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# 1. Introduction

The application aims to provide cognitive behavioral therapy to users through the use of meditation, analysis and education.

Your personal meditation coach and clarity consultant. Our application provides 5 core features:

1. Quizzes: Take one of three quizzes to help identify depressive or anxious mental state you may have.
2. Diary & Cue Establishment: A method of improving one's emotional awareness and identifying and creating cues for problems as well as solutions to those problems.
3. Meditation: Guided, timed and haptic meditation to help promote mindfulness and relaxation.
4. Resources: Gain convenient access to valuable SFU resources.

This application will help students improve their awareness of their mental state and promote cognitive rehabilitation through the use of CBT - ultimately improving one's overall mental health. Users with an iOS device will gain access to clinically proven methods of behavioral therapy and meditative tools.

The application delivers a CBT approach to spreading awareness of mental health issues, to assist users in managing said issues and to prevent proliferation of symptoms and disorders. After using the application for a prolonged period of time- approximately one month users should begin to gain a firm grasp of their mental and emotional health. Through the use of self-motivated logging, feedback from quizzes and regular meditation sessions, users will become more invested in their overall health, thus improving health-conscious behavior.

## **2. Intended Audience**

Anxiety and mood disorders run rampant within universities; our application is aimed towards students who are suffering from a multitude of mental disorders. Such disorders include stress, depression, PTSD, anxiety, ADHD/ADD, Depression, Eating disorders and many others.

The app has a target demographic but can also be applicable to other users wishing to make use of any other feature that the application provides.

The target demographic for the application are any students at SFU who have or currently do experience any mental health related issues and wish to utilize the methods deployed in the application to facilitate the improvement of their mental well being.

However the application is not strictly limited to just those individuals, any users who wish to make use of the meditation component of the application to relax or meditate can do so.

Any user wishing to inform themselves about any mental health related problem or ways on which to seek mental health related resources can also find that in the application.

Lastly any user hoping to establish better mental wellness using the CBT methods described in the application, such as the establishment of mental cues could also make use of the application.

### 3.Features/Functional Requirements

Function ID	Requirement Definition	User Story
<b>1.inputed_Time</b>	The function shall take a numerical input from the user and set it as a timer.	<b>As a user I would like to set a duration of time to meditate for myself.</b>
<b>2. Start</b>	The function shall begin a scheduled timer that runs every second a function called countdown().	<b>As a user I would like the countdown to begin counting down when I am ready to begin the countdown.</b>
<b>3.countdown</b>	The function shall take the Timer_Value provided to it and decrement it by 1, display that Timer_Value to a label and also invalidate the timer if Timer_Value is equal to 0.	<b>As a user I would like the countdown to decrement by 1 every second that passes in time.</b>
<b>4.Time_Slider</b>	The function shall allow the user to increment the Timer_Value variable by using a slider UI	<b>As a user I would like to increase the time I meditate for by using a slider.</b>
<b>5.music_List</b>	The function shall allow the user to choose between different playlists during meditation.	<b>As a user I would like the option to choose my own playlist to play during meditation.</b>
<b>6.stop</b>	The function shall allow the user to control the current process and halt its activity.	<b>As a user I would like to stop the meditation session, song or timer myself.</b>
<b>7.session_Type</b>	The function shall provide 3 different options for the user to choose.	<b>As a user I would like the option to choose from a selection of meditation modes.</b>
<b>8.spoken_On_Off</b>	The function shall allow the application to play sound back to the user or stop playing sound all together.	<b>As a user I would like the option of turning the application's sound off or on.</b>
<b>9.user_Session_Rating</b>	The function shall allow the user to rate the meditation session from 1-5.	<b>As a user I would like the option to rate the session I currently had in my phone.</b>
<b>10.current_step</b>	The function shall allow the user	<b>As a user I want to have the</b>

	to skip the current step in the meditation guide process.	<b>option to skip the current step in the meditation guide.</b>
<b>11.Date</b>	The function shall save the current date and tag it to each created diary.	<b>As a user I would like to know the dates of all the diaries I've taken.</b>
<b>12.current_Mood</b>	The function shall allow the user to give a 1-5 rating for their mood.	<b>As a user I would like to be able to measure my mood at any given time.</b>
<b>13.current_Post</b>	The function shall create a new post for the diary.	<b>As a user I want to be able to post a new entry into the diary.</b>
<b>14.current_Recording</b>	The function shall record any audio that the user inputs for however long they wish to.	<b>As a user I would like to record my own voice instead of having to type a diary in text.</b>
<b>15.current_Attachments</b>	The function shall allow the user to attach their own photo, video or file to that diary entry.	<b>As a user I would like to attach a file, photo or video to any diary entry on creation.</b>
<b>16.quiz_type</b>	The function shall give 3 different quiz options.	<b>As a user I would like the option to choose between the different quizzes offered for mental health analysis.</b>
<b>17.current_Quiz_Results</b>	The function shall display the results of the quiz in grade format (A,B,C etc..) to the user.	<b>As a user I would like to view my mental health analysis results.</b>
<b>18.historic_Result</b>	The function shall display previous result records.	<b>As a user I would like to view my past results from mental health analysis.</b>
<b>19.historic_Mood</b>	The function shall provide the user with previous mood results.	<b>As a user I would like to view my past results from mood</b>
<b>20.user_Selection_Begin</b>	The function shall allow the user to restrict the mental health quiz results to a specific starting date.	<b>As a user I would like to know my mental health results during a given time.</b>
<b>21.user_Selection_End</b>	The function shall allow the user to restrict the mental health quiz results to a specific end date.	<b>As a user I would like to know my mental health results during a given time.</b>
<b>22.current_Concern</b>	The function shall ask the user to input a current concern/problem in text.	<b>As a user I would like to document any current problems I'm facing.</b>
<b>23.Tags</b>	The function shall allow the user to place tags onto any concerns they've posted.	<b>As a user I would like to tag my concerns to be able to later find them easier.</b>

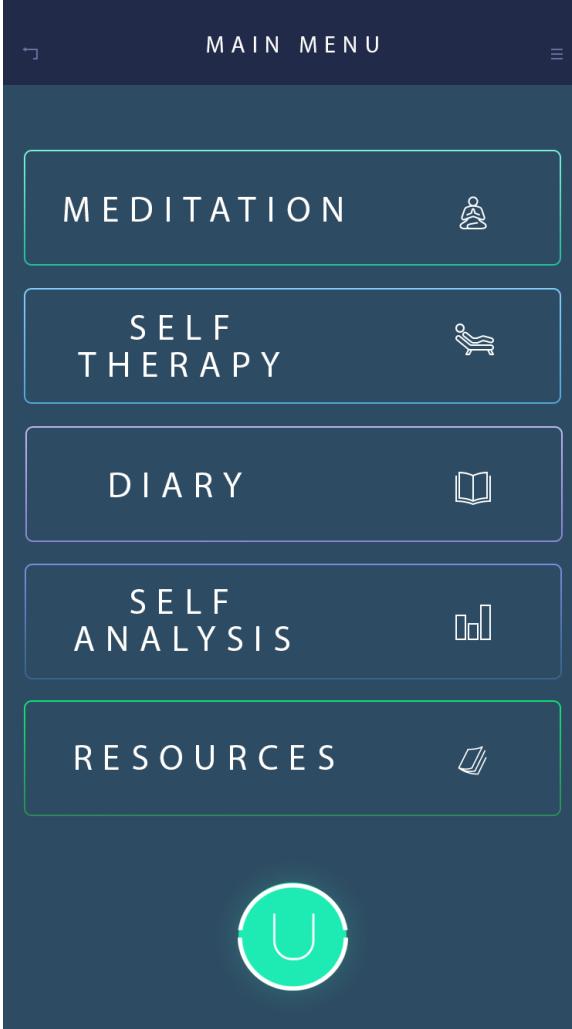
<b>24.solution</b>	The function shall take a user input as a solution to their concern.	<b>As a user I would like to be able to input my own solution to the concern or problem.</b>
<b>25.concern_Contacts</b>	The function shall display a list of contacts for the user that is relevant to the concern's tag.	<b>As a user I would like the option to be able to seek contact resources given my concern or problem.</b>
<b>26.emergency_Contacts</b>	The function shall display a list of emergency contacts for the user during an emergency.	<b>As a user in a dire situation, I would like to see contacts that I can call for assistance.</b>
<b>27.contacts_Type</b>	The function shall allow the user to choose from two types of options – emergency or great concern.	<b>As a user in a emergency, I would like the option to differentiate between something of great concern or an emergency.</b>

## 4. Non-functional Requirements

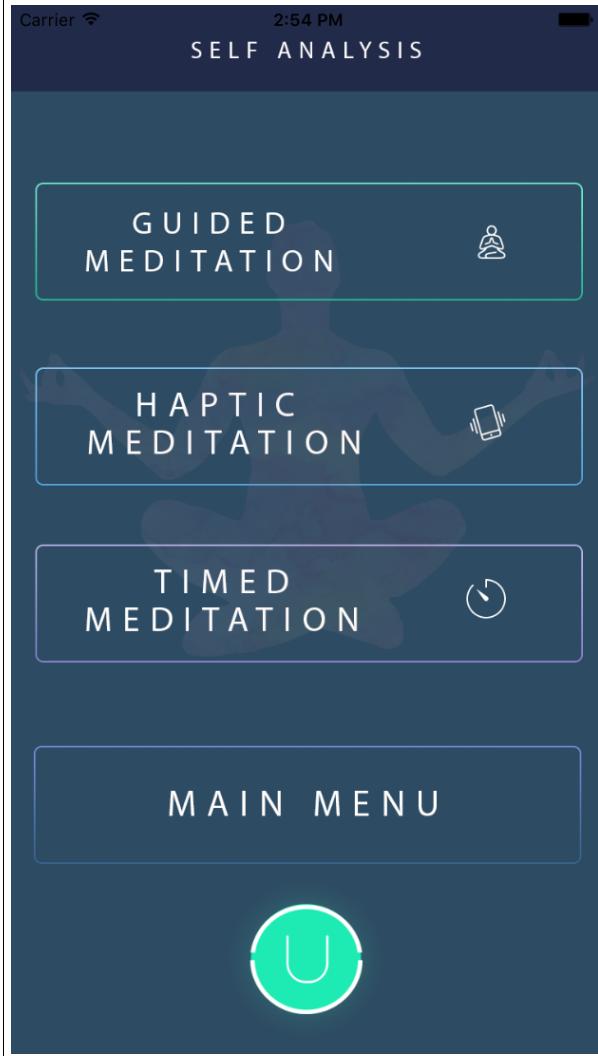
Feature	Non-Functional Requirement
<b>1. Timer Meditation</b>	User must not input a time greater than a day's duration.
<b>2. Haptic Meditation</b>	Application must not play any sounds during haptic meditation.
<b>3. Diary</b>	User must not attach very large files or anything other than a file, photo or video.
<b>4. Cue Creator</b>	User must input a solution if a concern is posted.
<b>5. General</b>	<p>Application must clear the cache upon crash. Application must not crash 95% of the time. Application must not consume more than 2% battery charge per 5 minutes. Application must restart in less than 5 seconds upon closing and reopening the application. Application must open a new page upon any selection that should open a page within 0.5 - 1 seconds. Application must have up to date resource and contact information.</p>

## 5.Tutorials / Scenarios

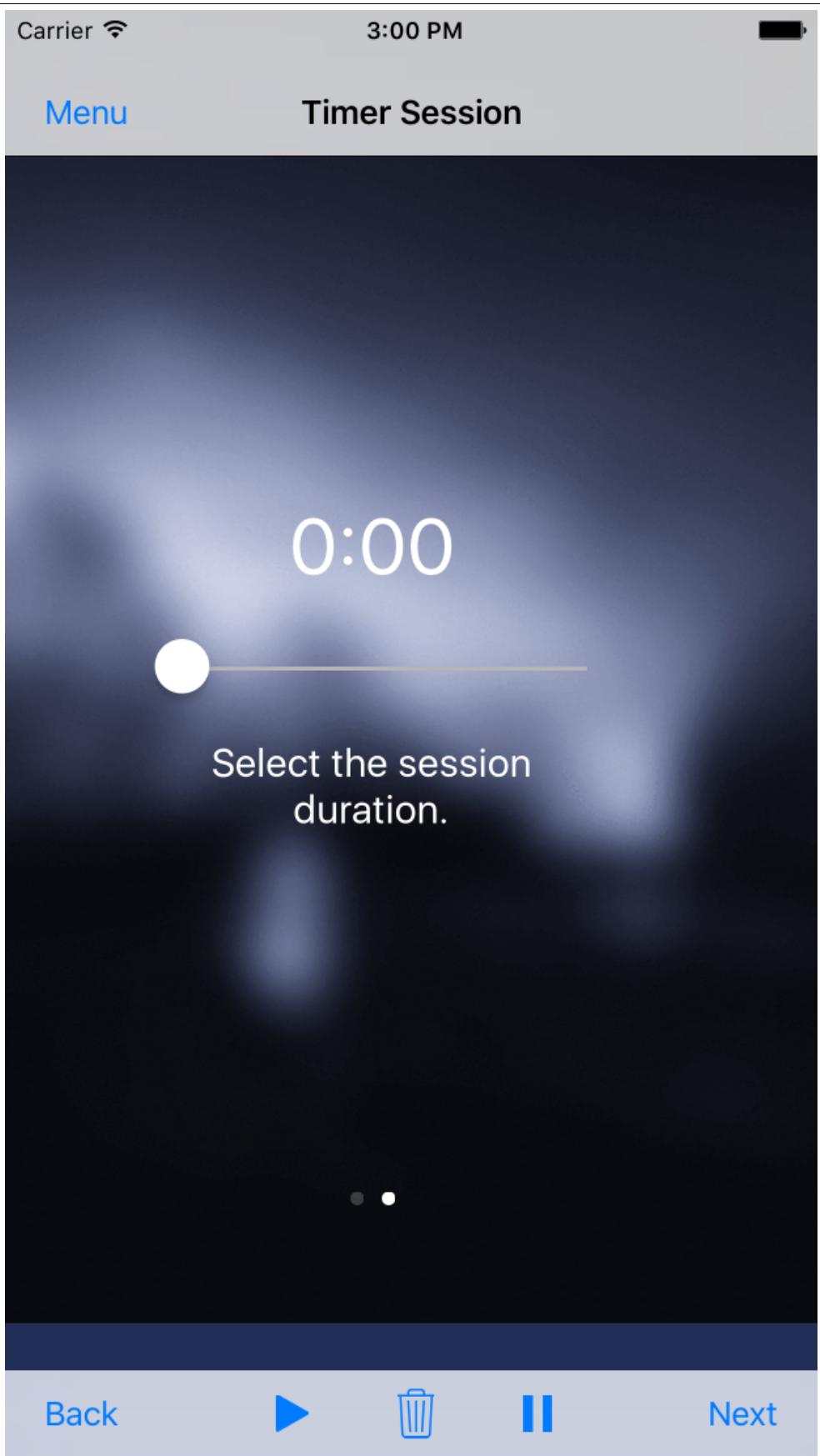
### Scenario 1 – Timed/Haptic Meditation

Description of Scenario	The user wishes to use the timer meditation option to set a duration in which they will meditate in using the application.
1. On the landing page, select Meditation.	

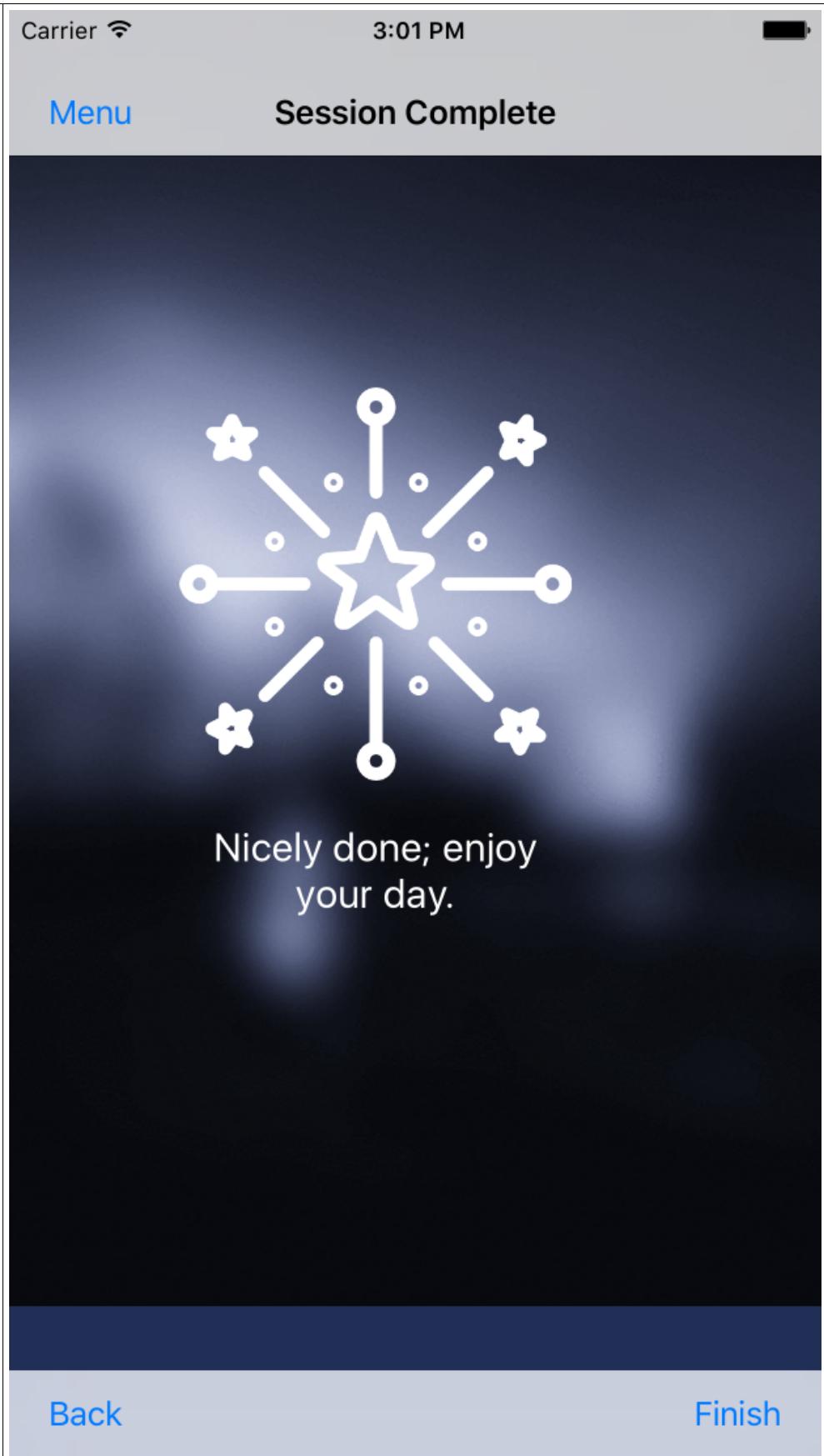
2. Select Timer  
Meditation.



3. Input a time duration and Select Go. The user will then see a central timer with the remaining time listed inside, a skip song and Stop session button.



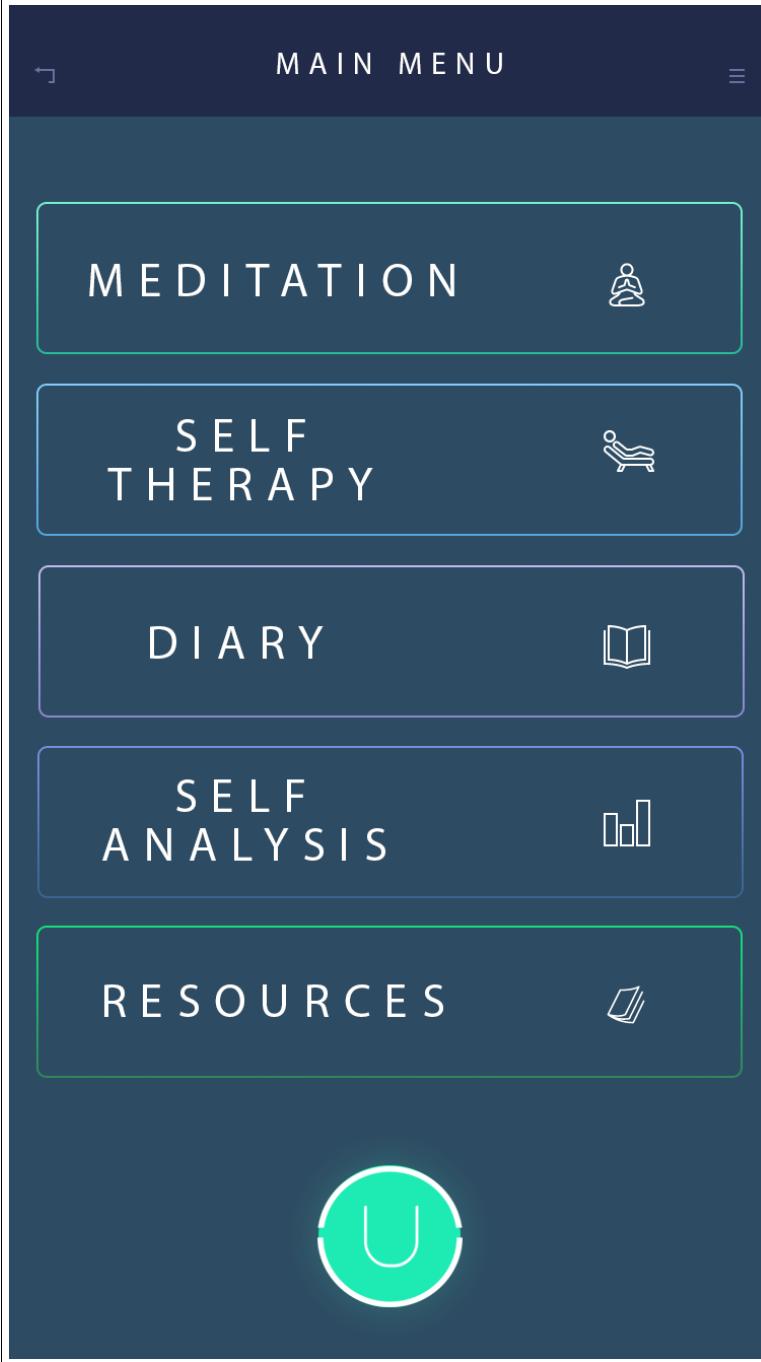
4. After the session has completed (or been terminated), the user will be thanked and will be placed back to the landing page.



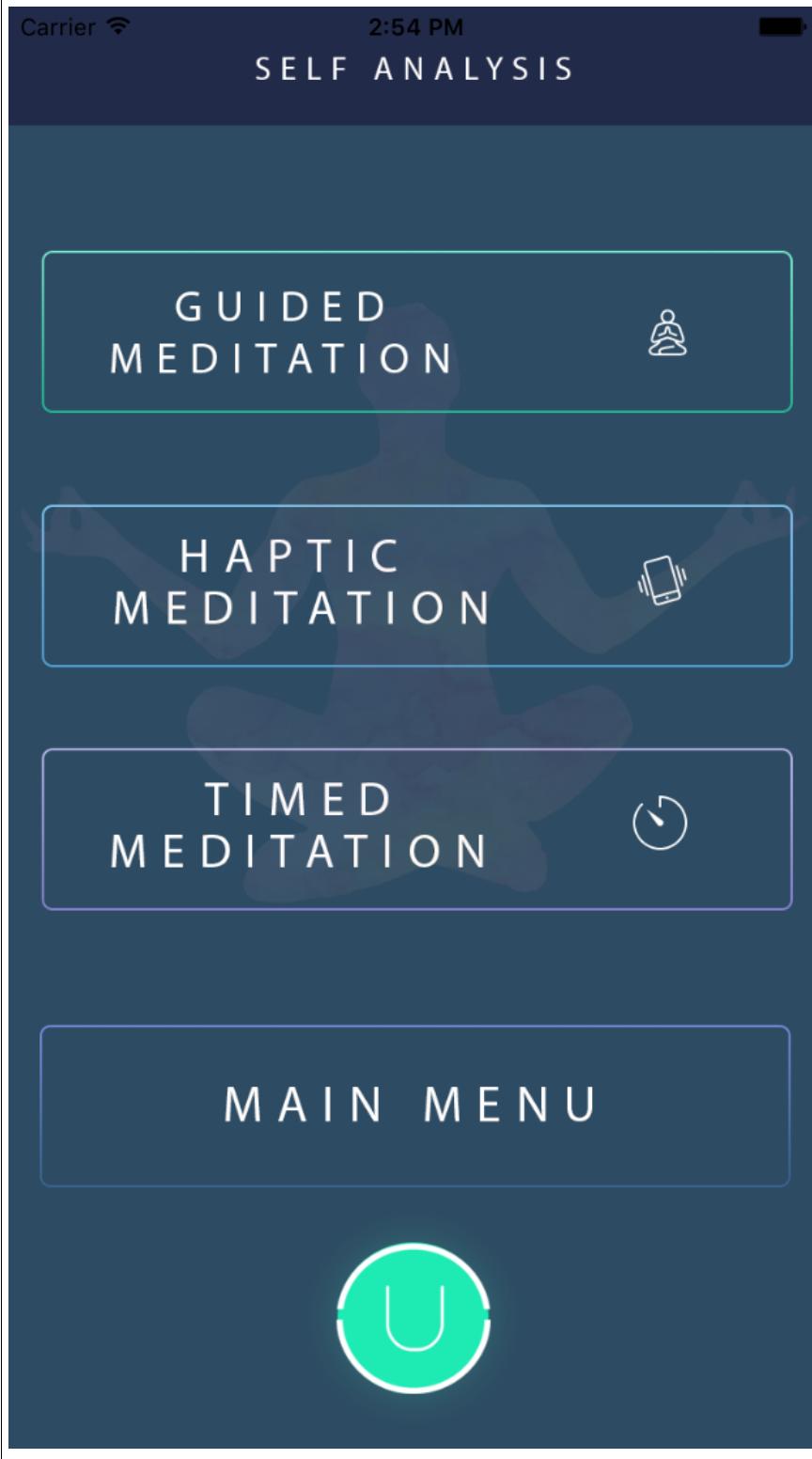
## 5.2 Scenario 2 – Guided Meditation

Description of Scenario	The user wishes to meditate through the in-app guided meditation.
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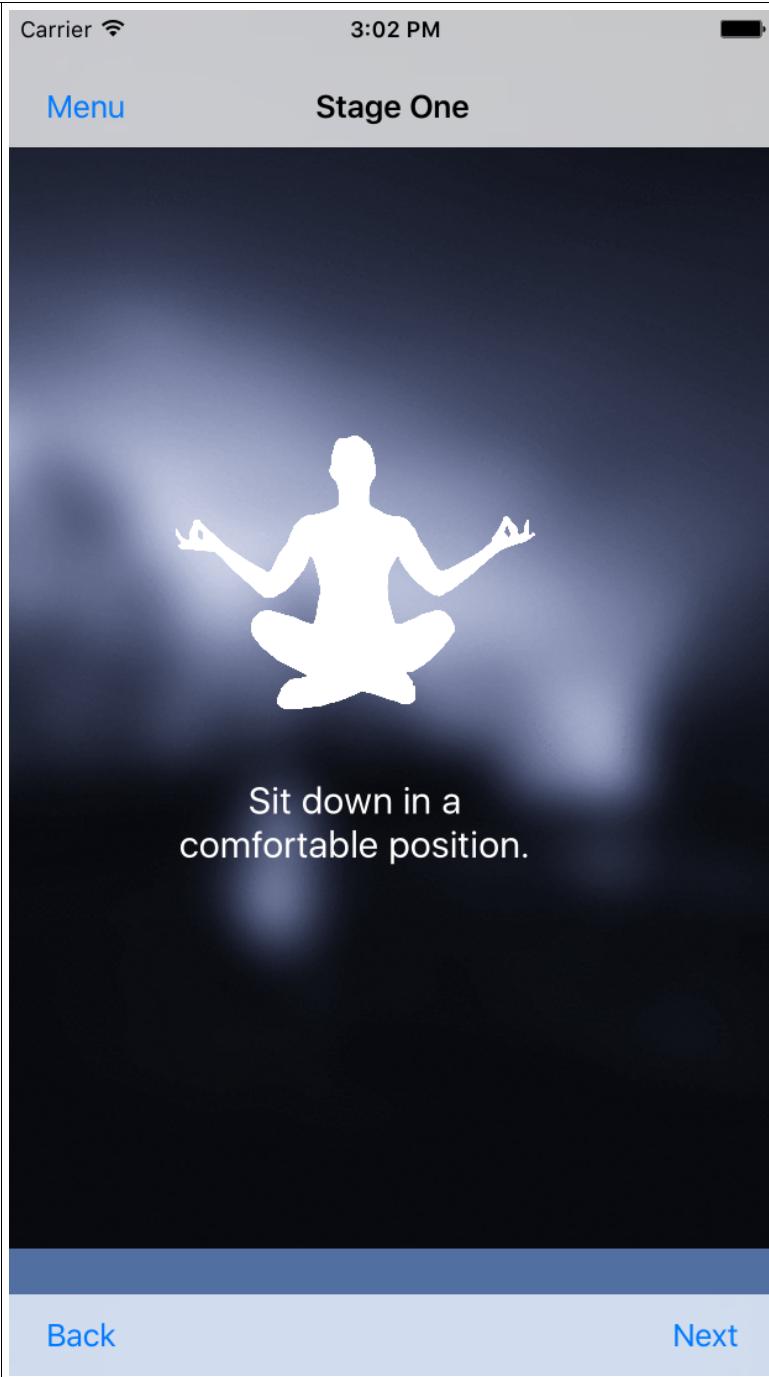
1. On the landing page, select Meditation.



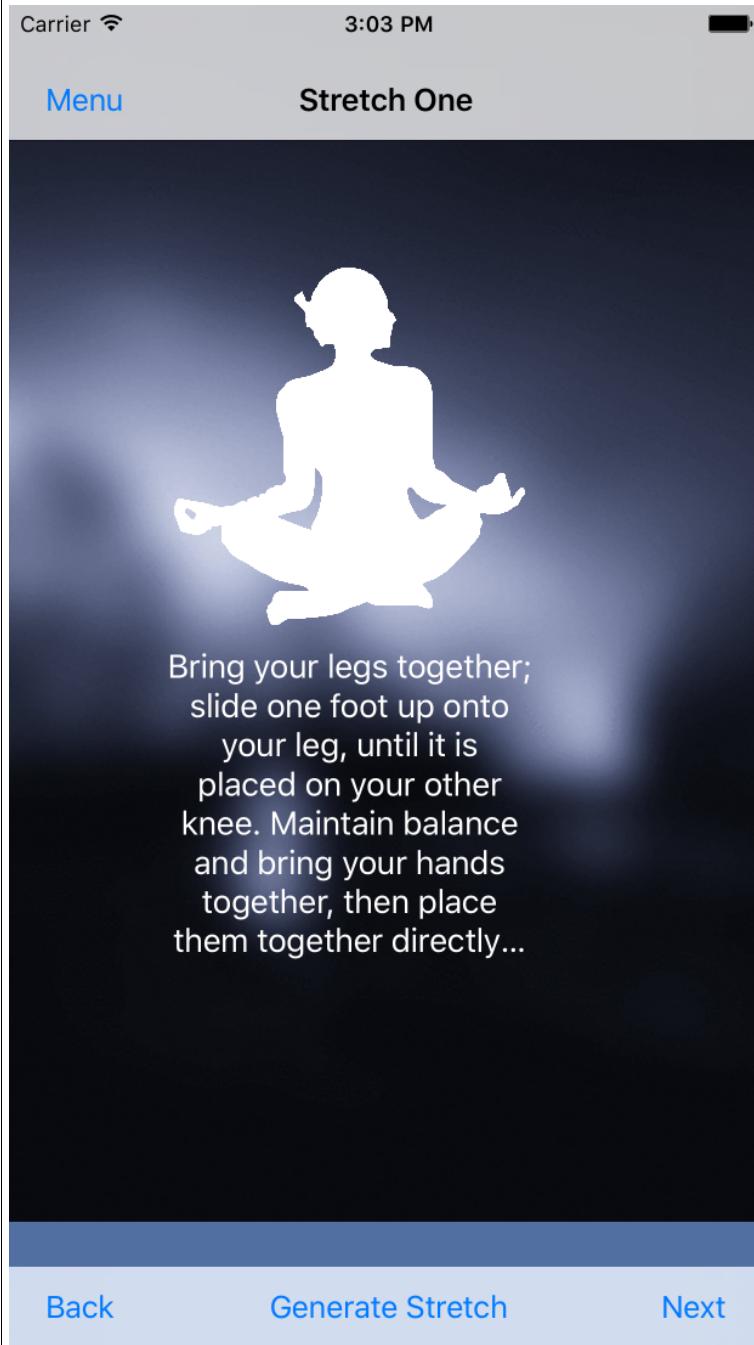
2. Select Guided Meditation.



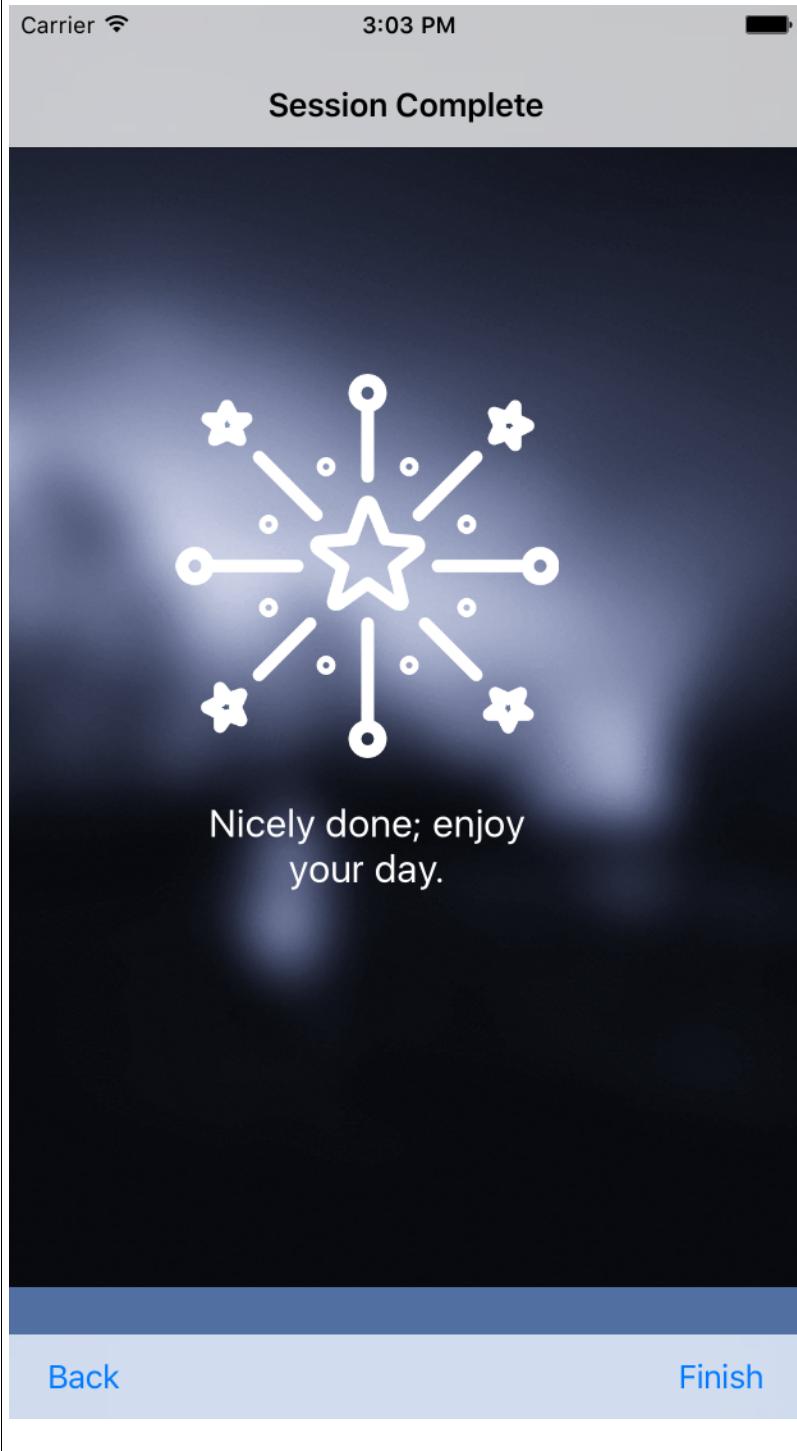
3. Follow the steps to begin the guided meditation



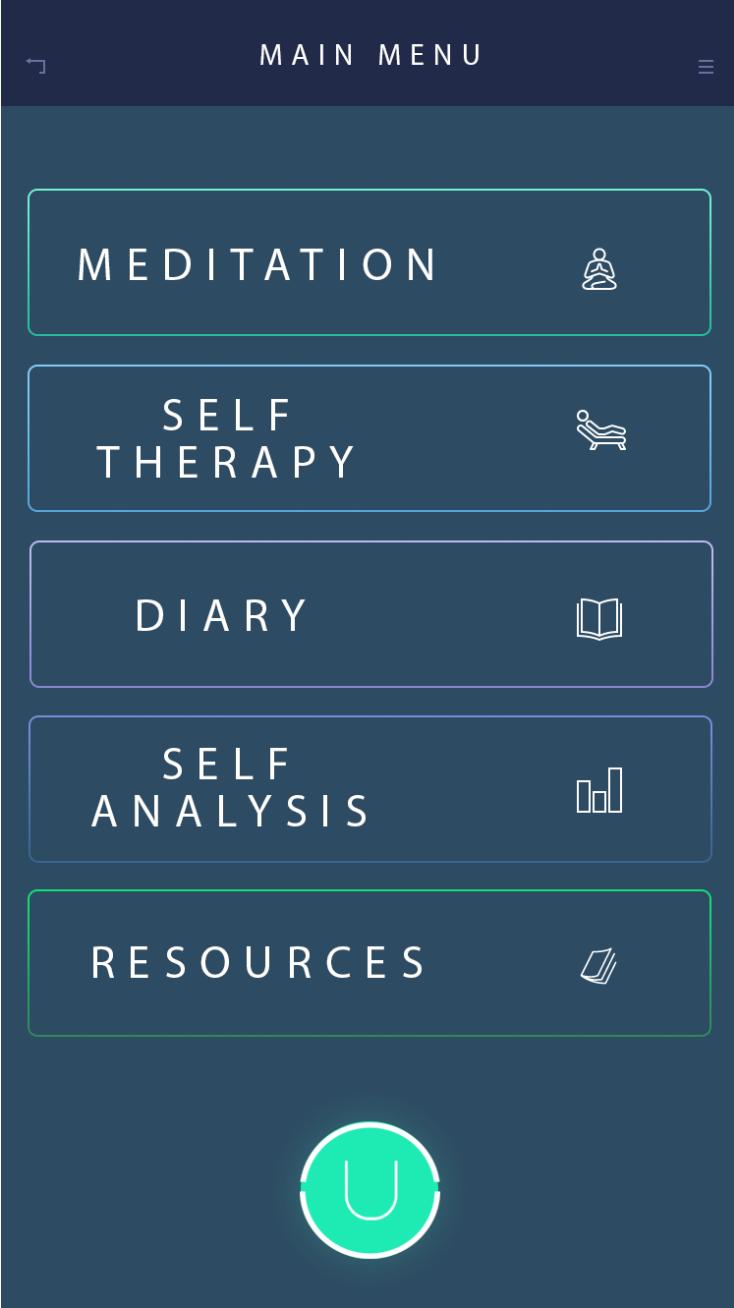
4. Proceed with the various stages in the process.



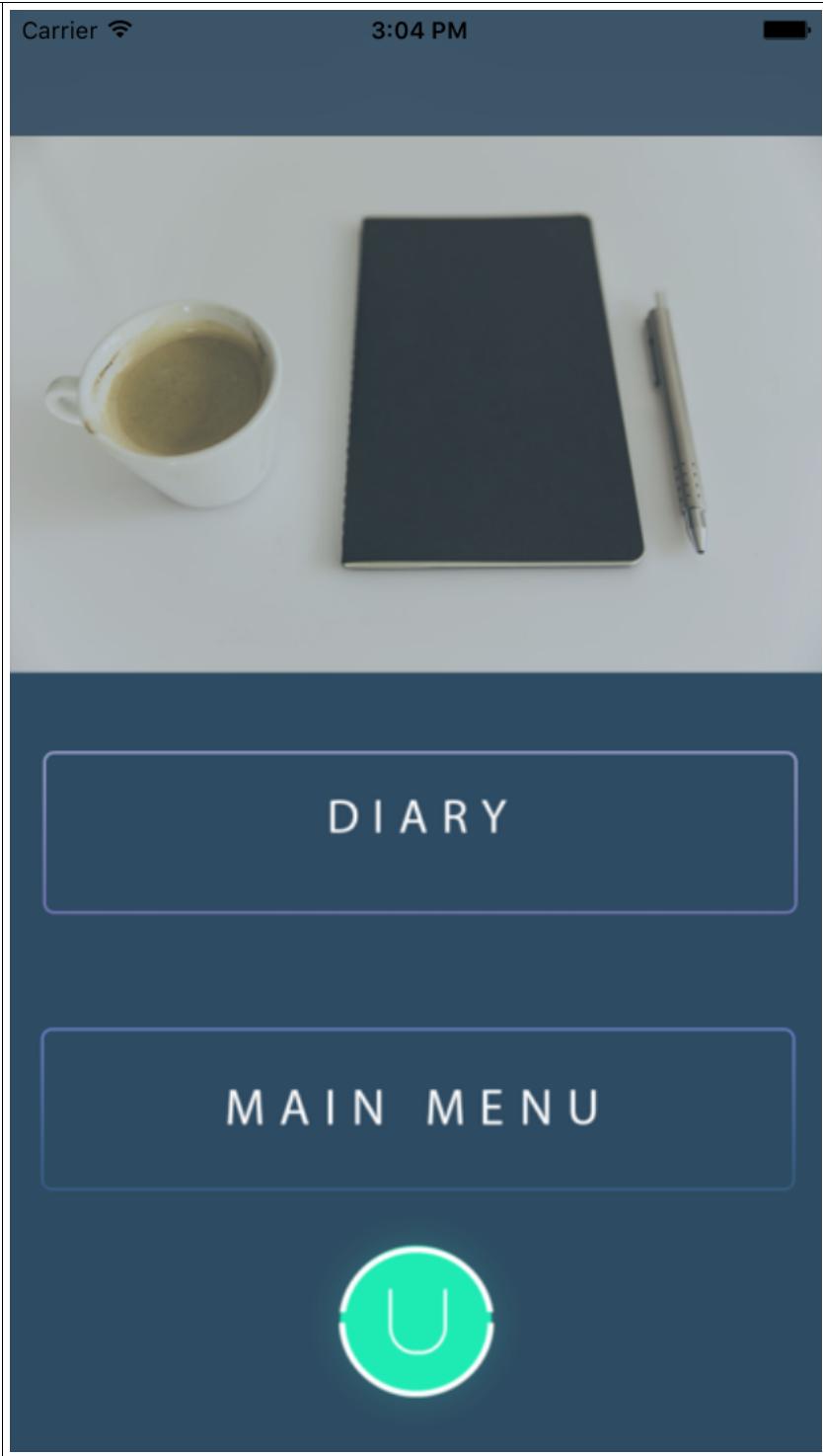
5. After the session has completed (or been terminated), the user will be thanked and will be placed back to the landing page.



### 5.3 Scenario 3 – Diary Usage

Description of Scenario	The user will create a new diary entry and guide the user to customize that entry.
1. From the main screen, Select Diary	 The image shows the 'MAIN MENU' screen of a mobile application. At the top center is the text 'MAIN MENU'. On the left is a back arrow icon, and on the right is a three-line menu icon. Below this are five rounded rectangular buttons, each containing a title and an icon. The first button, 'MEDITATION', has a person meditating icon. The second button, 'SELF THERAPY', has a person reclining icon. The third button, 'DIARY', has a book icon. The fourth button, 'SELF ANALYSIS', has a bar chart icon. The fifth button, 'RESOURCES', has a clipboard icon. A green outline highlights the 'DIARY' button. At the bottom center is a large circular logo with a stylized letter 'U' inside.

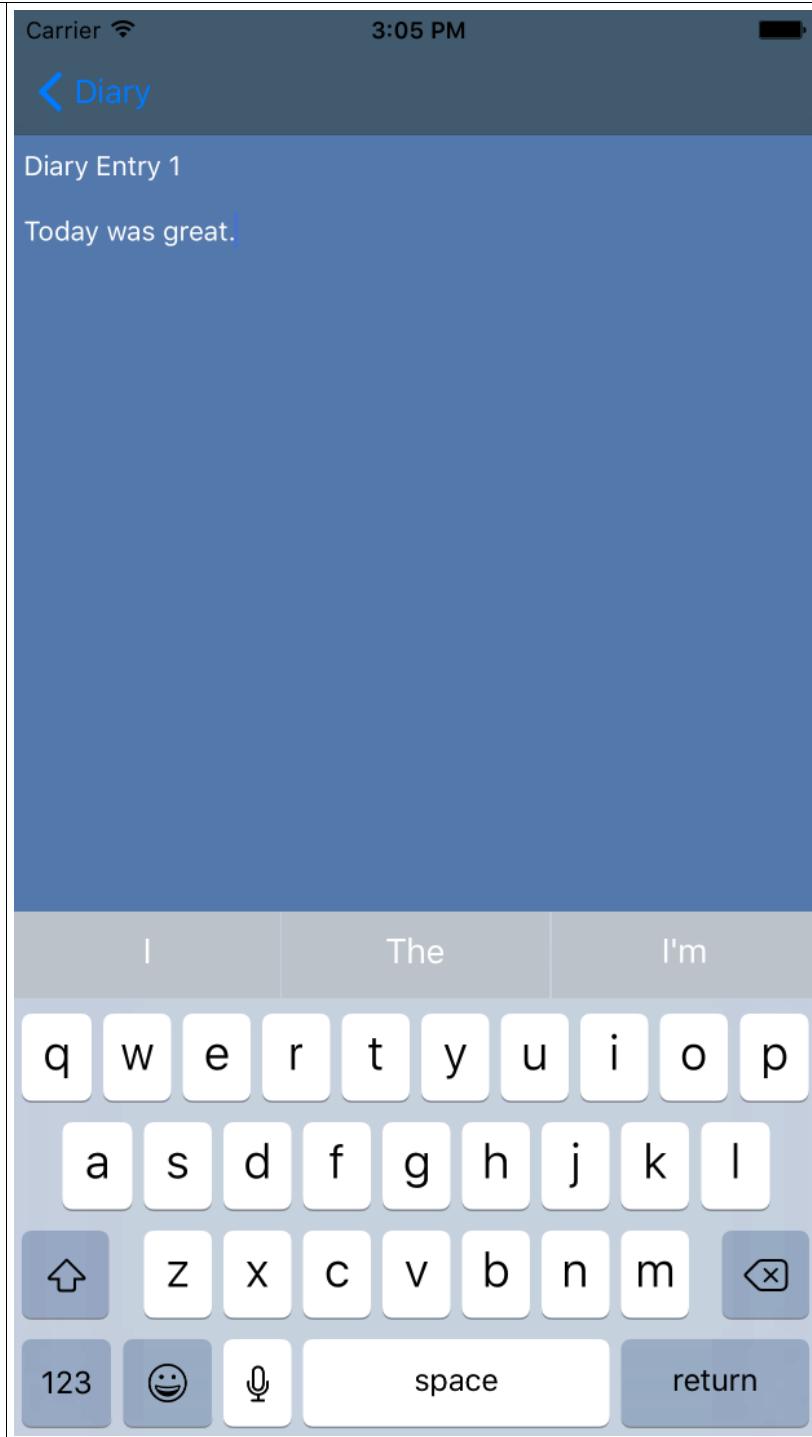
2. User chooses Diary  
Menu



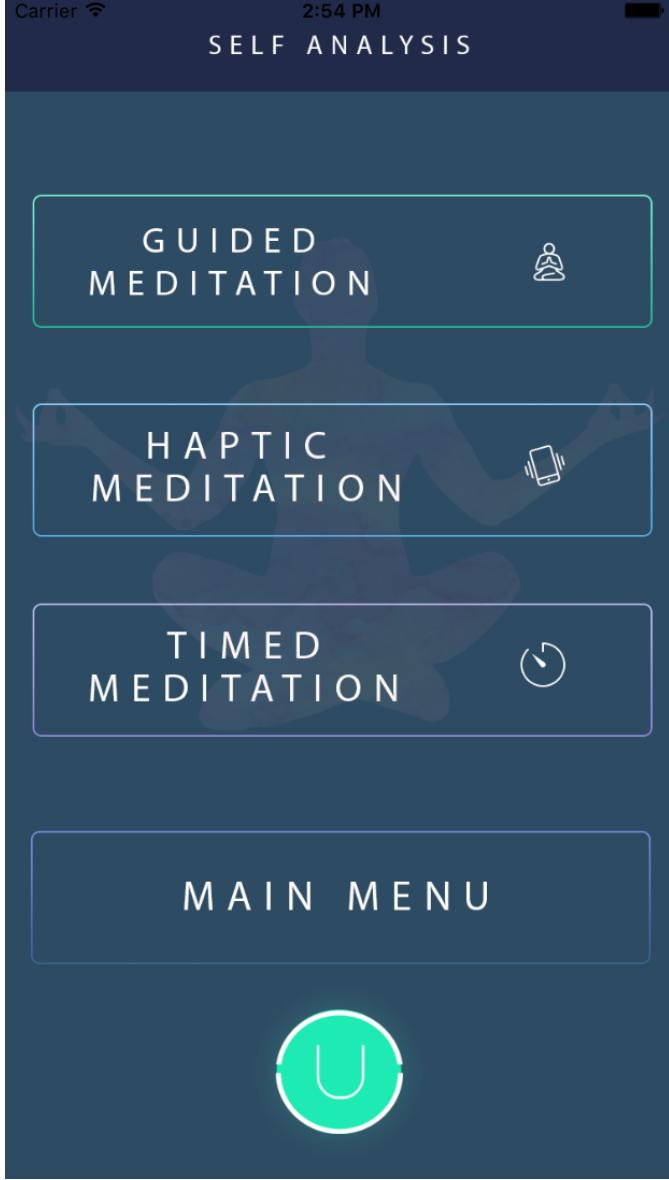
3. User can then add or edit/delete entries here.



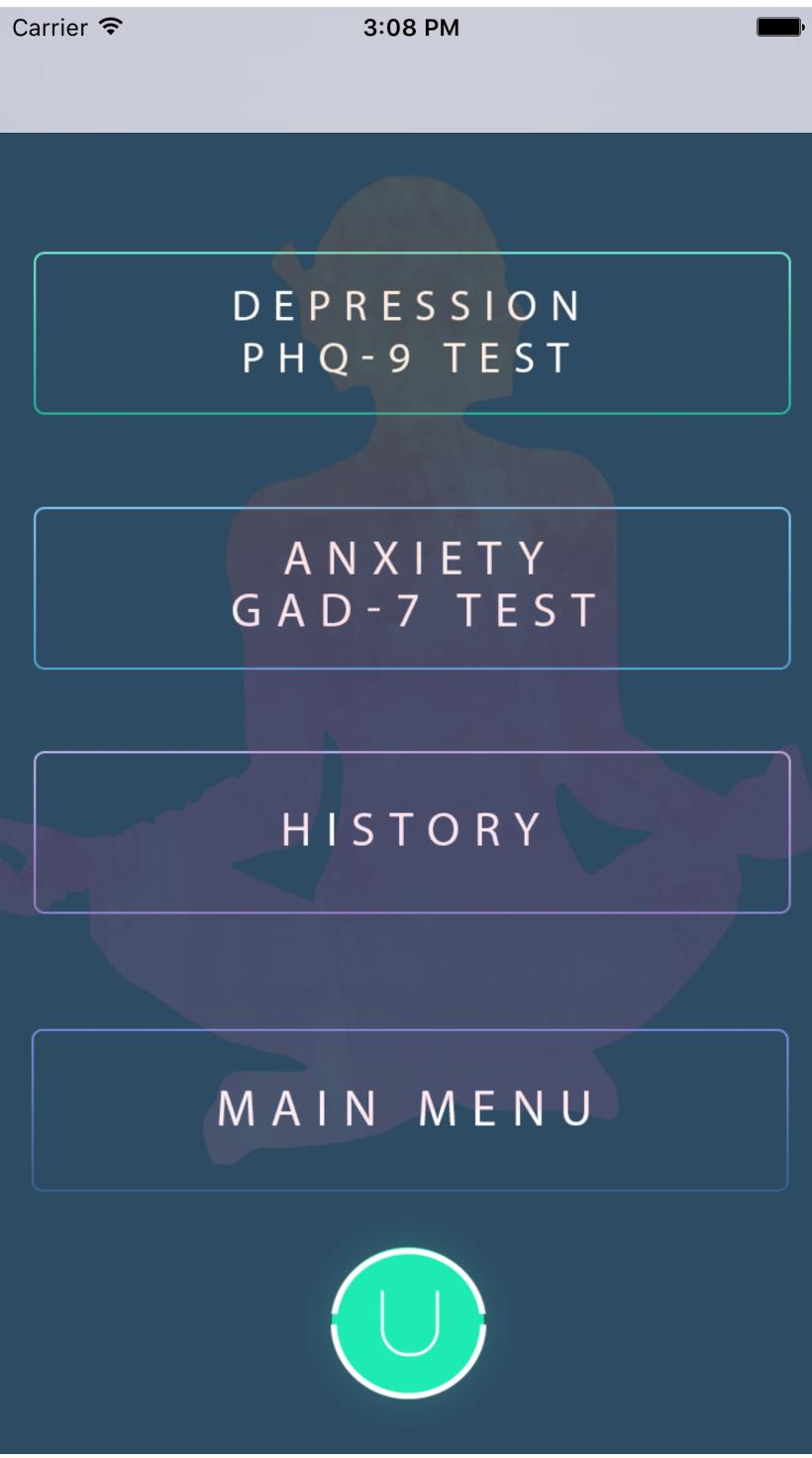
4.This is the add entry page



## 5.4 Scenario 4 – Quizzes

Description of Scenario	User will be able to fill out, save and view their results of 3 mental health analysis quizzes.
1. On the landing page, select Self-Analysis	 A smartphone screenshot displaying the 'SELF ANALYSIS' menu. The screen shows a dark blue background with a faint silhouette of a person sitting in a meditative pose. At the top, the text 'SELF ANALYSIS' is centered. Below it are four large, rounded rectangular buttons, each containing a meditation type and an icon. The first button on the left contains 'GUIDED MEDITATION' with a person icon. The second button contains 'HAPTIC MEDITATION' with a smartphone icon. The third button contains 'TIMED MEDITATION' with a timer icon. The fourth button at the bottom contains 'MAIN MENU'. A large, glowing green circular logo with a white 'U' shape is positioned at the bottom center of the screen.

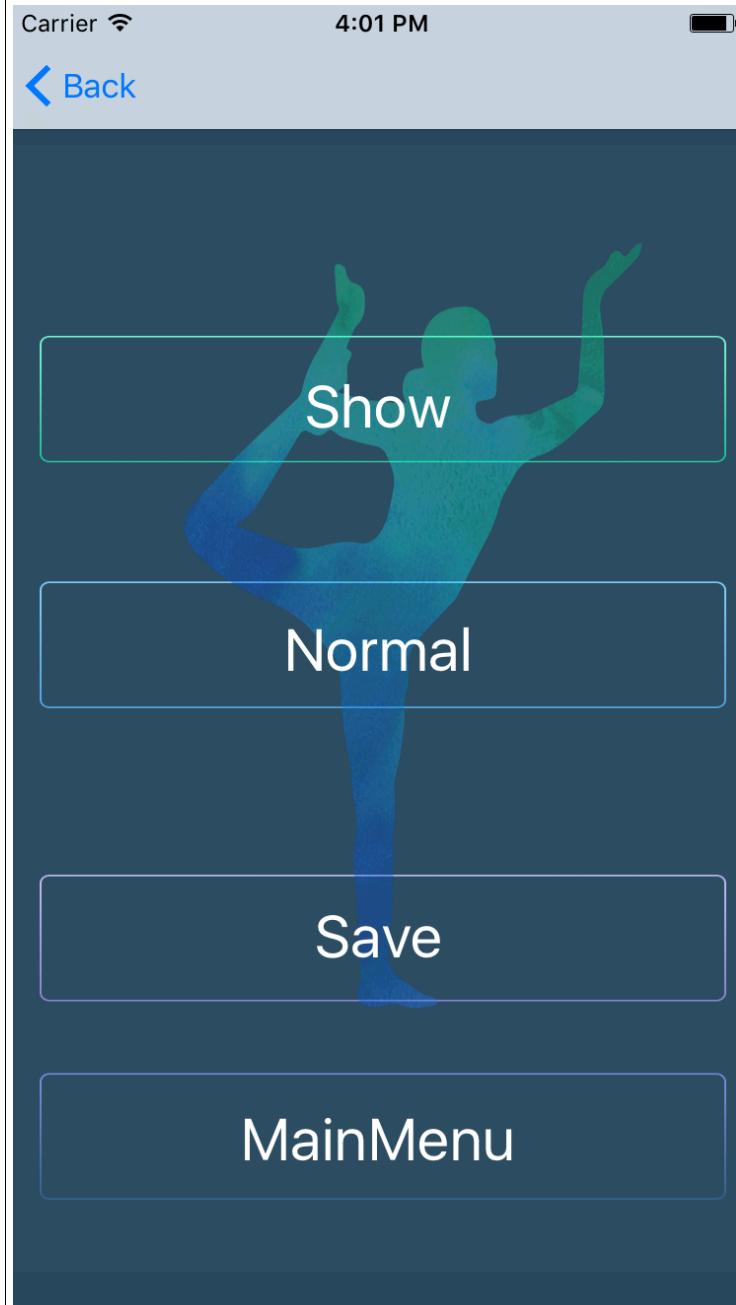
2. Select one of  
two quizzes.



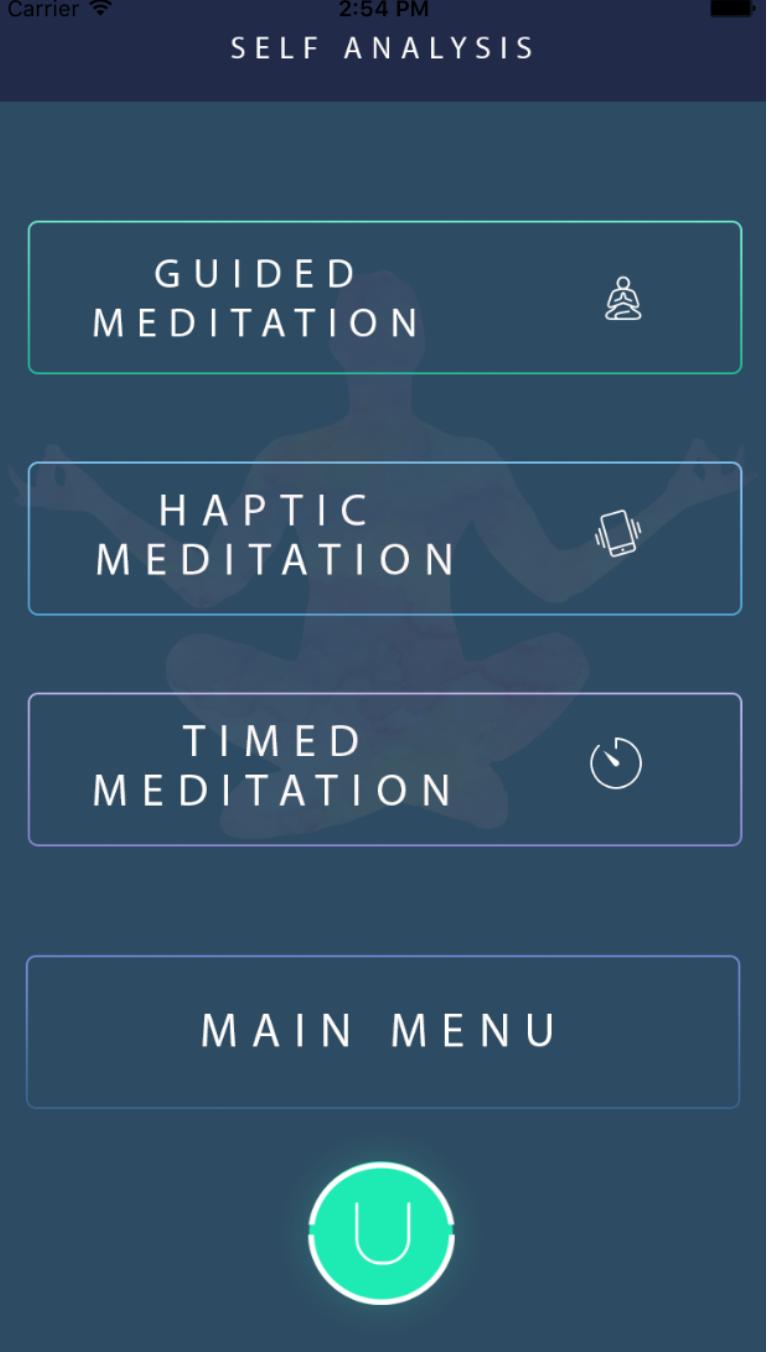
3. The user will be asked several questions where they will have to slide to select ratings.



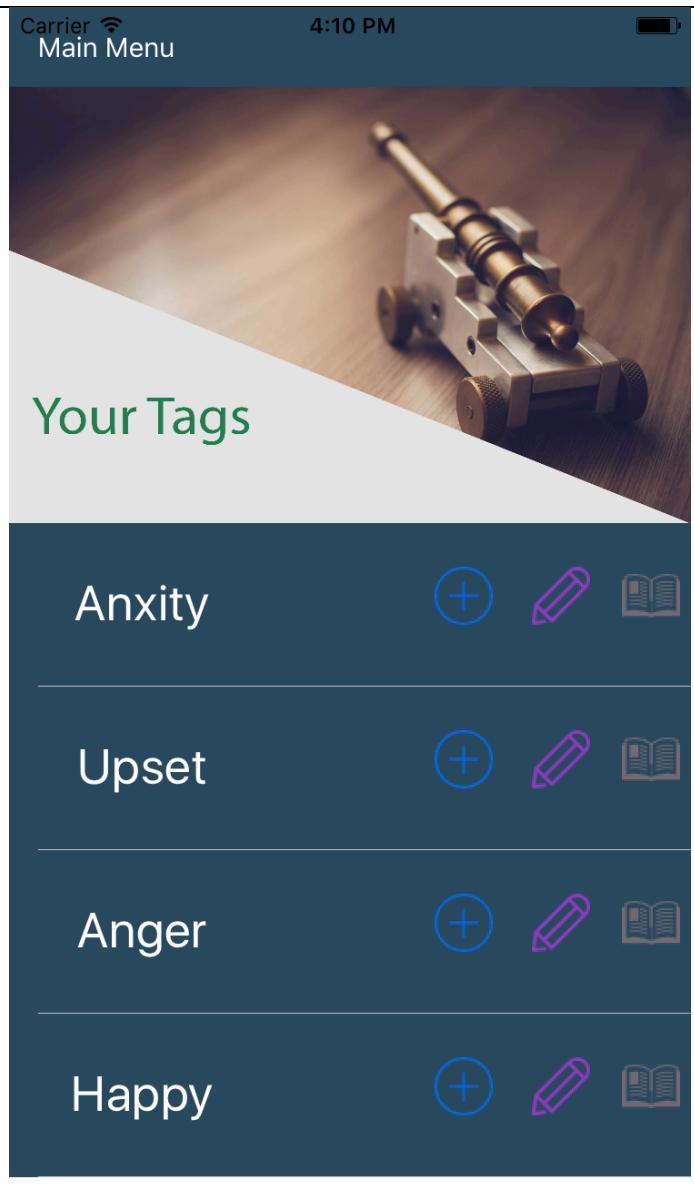
4.Finally the user will be able to save their results, show their results, view what their analysis is or go back to the main menu.



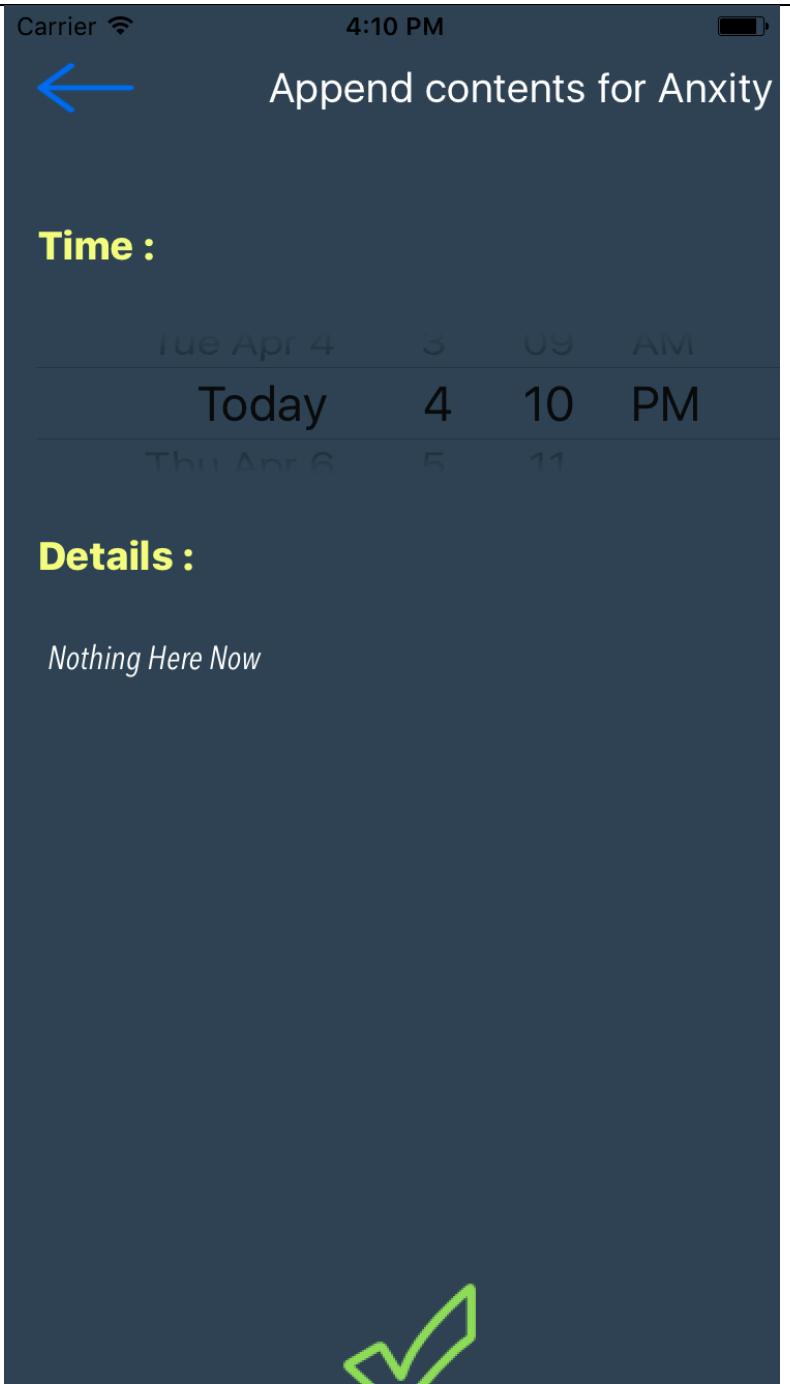
### 5.5 Self - Therapy

Description of Scenario	Users will be able to use a tag system to save solutions that cater to different emotions that they might have.
1.Select Self-Therapy on the main page	 <p>Carrier 2:54 PM SELF ANALYSIS</p> <p>GUIDED MEDITATION</p> <p>HAPTIC MEDITATION</p> <p>TIMED MEDITATION</p> <p>MAIN MENU</p> <p>U</p>

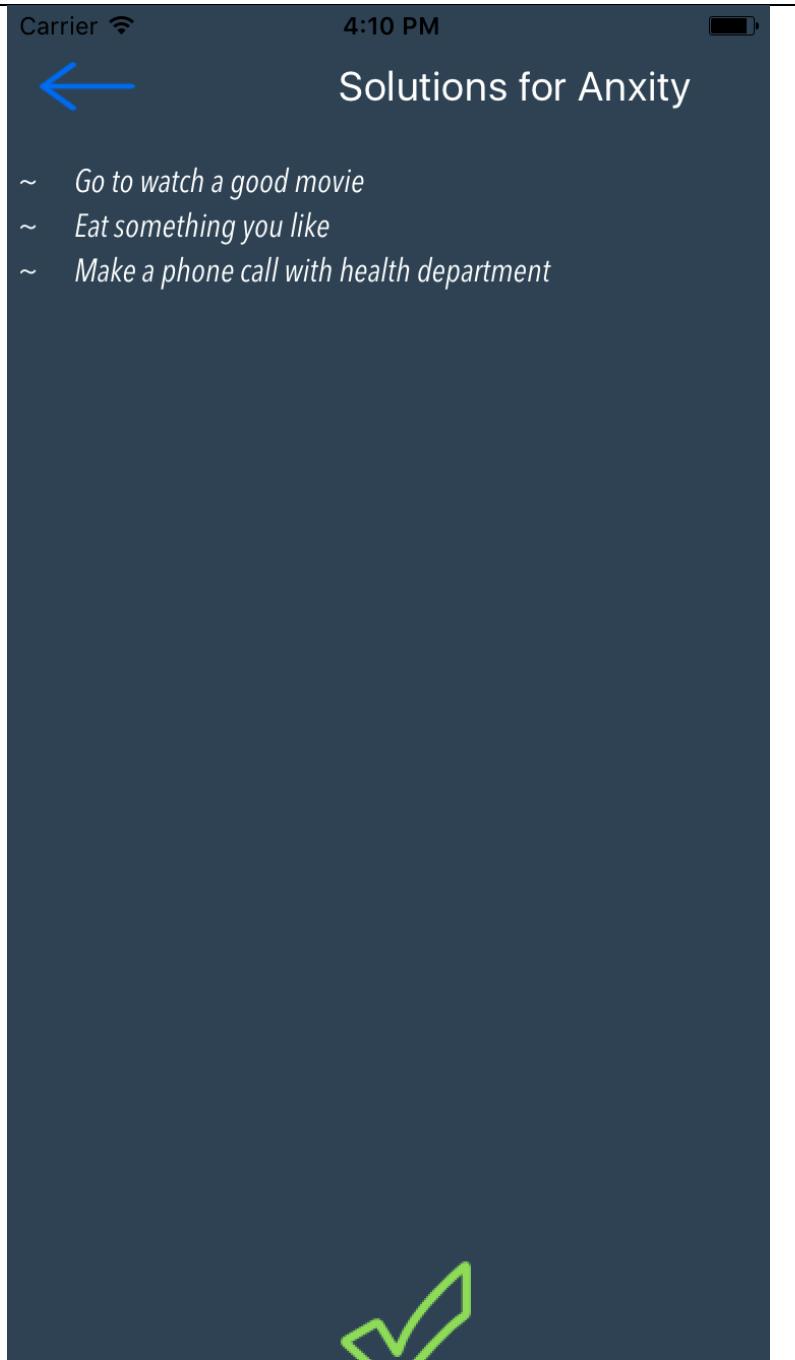
2.Create new tags by clicking on the + icon, add text and a solution.



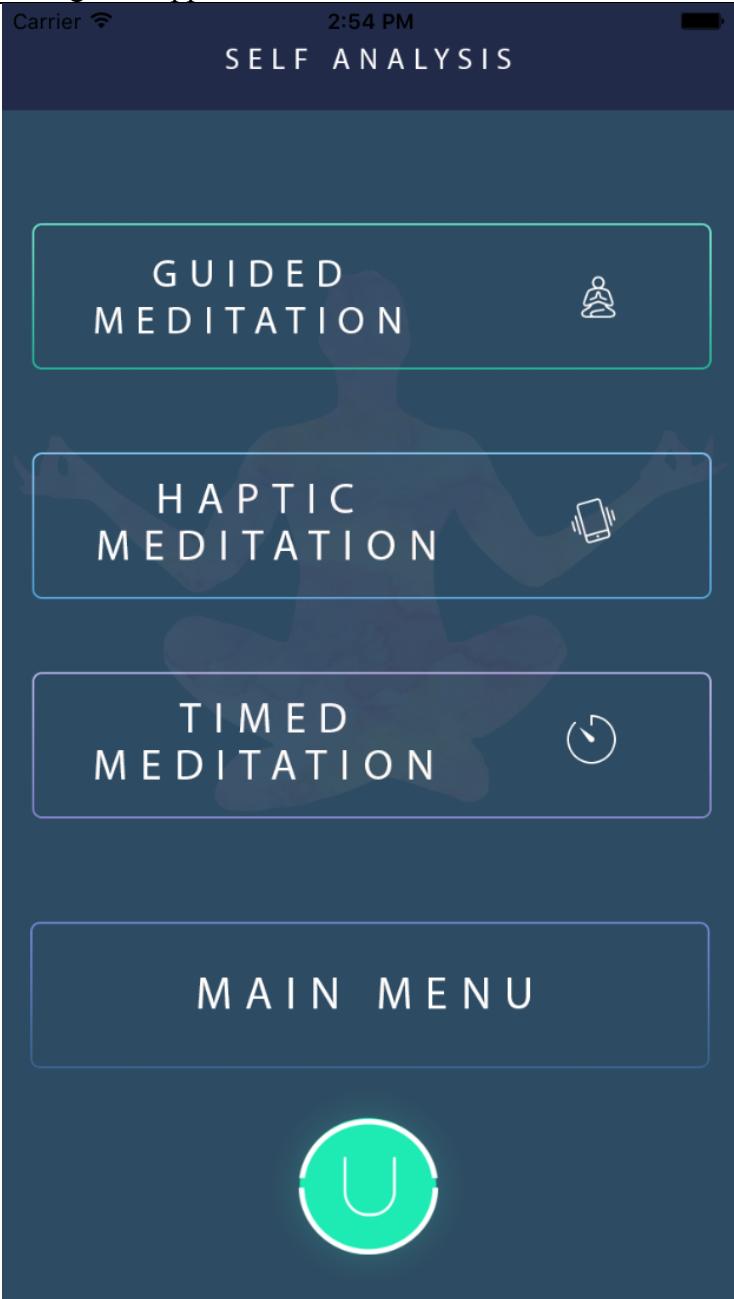
3. Edit the contents for any tag



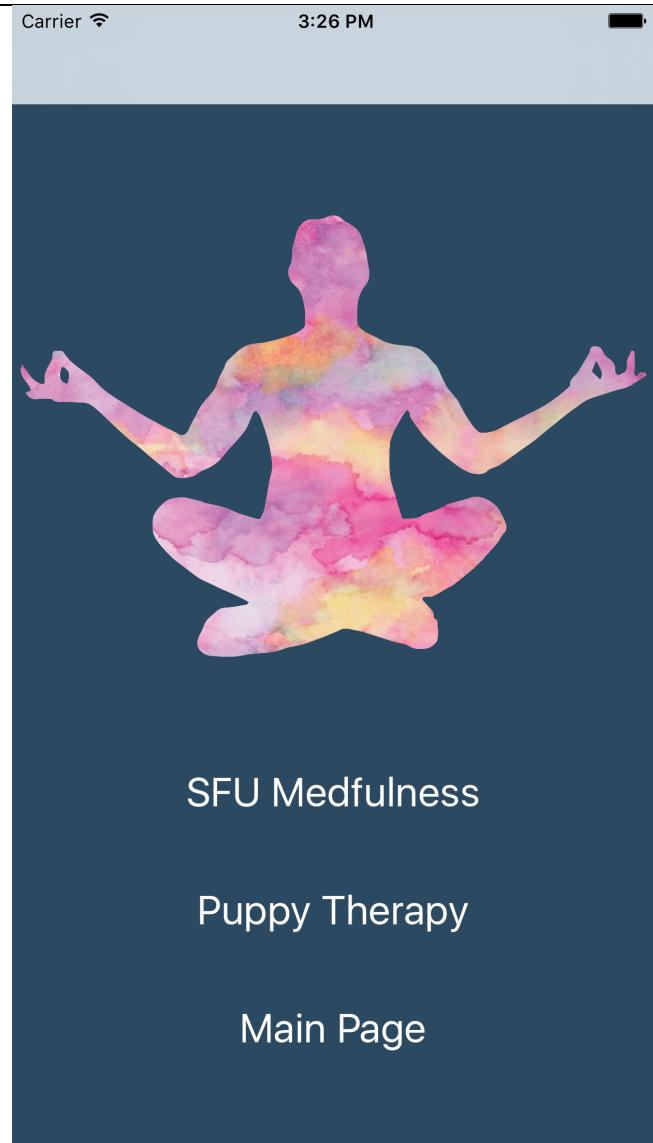
3. View solutions as well



## 5.6 Resources

Description of Scenario	Users will have access to SFU mental health resources through the application
1.Select resources on the main page	 <p>The image shows a smartphone screen displaying a mobile application interface. The top status bar indicates 'Carrier WiFi' and '2:54 PM'. The title 'SELF ANALYSIS' is centered at the top. Below the title are four large, rounded rectangular buttons, each containing text and an icon. The first button on the left contains 'GUIDED MEDITATION' with a small person icon. The second button contains 'HAPTIC MEDITATION' with a smartphone icon. The third button contains 'TIMED MEDITATION' with a timer icon. The fourth button on the right contains 'MAIN MENU'. At the bottom center of the screen is a large, circular green button with a white stylized 'U' shape inside.</p>

2. Choose from the 2 options to be directed to online resources within the app



3. Proceed to view website within the application

The screenshot displays a mobile application interface for SFU Health & Counselling Services. At the top, there is a header bar with a 'Carrier' icon, a signal strength icon, the time '3:26 PM', and a battery icon. Below the header is a blue navigation bar with a back arrow and a magnifying glass icon. The main content area features the SFU logo and the text 'STUDENT SERVICES Health & Counselling Services'. A horizontal menu bar with three colored segments (red, yellow, green) is visible. Below the menu, three red, green, and blue buttons contain the text 'What to do in an Emergency', 'Sexual Assault Support', and 'Supporting Students in Distress'. At the bottom of the screen, there is a footer with the text 'Health & Counselling Services / Events / Mindfulness Meditation'. The central part of the screen shows a large title '~Mindfulness Meditation~' with the subtitle 'Quiet the mind and rest from constant thinking.' Below this, the text 'SPRING 2017' and 'BURNABY' is displayed.

## 6. Glossary

6.1 CBT	Cognitive behavioral therapy is a series of mental rehabilitation techniques used to change behavioral and thinking patterns.
6.2 Emulation	An emulator is a virtual simulation of physical hardware. In our context, we will emulate an iPhone on our computers.
6.3 Haptic	A haptic sensation is a vibration which imitates physical sensations like touches and taps. In our context, the haptic feedback will simulate a light tap on the leg.
6.4 Repository	A shared storage location where all produced data is held for future use. In our case, this will be a user's local storage.
6.5 Step	A step is a single action within a larger meditation plan. For example, one step would be 'Take Deep Breaths.'