>