Software Requirement Specification

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	Rick Williams

1. Project Description

The project will create a mental health app using java. This app will use a java swing gui to interface with the user. The mental health app will allow the user to create an account that is protected with a password and has a unique username. This program will enable users to log their responses to mood questions every day and store the inputted mood and dates for later use. It will allow the user to request access to the stored information, as well as create a graph for the user to look at to gauge how their mental state has changed over time. It also will have all information stored locally, and will be capable of containing up to 10 different accounts.

2. Functional Requirements

FR01	Software must enable the users to be able to register an account using an username and password.
FR02	Software must enable the users to be able to login and log out securely.
FR03	Software must enable the users to log their mood with a simple rating system (e.g., a scale from 1 to 10).
FR04	Software must enable the users to view all their stored information (e.g. name, dob, address, etc)
FR05	Software must enable the users to be able to save their appointments within the app.
FR06	Program should allow users to be able to view their log history
FR07	Program should store the user account data upon account creation/update
FR08	Program should store the date when users input their mood
FR09	Program should prompt users with questions to answer when inputting their mood (e.g, how are you feeling, when is next appointment, any information has changed)
FR10	Program should be able to print out a simple graph using java swing, that shows how their mood has fluctuated over time.

3. Non-Functional Requirements

NFR01	If the program is unresponsive for 10 seconds after input, the program will restart
NFR02	During password creation, If user inputs password that does not meet the specified password criteria, tells the user and prompt for a new inputted password

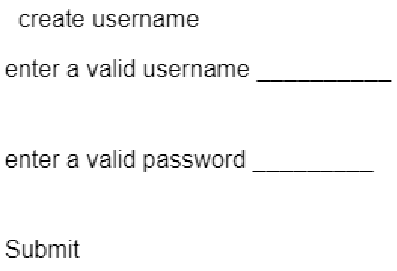
NFR03	Program will support up to 10 separate accounts.
NFR04	Program will require the system it is running on to have Java, and Java Swing installed to run correctly
NFR05	The program will require a system working Windows or MacOS terminal/command line.
FRN	During account creation, program correctly verifies all input is valid

4. Use Case Specification

*<< Select **three** functional requirements and describe them in detail using use cases.>>*

UC01 Name:	**FR01** User Registration
Description:	Create a new account within the app.
Actor:	New User
Entry condition:	Successfully create an account within the app, using a username and password.
Basic path:	**[B01] The Actor creates a new account** 1. The user navigates to the "Create Username" page. 2. The system prompts the user to enter**[PRO01]** - username - password -submit 3. The user enters a valid, unique username and password. 4. The system checks the availability of the username. **[A01][E02][BR01]** 5. The system confirms the username is available.**[A02][E03]** 6. The system checks if the password is valid**[E01][BR02]** 7. The system saves the username. 8. The system notifies the user of the successful username creation.
Alternative paths:	**[A01] User changes mind about username during process** 1. Steps 1-3 from the Basic Path. 2. Instead of submitting, the user clicks "Cancel." 3. The system asks the user to confirm the cancellation.

	4. The user confirms, and the system discards any entered data and returns the user to the previous page without creating a username. **[A02] The requested username is unavailable** 1. The user will receive a message, “The username you’ve entered is unavailable, please choose another username and try again.
Exception paths:	**[E01] Password is ineligible** 1. The user will receive a message: “The password you’ve entered is ineligible, please ensure the password is at least 12 characters long.” 2. The user will be prompted to enter a new password that meets the criteria specified. 3. If the new password is eligible, notify the user that they have registered successfully, otherwise, repeat from step 1. **[E02] The requested username is ineligible** 1. The user will receive a message: “The username you’ve entered is ineligible, please ensure the username is at least 5 characters long and uses only letters and numbers.” 2. The user will be prompted to enter another username that fits within the entrance criteria. 3. If the username is still ineligible, start from step 1. Otherwise, notify the user that their account was successfully created. **[E03] The requested username is unavailable**

<table>
<tr><td></td><td>1. The user will receive a message, “The username you’ve entered is unavailable, please choose another username and try again.</td></tr>
<tr><td><b>Business Rules:</b></td><td><b>[BR01]</b> Each username within the app should be unique.
<b>[BR02]</b> If the required fields are empty or incorrect, appropriate error messages should be displayed to the user.</td></tr>
<tr><td><b>Data description</b></td><td><table>
<tr><th>Name</th><th>Type</th><th>Length</th><th>Mask</th><th></th></tr>
<tr><td>username</td><td>String</td><td>5-15 chars</td><td><username></td><td></td></tr>
<tr><td>password</td><td>String</td><td>5-20 chars</td><td><password></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td><b>Prototype:</b></td><td><b>[PRO01]</b>
create username
enter a valid username __________
enter a valid password _________
Submit</td></tr>
</table>

UC02 Name:	User Login
Description:	Allow the actor to input their login information as a login attempt

Actor:	Returning User/Customer
Entry condition:	Successfully enter a username and password - Password must contain at least 1 special character, 1 number, 1 capitalized character, as well as a 5-20 char limit - Username must be 5-15 characters long with only letters and numbers
Basic path:	**[B01] The Actor Attempts to Login** 1. The system presents the customer welcome screen containing: **[PRO01]** - The options: --- Login --- Sign up **[A01]** --- Cancel 2. The actor selects the option Login The options: --- Confirm **[E01][E02][E03][BR01][BR02]** --- Back 3. The Actor successfully logs in and the system presents the programs home screen
Alternative paths:	**[A01] The actor selects the Sign Up/Register option** 1. Refer to steps in **[UC01]**
Exception paths:	**[E01] The wrong password is inputted** 1. The user will receive a message: “The password you entered is incorrect. Please try again” Options: - Try Again 2. The user will be prompted again to login and enter their username and password **[B01]**

<table>
<tr><td></td><td><b>[E02] The username does not match a username in the Database</b>
3. The user will receive a message: “The username you entered does not exist. Please try again”
Options:
- Try Again
4. The user will be prompted again to login and enter their username and password <b>[B01]</b>
<b>[E03] The inputted username is ineligible</b>
1. The user will receive a message: “The username you’ve entered is ineligible, please ensure the username is at least 5 characters long and uses only letters and numbers.”
Options:
- Try Again
2. The user will be prompted again to login and enter their username and password <b>[B01]</b></td></tr>
<tr><td><b>Business Rules:</b></td><td><b>[BR01]</b> If the user takes more than 10 login attempts, temporary disable their ability to login
<b>[BR02]</b> If the required fields are empty or incorrect, appropriate error messages should be displayed to the user.</td></tr>
<tr><td><b>Data description</b></td><td><table>
<tr><th>Name</th><th>Type</th><th>Length</th><th>Mask</th><th></th></tr>
<tr><td>username</td><td>String</td><td>5-15 chars</td><td><username></td><td></td></tr>
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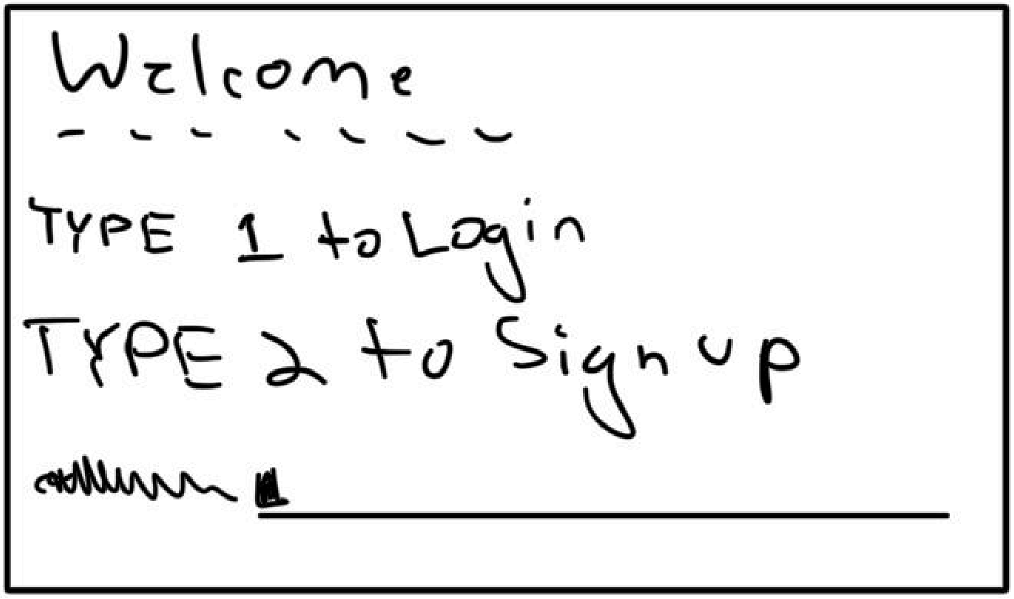
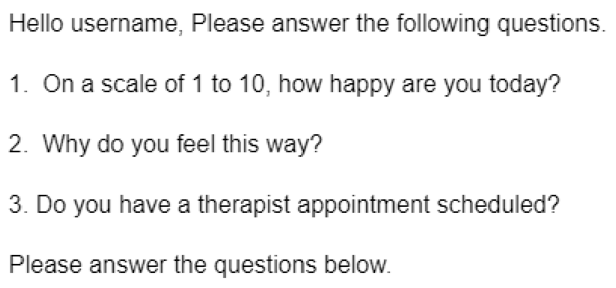
</table></td></tr>
<tr><td><b>Prototype:</b></td><td><b>[PRO01]</b></td></tr>
</table>

UC03 Name:	Users must be able to submit their moods to the program
Description:	The program will ask the user a series of questions, and the user will submit their answers to the questions
Actor:	Returning user
Entry condition:	the user must be logged into their account and have successfully navigated to the mood submission section of the app.**[UC01][UC02]**
Basic path:	1. The user runs the program 2. The user logs into their account.[**UC02]** 3. The system asks the user a. Answer Mood Questions? b. back 4. If selection a is selected, The user is prompted with questions regarding their current mood**[PRO01]** 5. The user inputs their response to all questions.**[A01][E02][BR01]** 6. The system saves the mood data along with the date and time of the entry.**[A02][BR02]** 7. The system confirms the submission is properly formatted and saved correctly.**[E01]**

Alternative paths:	**[A01] If the user does not complete all mood questions:** 1. The system notifies the user that all fields must be completed.**[BR01]** 2. The user is prompted to answer the remaining questions. 3. Once all responses are provided, the system saves the data. **[A02] If the user exits the mood submission before saving:** 1. The system asks the user to confirm exiting without saving. 2. If the user confirms, no data is saved, and the user is returned to the previous screen.
Exception paths:	**[E01] If the system cannot save the mood data due to an issue:** 1. The system displays an error message: “Unable to save your mood entry. Please try again.” 2. The user is prompted to resubmit the data. 3. If the error persists, the user is advised to reinstall the program **[E02] The answers submitted are not correctly formatted, or incorrect** 1. The user will receive a message: “the answers must be from 1 to 10”, or “the character limit is 255 characters”. The first question must be from 1 to 10, and the next two questions can not have answers more than 255 characters a. Options: b. User can select “ok”, and fix their problems 2. The user will be prompted again to answer all questions and insure the answers are correct and properly formatted **[B01][BR02]**
Business Rules:	**[BR01]** The system should validate that all required mood questions are answered before submission.

<table>
<tr><td></td><td><b>[BR02]</b> The mood data should be saved with a timestamp to track the date and time of the entry.</td></tr>
<tr><td><b>Data description</b></td><td>
<table>
<tr><th>Name</th><th>Type</th><th>Length</th><th>Mask</th><th></th></tr>
<tr><td>Mood rating</td><td>integer</td><td>1-10</td><td>Stored as number</td><td></td></tr>
<tr><td>Mood reason</td><td>string</td><td>255</td><td>Text</td><td></td></tr>
<tr><td>date/time</td><td>integer/date</td><td>10 characters</td><td>Stored as 01/01/2000</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td><b>Prototype:</b></td><td><b>[PRO01]</b>

Hello username, Please answer the following questions.
1. On a scale of 1 to 10, how happy are you today?
2. Why do you feel this way?
3. Do you have a therapist appointment scheduled?
Please answer the questions below.</td></tr>
</table>