**myJournal: Mental Health Tracker**

Software Requirements Specification (SRS)

*Team 5*

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# Version History

| Version | Date | Author(s) | Change Comments |
| --- | --- | --- | --- |
| 1.0 | 2/19/2024 | Matt  Daniel  Jade | Added system requirements, system constraints, and requirements modeling. |
| 1.1 | 4/28/2024 | Jade | Made edits as suggested in professor/TA feedback |
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### System Requirements

#### Functional Requirements

##### Login

| Title | Login |
| --- | --- |
| Description | Users should be able to securely log in to the web application using their registered email and password. |
| Priority | 0 |
| Precondition(s) | * The user has already registered. * The user has a valid email and password. |
| Basic Flow | 1. The user navigates to the login page. 2. The user enters their registered email in the email field. 3. The user enters their password in the password field. 4. The user clicks on the login button. 5. The system validates the user’s credentials. 6. If the credentials are valid, they are stored in the database. 7. The user is redirected to the homepage. |
| Postconditions(s) | * The user is logged in to the web application * The user can now access features. |
| Use Case Diagram | 3.1.1, 3.2.1 |

##### 

##### Dashboard

| Title | Journal |
| --- | --- |
| Description | Upon logging in, users should be presented with a visual representation of their journaling trends (e.g. the user has been feeling better or worse lately). The user is also presented the option to go to their journal, create new journal entries, and edit existing entries. |
| Priority | 3 |
| Precondition(s) | * The user must be logged in. |
| Basic Flow | 1. After logging in, user is brought to a Journal homepage. 2. On the homepage, there are options to create a new entry, edit an existing entry, or delete an entry. 3. After making a selection and performing the desired action, the user is brought back to the Journal homepage. |
| Postconditions(s) | User is now able to create a new entry, edit an existing entry, or delete an entry. |
| Use Case Diagram | 3.1.1 |

##### Register

| Title | Register |
| --- | --- |
| Description | Users should be able to register for an account using their email and a password. |
| Priority | 0 |
| Precondition(s) | * The user has a valid email address that has not been used to register an account. * The user is on the registration page. |
| Basic Flow | 1. The user navigates to the registration page. 2. The user enters their email in the email field. 3. The user enters a password in the password field. 4. The user confirms the password in the confirm password field. 5. The user clicks on the Register button. 6. The system validates the email and password. 7. If the email and password are valid, the system creates a new user account and stores relevant data in the database. 8. The system logs the user in. |
| Postconditions(s) | * A new user account is created |
| Use Case Diagram | 3.1.1, 3.2.1 |

##### 

##### Create Journal Entry

| Title | Create |
| --- | --- |
| Description | Users are creating a new entry in their myJournal. |
| Priority | 1 |
| Precondition(s) | * User has registered. * User has logged in to registered account. |
| Basic Flow | 1. After logging in, user is brought to the myJournal dashboard 2. Once the “Create entry” button is selected, the user is brought to a new empty myJournal page 3. Once the user is done with the entry, the page is saved to the myJournal database |
| Postconditions(s) | * A new myJournal entry has been created and saved to the users myJournal dashboard and the myJournal database. |
| Use Case Diagram | 3.2.1 |

##### 

##### Edit Journal Entry

| Title | Edit |
| --- | --- |
| Description | Users are editing an existing entry in their myJournal. |
| Priority | 2 |
| Precondition(s) | * User has registered. * User has logged in to a registered account. * User has previously created a myJournal entry. |
| Basic Flow | 1. After logging in, user is brought to the myJournal dashboard 2. Once the “Edit entry” button is selected, the user is brought to a list of existing myJournal pages 3. The user is then prompted to select which page they want to edit 4. After selecting the entry, the user is brought to the entry page where they can make their edits 5. Once the user is done with their edits, the page is saved to the myJournal database |
| Postconditions(s) | * An existing myJournal entry has been edited and saved to the user’s myJournal dashboard and the myJournal database. |
| Use Case Diagram | 3.2.1 |

##### 

##### Delete Journal Entry

| Title | Delete |
| --- | --- |
| Description | Users are deleting an existing entry from their myJournal. |
| Priority | 2 |
| Precondition(s) | * User has registered. * User has logged in to registered account. * User has previously created a myJournal entry. |
| Basic Flow | 1. After logging in, user is brought to the myJournal dashboard. 2. Once the “Delete entry” button is selected, the user is brought to a list of existing myJournal pages. 3. The user is then prompted to select which page they want to delete. 4. After selecting the entry, the user is asked to confirm the deletion of the selected page. 5. After selecting “yes” to the previous prompt, the database removes the selected page. 6. The user is brought to the dashboard with an update confirming the entry has been deleted from the myJournal. 7. If the user selects “no” to the prompt, they are brought back to the list of existing pages. |
| Postconditions(s) | * An existing myJournal entry page has been deleted from the user’s myJournal dashboard and the myJournal database. |
| Use Case Diagram | 3.2.1 |

#### 

#### Non-Functional Requirements

##### Data Encryption & Security

| Title | Data Encryption & Security Protocols |
| --- | --- |
| Description | In order to comply with federal, state and local regulations pertaining to the tracking and managing of health data, all client data must be properly encrypted and secured. In addition, all user information, including login information, must be properly safeguarded by employing current best practices in the cybersecurity field. |
| Priority | 1 |
| Applicable FR(s) | Applicable to user profile data (collected in 1.1.3 and accessed for verification in 1.1.1) and journal data (1.1.4, 1.1.5, 1.1.6). All evolutionary requirements must comply with this non-functional requirement. |

### System Constraints

#### Tool Constraints

##### Development Tools

| Title | Development tools |
| --- | --- |
| Description | The development of the application may be constrained by tools used, such as specific IDEs, libraries, or frameworks. The Django API will be employed as the primary basis for the framework of myJournal. Native phone applications will be developed using Xcode (iOS) and the Android SDK (Android) and will employ the appropriate libraries from the Django API. |
| Priority | 0 |

##### Version Control System

| Title | Version Control System |
| --- | --- |
| Description | The development team must use GitHub to manage code versions and track changes. |
| Priority | 0 |

#### Language Constraints

##### Programming Language

| Title | Programming language |
| --- | --- |
| Description | The web application will be developed using the Django API, which is Python-based. The native applications will be developed using the Swift (iOS) and Kotlin (Android) programming languages. |
| Priority | 0 |

#### Platform Constraints

##### Operating System Compatibility

| Title | Operating System Compatibility |
| --- | --- |
| Description | The web application should be compatible with all major operating systems. |
| Priority | 0 |

#### Hardware Constraints

##### Processing Power

| Title | Adequate Processing Power |
| --- | --- |
| Description | The device should have sufficient processing power to run the application smoothly. The native applications should be fully functional without undue lag or input delay on all currently-supported iOS and Android devices. |
| Priority | 3 |

#### Network Constraints

##### Network Speed and Stability

| Title | Network Speed and Stability |
| --- | --- |
| Description | Web apps are reliant on the internet; therefore, internet speed and reliability of connection must be taken into consideration for accessibility. |
| Priority | 2 |

#### Deployment Constraints

##### Hosting Environment

| Title | Hosting Environment |
| --- | --- |
| Description | The web application requires a reliable hosting environment that can handle the expected user load. |
| Priority | 0 |

##### Database Management

| Title | Database Management |
| --- | --- |
| Description | The application requires a robust database management system to store and manage user data securely. This database management system must be compliant with all federal, state and local laws and regulations pertaining to the handling of health data. |
| Priority | 0 |

#### Transition & Support Constraints

##### Technical Support

| Title | Technical Support |
| --- | --- |
| Description | Ongoing technical support should be available to assist users and address any issues. |
| Priority | 1 |

##### 

##### Software Updates

| Title | Software Updates |
| --- | --- |
| Description | Regular software updates will be needed to fix bugs, add new features, and improve security. |
| Priority | 1 |

##### Documentation

| Title | Documentation |
| --- | --- |
| Description | Comprehensive documentation should be available to help users understand the application. |
| Priority | 3 |

#### Budget & Schedule Constraints

##### Team Member Availability

| Title | Team Member Availability |
| --- | --- |
| Description | As students, our team members might have different schedules, which could affect when we can work on the project. |
| Priority | 2 |

##### Academic Calendar

| Title | Academic Calendar and Deadlines |
| --- | --- |
| Description | Due to the academic calendar and course deadlines, this project must progress according to the specific dates. |
| Priority | 0 |

##### Budget Constraint

| Title | Budget of Tools and Software |
| --- | --- |
| Description | As college students, mostly free/low cost software and tools must be used. |
| Priority | 2 |

#### Miscellaneous Constraints

##### Privacy

| Title | Privacy of Data |
| --- | --- |
| Description | All user data, including journal entries and personal health information, must be stored securely. Handling of health data must comply with all relevant laws and regulations. |
| Priority | 0 |

### Requirements Modeling

#### **Use Case Diagram**

### Evolutionary Requirements

#### Functional Requirements

##### Heart Monitor Tool

| Title | Heart Monitor |
| --- | --- |
| Description | On the mobile app, users are able to access a heart monitor tool that tracks heart rate. This requirement is evolutionary because it is not inherently necessary for basic functionality. |
| Priority | 5 |
| Precondition(s) | * User has registered. * User has logged in to a registered account. * User has connected a device that is capable of tracking heart rate (e.g. an Apple Watch). |
| Postconditions(s) | User is shown their current heart rate and tracked history of heart rate. |

##### Sleep Monitoring Tool

| Title | Sleep Monitor |
| --- | --- |
| Description | Users are able to access a sleep monitoring tool that tracks hours of sleep, restfulness of sleep, and related measures. This requirement is evolutionary because it augments and expands the base functionalities of the journal rather than being a core component. |
| Priority | 4 |
| Precondition(s) | * User has registered. * User has logged in to a registered account. * User has connected a device that is capable of tracking sleep data (e.g. an Apple Watch). |
| Postconditions(s) | User is shown their sleep monitoring history, including all relevant metrics. |

##### Therapy Scheduling Support

| Title | Therapy Scheduling Support |
| --- | --- |
| Description | Users are able to schedule therapy appointments within the app. This scheduling system would employ an API from an existing therapy provider such as (but not necessarily) BetterHelp. This requirement is evolutionary because its functionality is a complement to the app’s functionality rather than directly tied to it. |
| Priority | 3 |
| Precondition(s) | * User has registered. * User has logged in to a registered account. |
| Postcondition(s) | User can schedule therapy appointments using an external API. |

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