BAIT2203 HUMAN COMPUTER INTERACTION

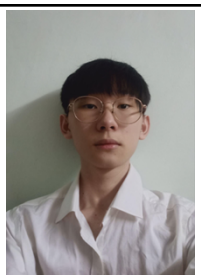
DESIGN & PROTOTYPING REPORT

Programme : **RSW-Bachelor of Computer Science (Honors) in Software Engineering Year 1 Semester 3 (Intake:202205)**

Tutorial Group : **G6**

Prototype name: **Mood Mentor**

Declaration : I/We declare that this assignment is free from all forms of plagiarism and for all intents and purposes is my/our own properly derived work.

No	Student Photo	Student Name	Student ID	Signature
1		**Hue Zhen Wei**	**22WMR05658**	**zhennn**
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3		**Kwo Chun Kit**	**22WMR05665**	*KWO*

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1. Preliminary Design and High-Fidelity Design

1.1. First Interaction Welcome Page

Figure 1.1.1a First Interaction Welcome Page (High-Fidelity Design)

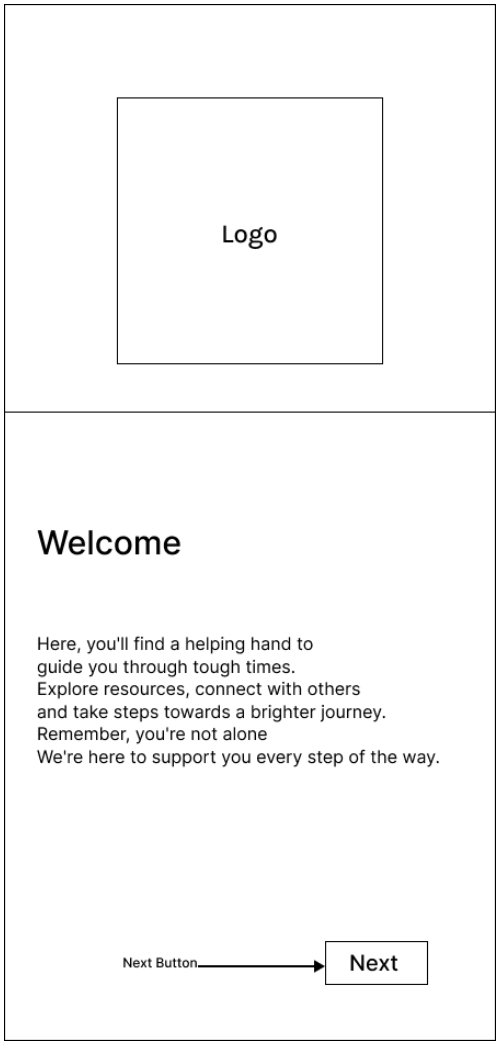

Figure 1.1.1b First Interaction Welcome Page (Low-Fidelity Design)

Based on ***Figure 1.1.1a***, when users launch the "Mood Mentor" application, they will first approach a welcome page. Most of the users of "Mood Mentor" found negative emotions and negative symptoms of depression. Therefore, it is extremely important to welcome the users with appropriate displays, messages, and logos, letting them know what to expect in the system. In order to achieve consistency, the system is major in glossy dark blue color.

The differences between the ***Figure 1.1.1a*** and ***Figure 1.1.1b*** for the welcome page are the color palette and soothing flowery design to create a sense of relaxation. The “Next” button was designed in the bottom right to proceed to the next page, which creates a sense of leading users after a visit.

1.2. Welcome Page

Figure 1.2.1a Welcome Page (High-Fidelity Design)

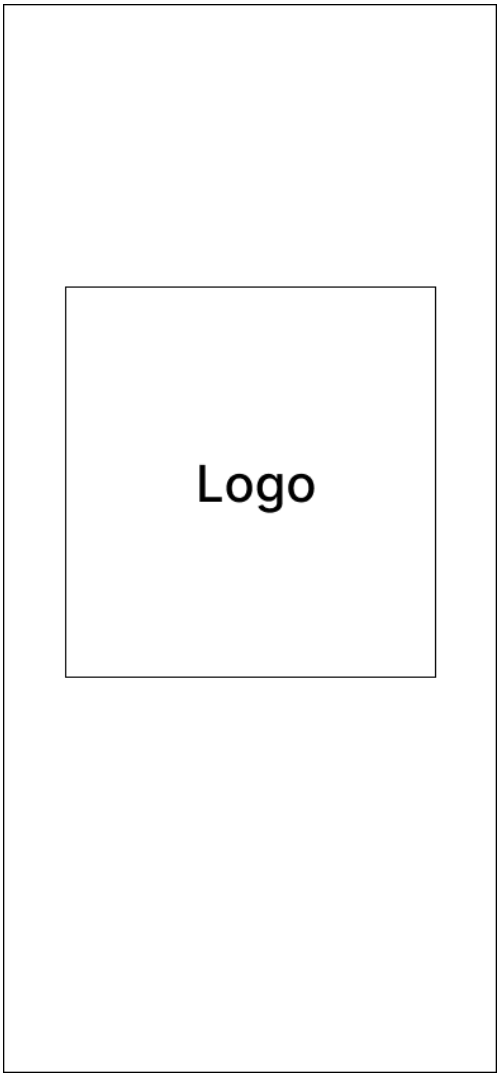

Figure 1.2.1b Welcome Page (Low-Fidelity Design)

Based on ***Figure 1.2.1a,*** it is necessary to introduce the "Mood Mentor" application logo and the name, for easier recognition instead of recall or memorisation. In the preliminary design, the logo always displayed in the welcome page, whenever the user entered "Mood Mentor".

1.3. Registration Page

1.3.1. Register User Details

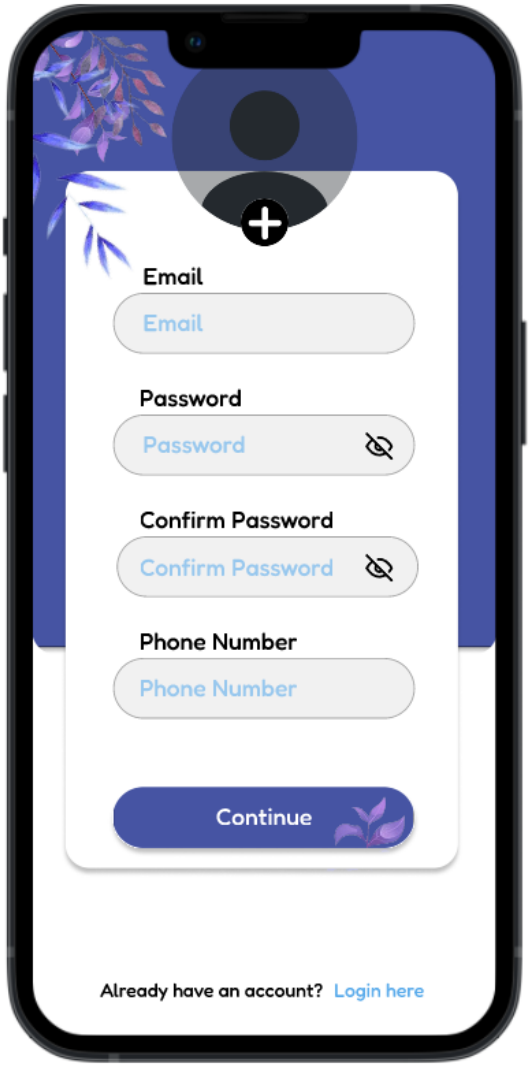

Figure 1.3.1.1a Registration Page (High-Fidelity Design)

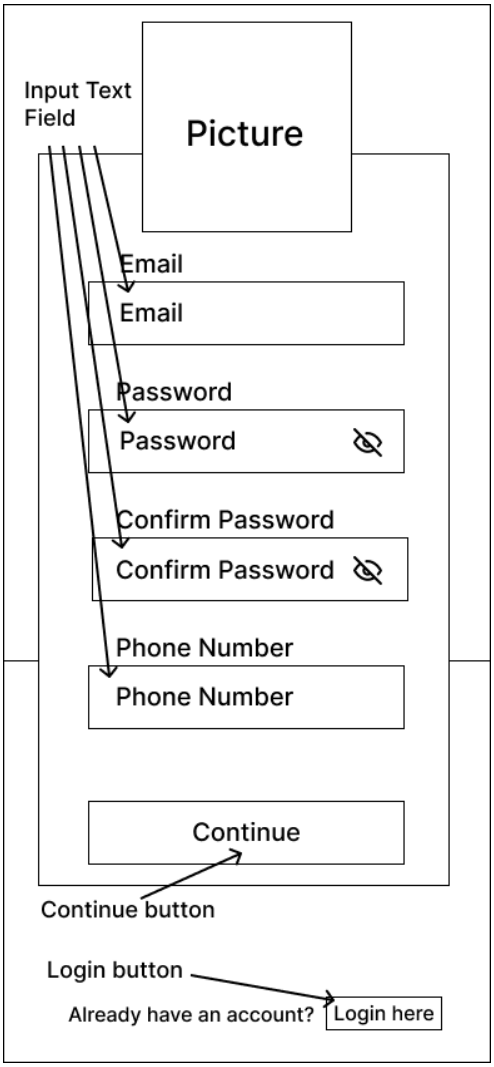

Figure 1.3.1.1b Registration Page (Low-Fidelity Design)

Based on ***Figure 1.3.1.1a,*** when the users do not own an account and click register from any of the page, they will be redirected to the registration page. Users are required to fill in their credentials such as email, passwords, confirmation passwords and phone number. After filling their credentials correctly, a continue button is here to allow the user to proceed with the face id in the coming page in order to create an account. Simultaneously, users are also allowed to click "Login Here" instead of denying users only performing registration.

Differences between the ***Figure 1.3.1.1a*** and ***Figure 1.3.1.1b*** for the registration page are the default text color inside the textbox is light blue indicating the default value awaiting users for inputs credentials'. Profile pictures are highly recommended for users for customization and personalization.

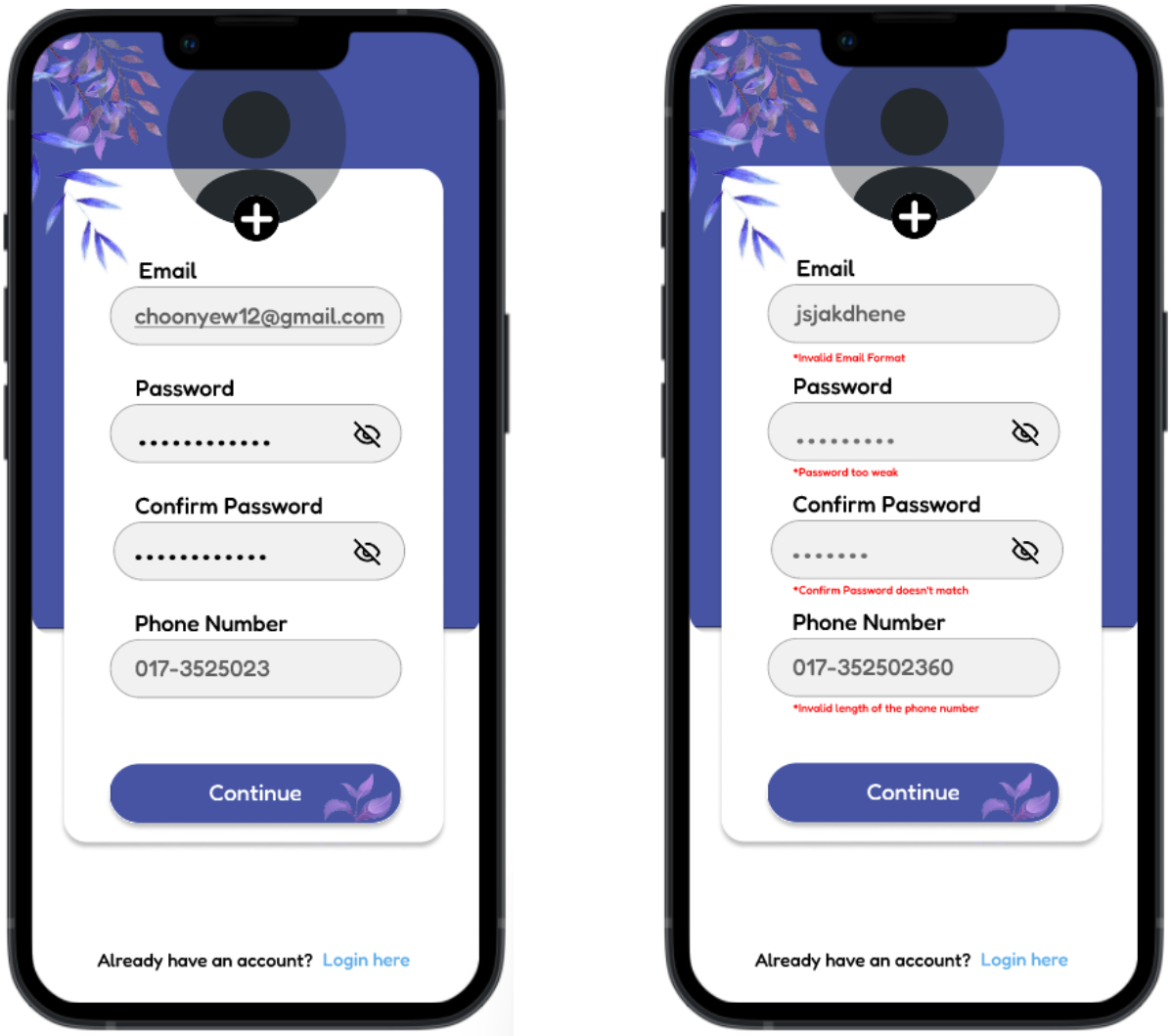

Figure 1.3.1.2 Registration Page with validations

Based on ***Figure 1.3.1.2,*** when the users start inputting registration credentials such as email address, a validation check will be designed to determine users input the existing email address or correctness. Meanwhile, password validation for ensuring users create a solid and strong password from security. Confirmation password validation also ensures users input the password same as input password during registration. Lastly, phone number verification to ensure the

phone number existing and only one phone number for registration. All of the above validations are meant to protect users' datas.

1.3.2. Register Face ID

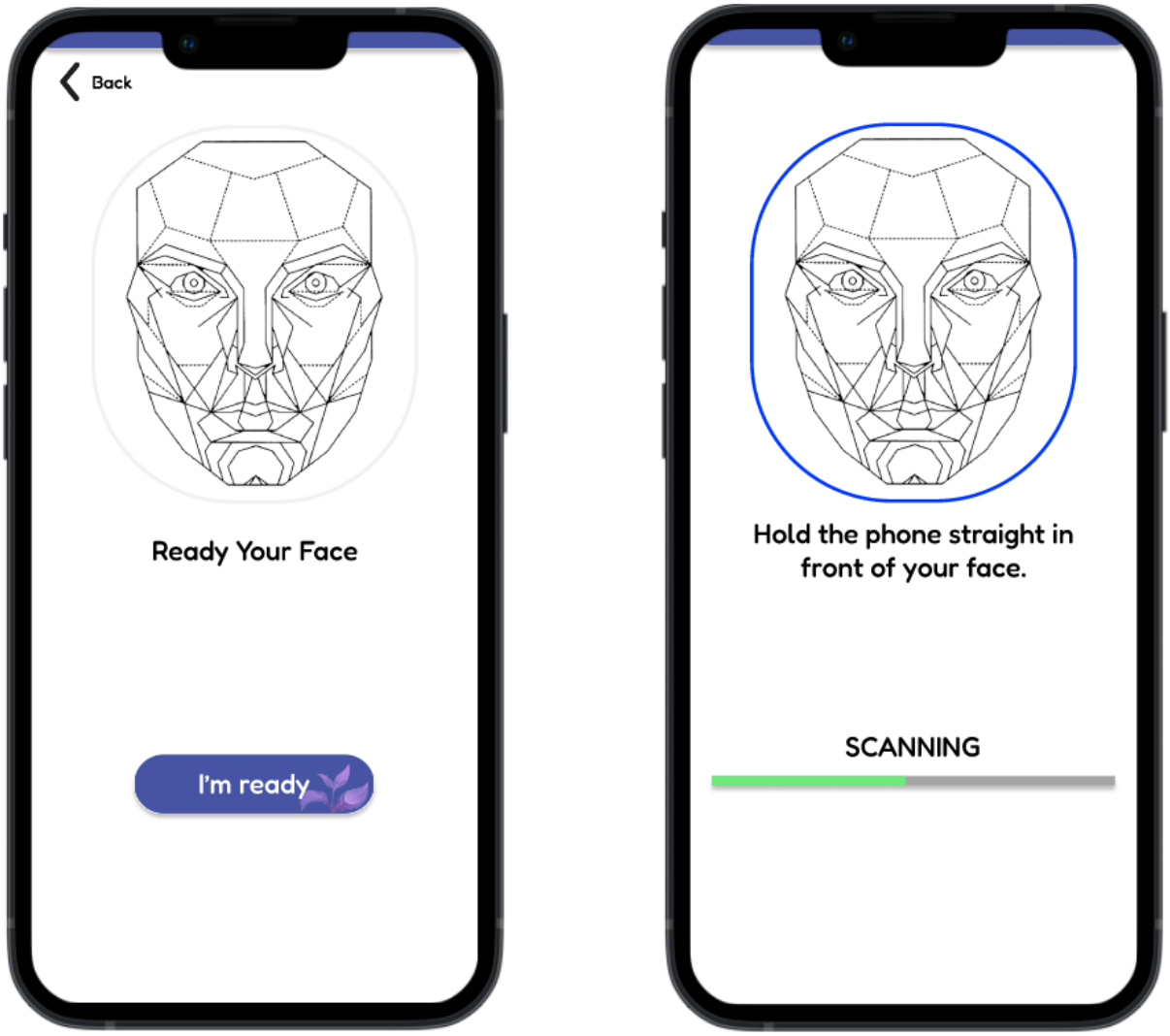

Figure 1.3.2.1 Registration Face ID Page

Based on ***Figure 1.3.1.2*** previously**,** after registration from ***Figure 1.3.1.2,*** users are redirected to ***Figure 1.3.2.1.*** Users are then required to prepare their physical appearance to capture their face and save it as one Face ID, for further biometric verification purposes.

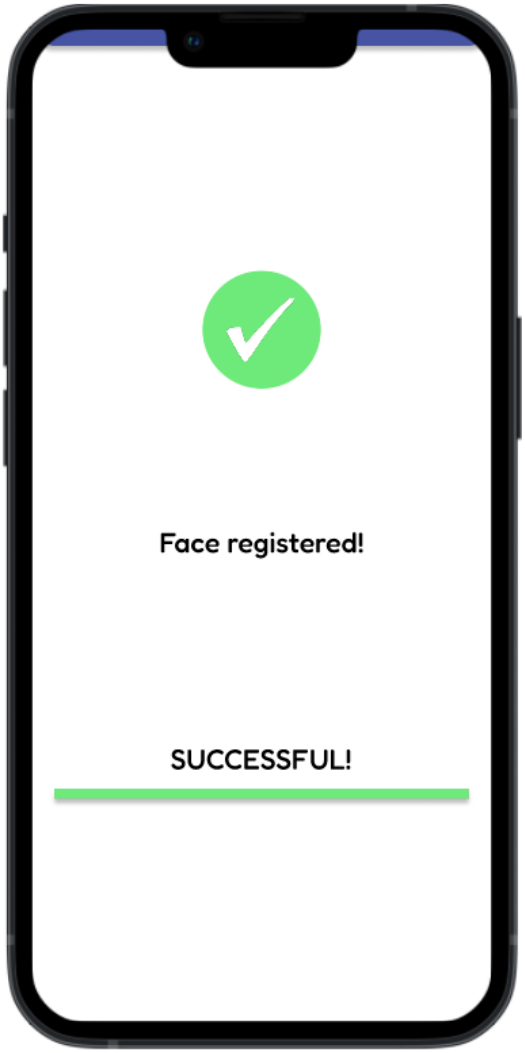

Figure 1.3.2.2 Registered Face ID Successfully

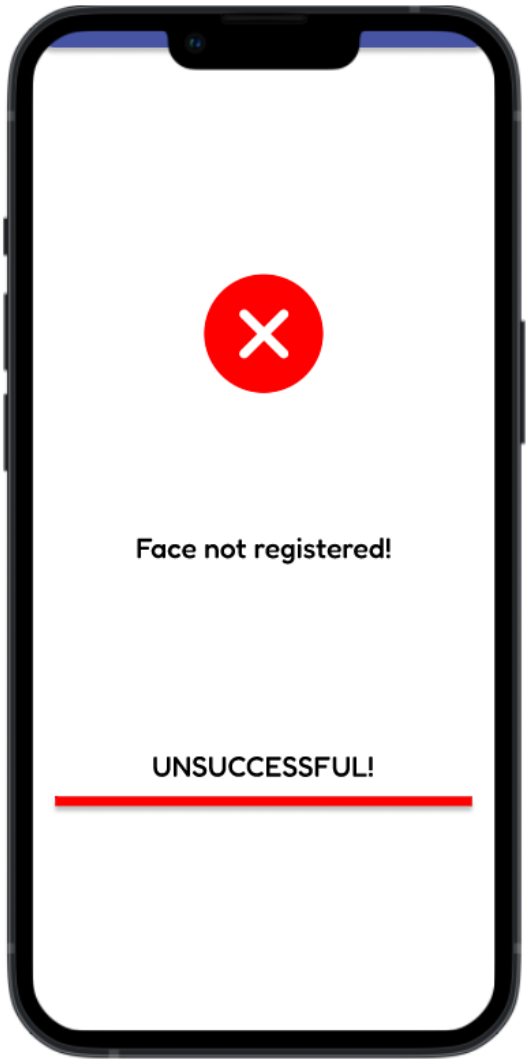

Figure 1.3.2.3 Registered Face ID Unsuccessfully

When the face ID is collected from the user successfully, it will display ***Figure 1.3.2.2***. Whereas when the face ID is collected from the user unsuccessfully, it will go to ***Figure 1.3.2.3*** which indicates that the face wasn't been registered. Then, the user needs to go back to ***Figure 1.3.2.1*** in order to redo the registration face ID again.

1.4. Login Page (Email & Password)

1.4.1. User Login

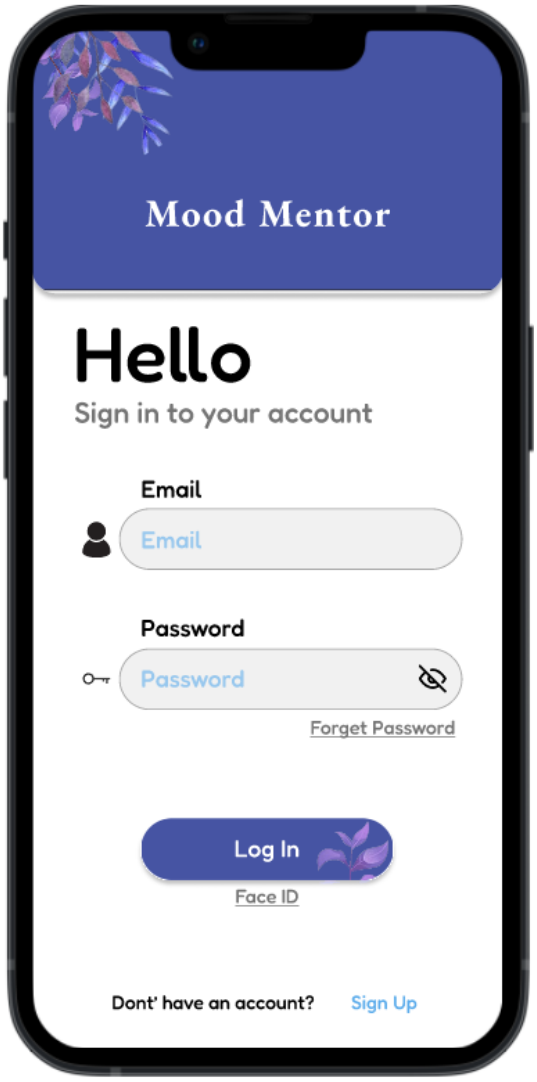

Figure 1.4.1.1a Login Page (High-Fidelity Design)

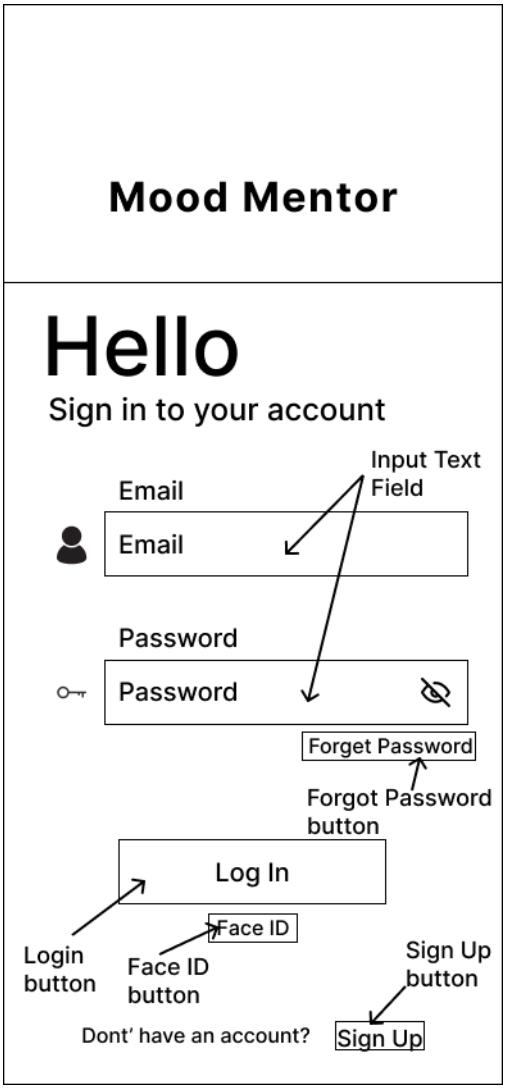

Figure 1.4.1.1b Login Page (Low-Fidelity Design)

Based on ***Figure 1.4.1.1a,*** when the users want to login, they need to enter existing credentials such as email and passwords. Users then continue by clicking on the Login button to proceed to the next page. At the same time, users are allowed to select "Face ID" hyperlink to login as an alternative. To conserve numerous times and bring convenience. Simultaneously, users are also allowed to click "Sign Up" instead of denying users only performing login.

Differences between the ***Figure 1.4.1.1a*** and ***Figure 1.4.1.1b*** are the icons designs are straightforward indicating user email and key represents passwords, besides the typical hidden password icon is placed most right inside the textbox, so that the users can choose to hide due to desired privacy from the public environment.

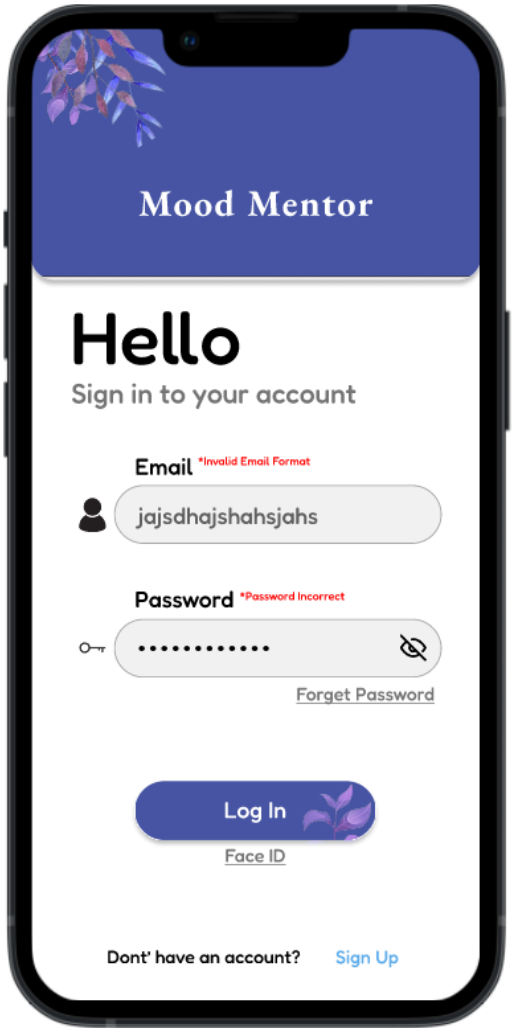

Figure 1.4.1.2 Login Page with validations

Based on ***Figure 1.4.1.2,*** the page is required to validate users' credentials before fully accessing "Mood Mentar". A high contrast red color validation word will approach users if there is invalid email address upon clicking the Login button. Password validation for checking the correct password as well.

1.4.2. User Enter OTP

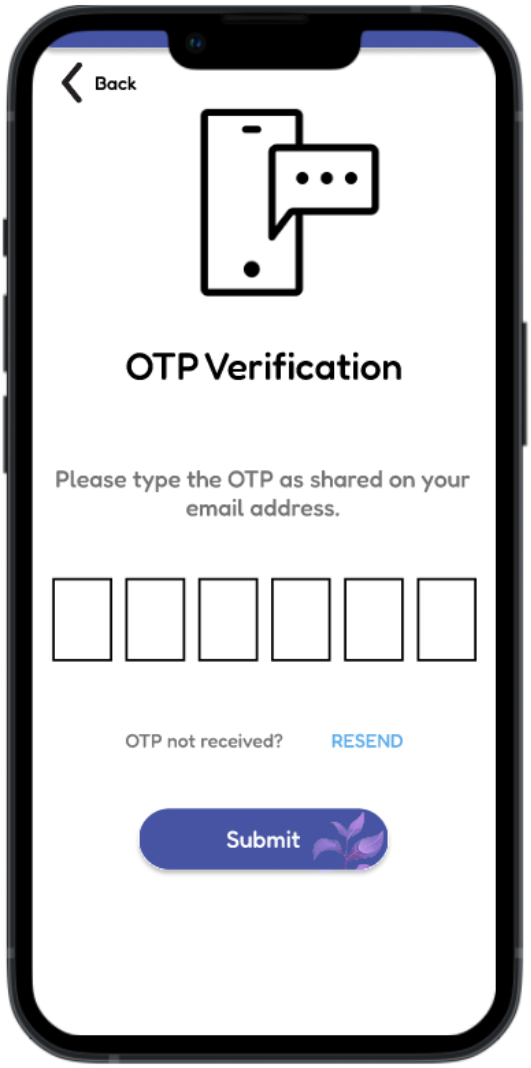

Figure 1.4.2.1a Login Page with One-time Password (OTP) (High-Fidelity Design)

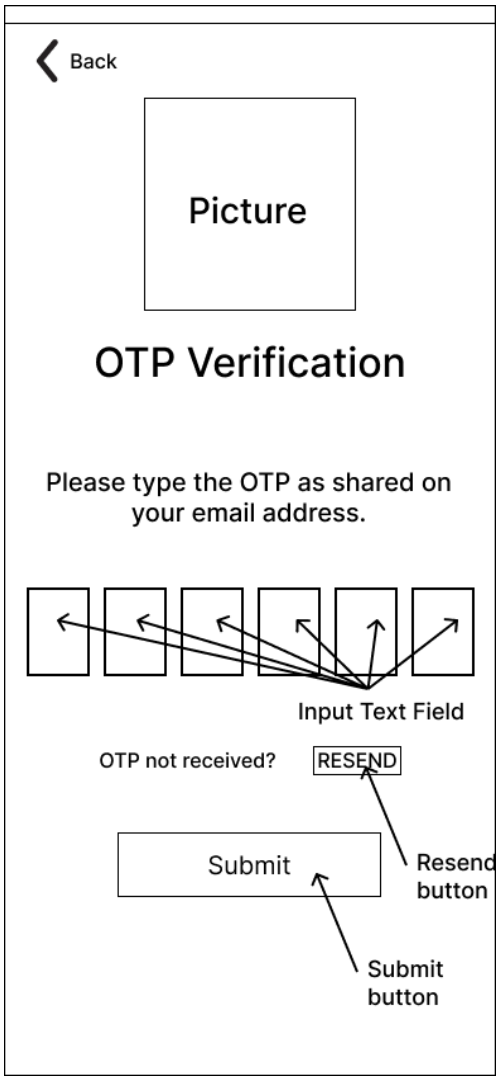

Figure 1.4.2.1b Login Page with One-time Password (OTP) (Low-Fidelity Design)

Based on ***Figure 1.4.1.1a*** previously**,** users then proceed to ***Figure 1.4.2.1a,*** Login page with OTP. Once users had entered the correct credentials. The OTP password is sent to the existing user's domain email address. Therefore, users are required to enter the received OTP verification inside the six squares fill. Any incorrect or unreceived OTP can be resolved by clicking the "RESEND" hyperlink. Lastly, users click the submit button to proceed to the following page, upon correct OTP validated and entered.

Differences between the ***Figure 1.4.2.1a*** and ***Figure 1.4.2.1b*** are the images for OTP verification process. In order to capture first insight for users to recognize OTP pattern more easier. Besides, the "RESEND" button is designed with light blue color instead of typical dark color, so that the users can rapidly click it. Again, if the users are not satisfied with the page or change of mind, users are allowed to click the back button.

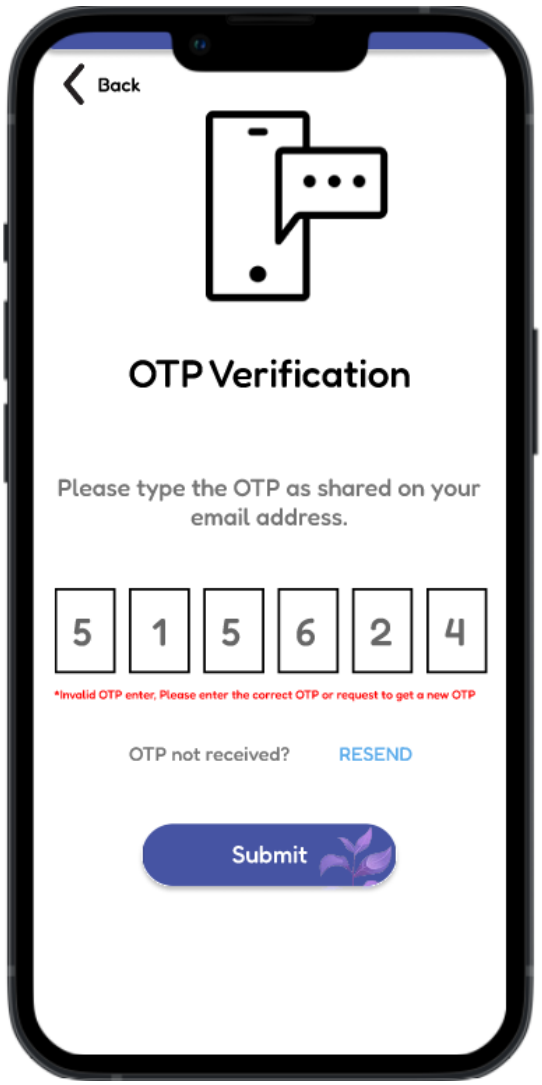

Figure 1.4.2.2 Login Page with One-time Password (OTP) when Failed.

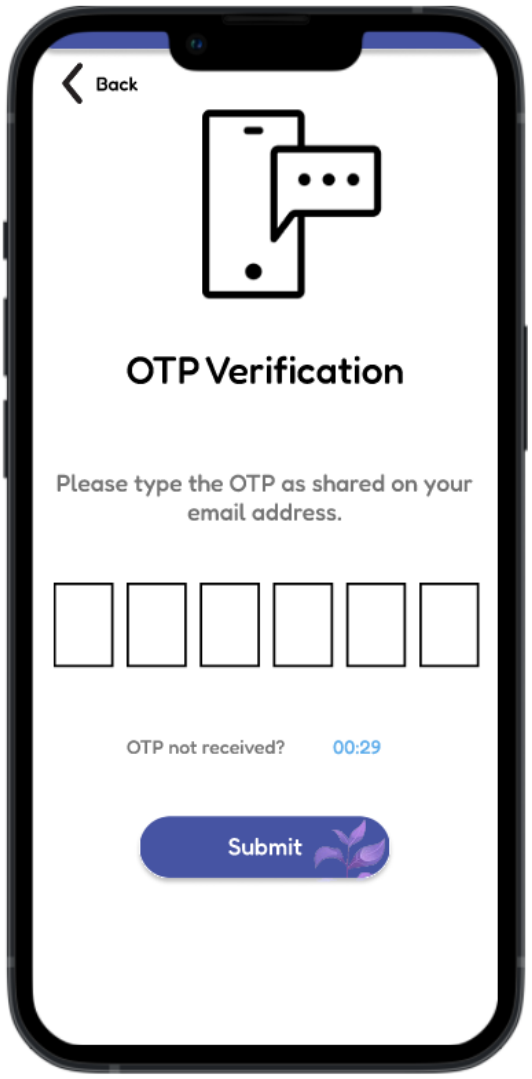

Figure 1.4.2.3 Requests the One-Time Password (OTP) again.

From the previous ***Figure 1.4.2.1a***, the user is inputting a One-Time Password (OTP) to the OTP verification page. The system will validate the correctness of the entered OTP, when it is an invalid OTP code, it will show the result as ***Figure 1.4.2.2***. Users are allowed to request the OTP again by pressing the "RESEND" button as the ***Figure 1.4.2.3***.

1.4.3. Forgot Password

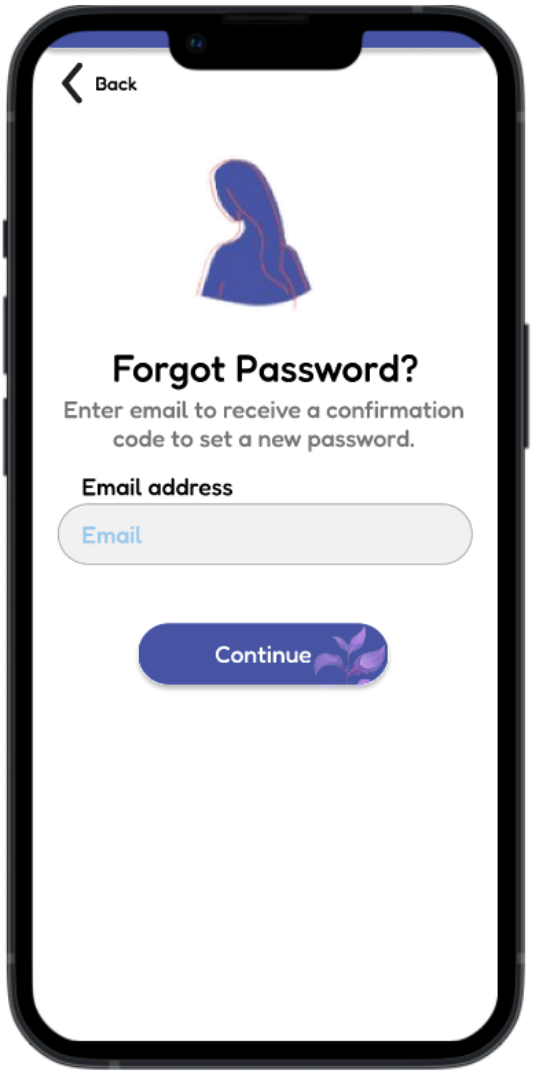

Figure 1.4.3.1a Forgot Password Page (High-Fidelity Design)

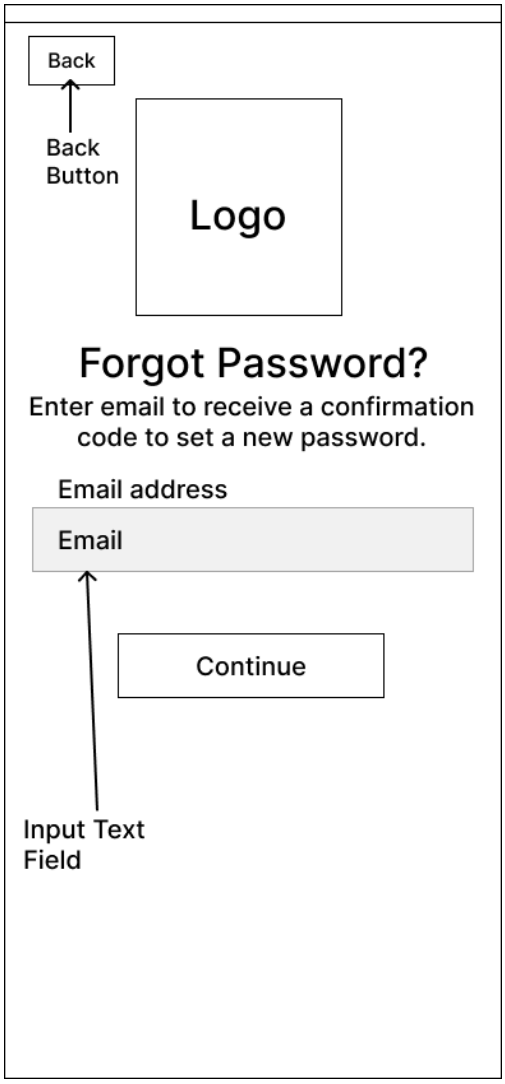

Figure 1.4.3.1b Forgot Password Page (Low-Fidelity Design)

Based on ***Figure 1.4.3.1a*** shows the Forgot Password Page, this page will only appear when users click the Forgot password hyperlink. It is usual for users to forget their password. For security reasons, users are required to enter a registered email address from "Mood Mentor" and can reset password.

Differences between the ***Figure 1.4.3.1a*** and ***Figure 1.4.3.1b*** are the instructions and background design are decent designs to prevent confusion or create any frustration when users already find it difficult to remember their passwords.

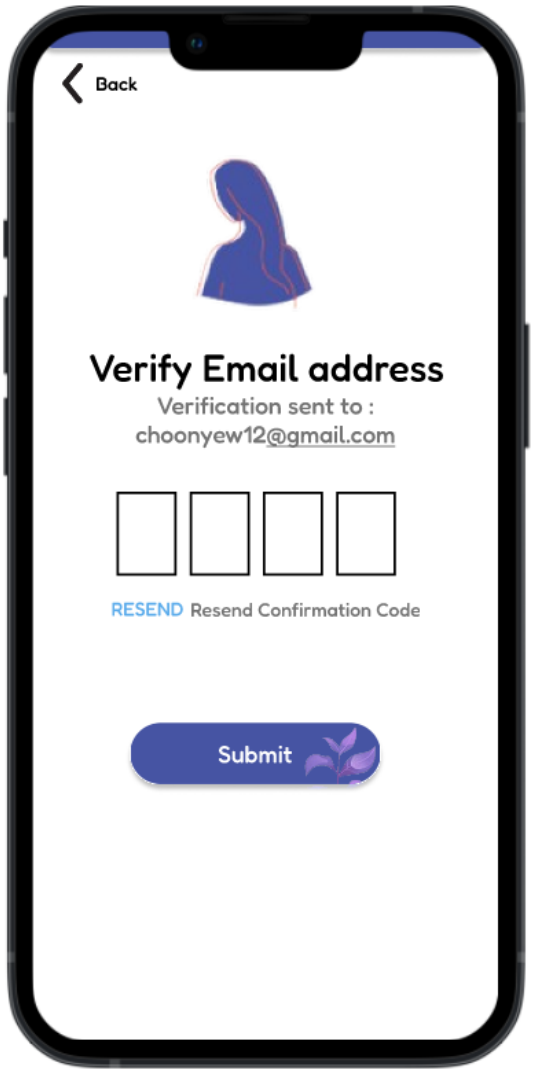

Figure 1.4.3.2a Forgot Password Verification Page (High-Fidelity Design)

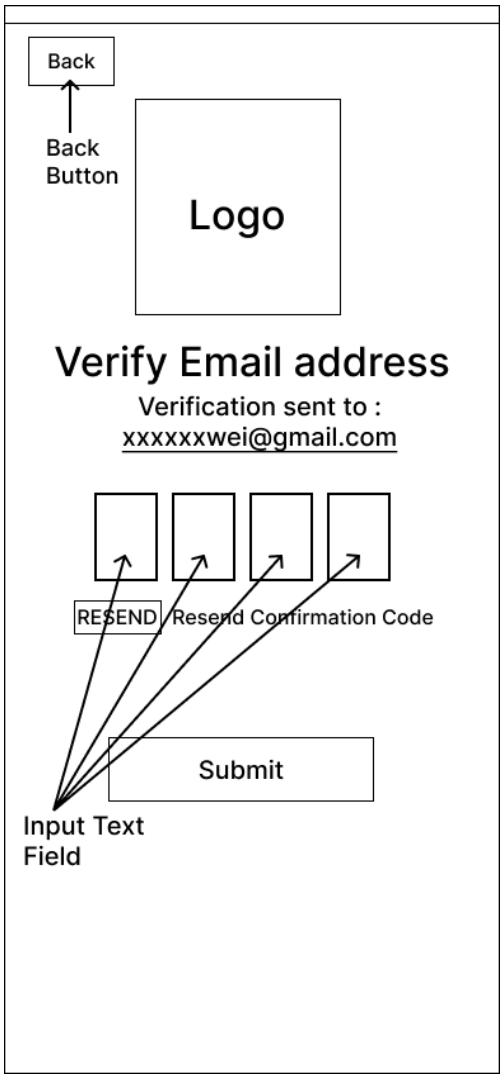

Figure 1.4.3.2b Forgot Password Verification Page (Low-Fidelity Design)

Based on ***Figure 1.4.3.2a*** shows Forget Password Verification Page upon users had input their existing registered email address in ***Figure 1.4.3.1a*** Forgot Password page. Users are required to check their domain email inbox to get the 4 confirmation codes. In order to complete the email address verification to reset password, users are required to enter the following 4 digit code to the box then submit. The Submit button then navigates back to the login page.

Differences between the ***Figure 1.4.3.2a*** and ***Figure 1.4.3.2b*** are the instructions and background design are decent designs to prevent confusion or create any frustration. A Resend

button is designed with different color to ease users whenever they do not receive the code or prefer to resend due to desired.

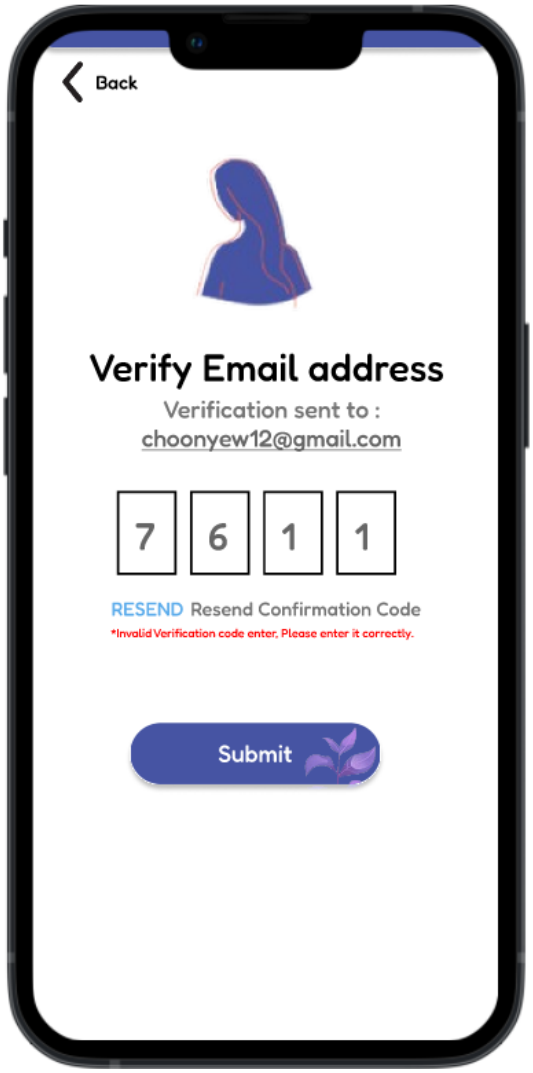

Figure 1.4.3.3 Forgot Password Verification Page

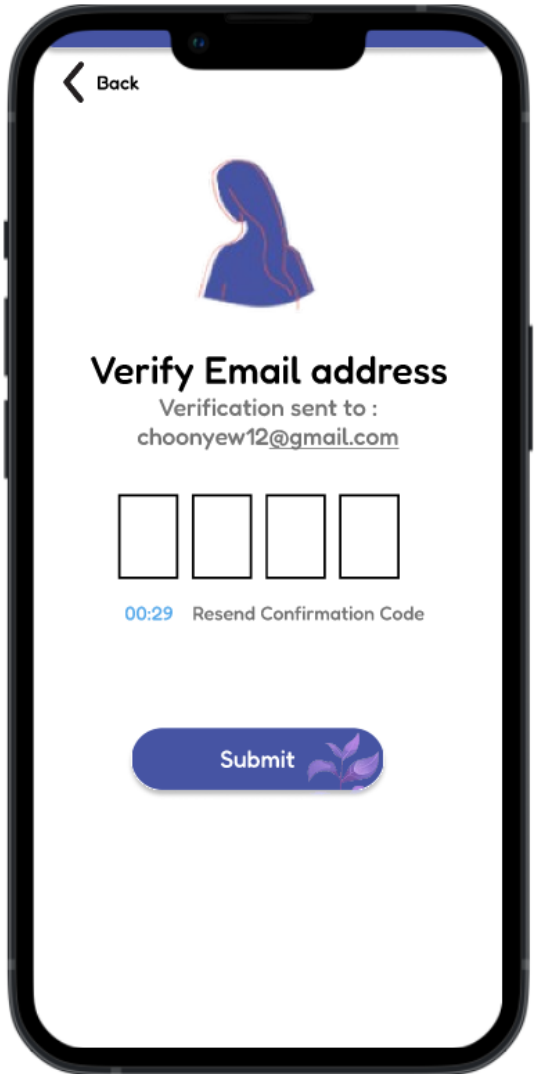

Figure 1.4.3.4 Requests the confirmation code again

The system will validate the correctness of the entered confirmation code. When it is an invalid confirmation code, it will show the result as ***Figure 1.4.3.3***. Users are allowed to request the confirmation code again by pressing the "RESEND" button as the ***Figure 1.4.3.3***. Then the "RESEND" button will change become a countdown of less than 1 minute which is shown in ***Figure 1.4.3.4***.

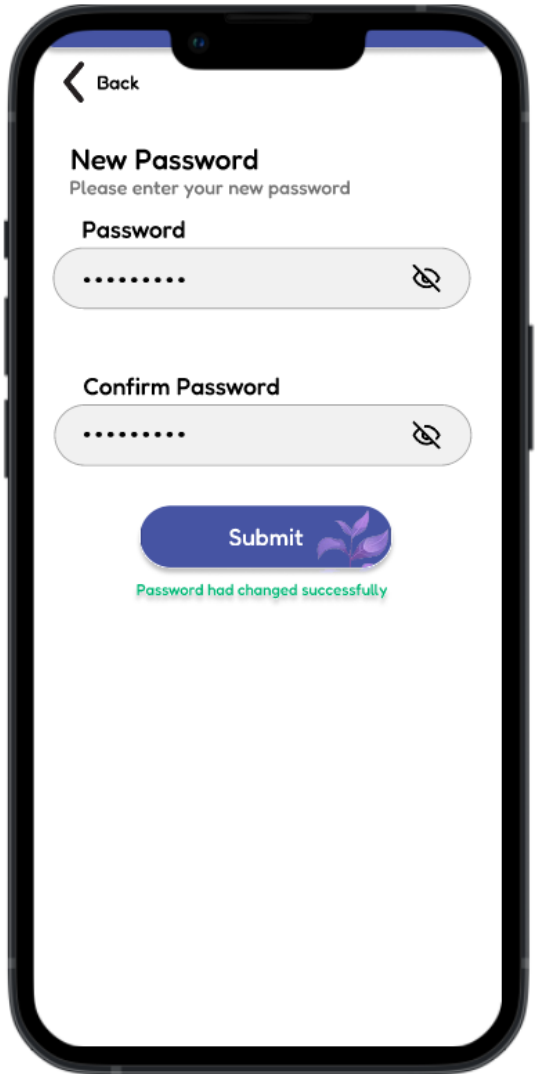

Figure 1.4.3.5 Reset Password Page

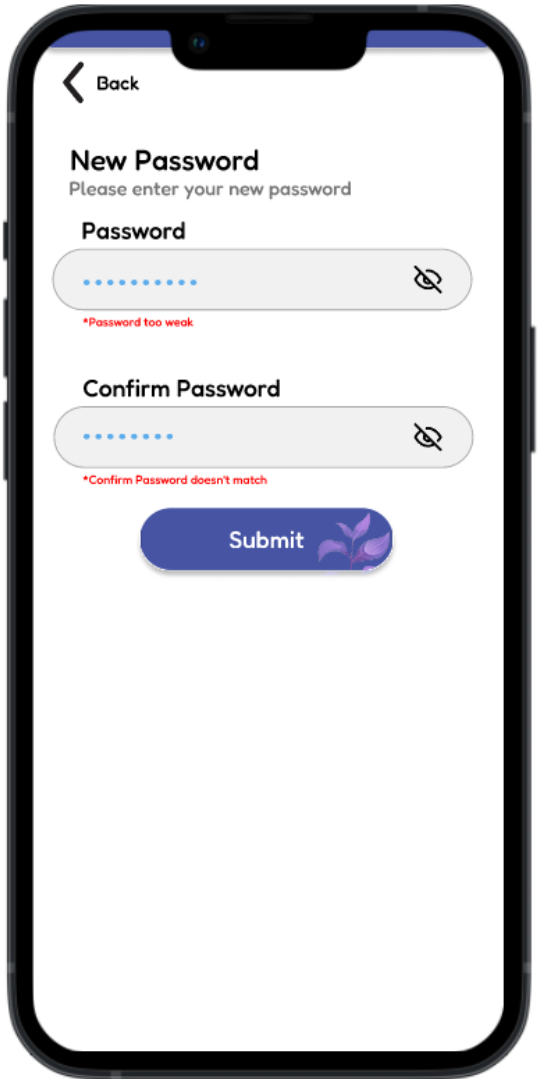

Figure 1.4.3.6 Reset Password Page with validation

These figures indicate that users would like to reset passwords. Users are required to create new passwords and confirmation passwords as well. Then, ***Figure 1.4.3.6*** shows the reset password page with validation to remind users and guide them remake the passwords according to the meeting requirements.

1.5. Login Page (Face ID)

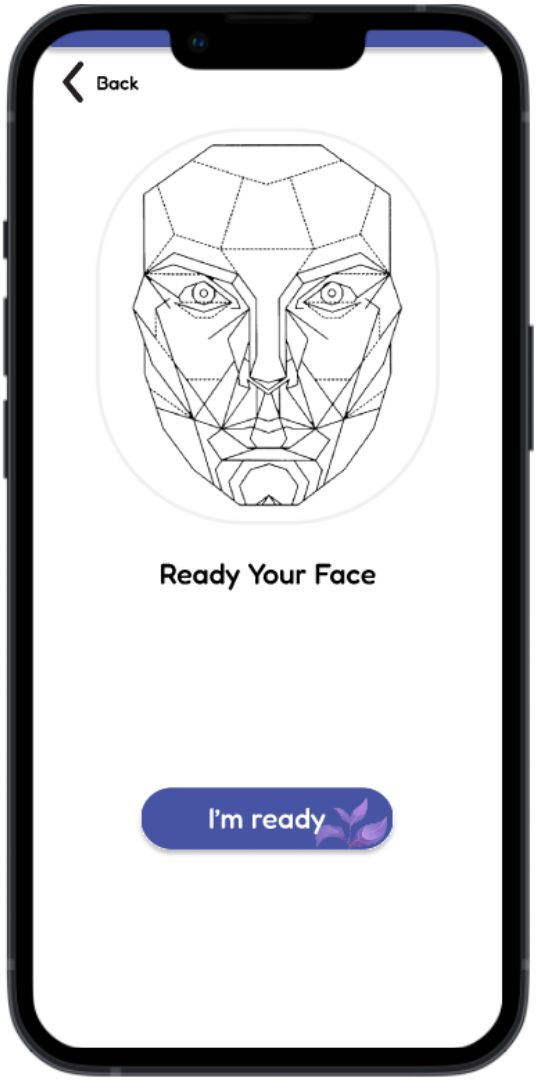

Figure 1.5.1.1a Login Page with Face ID (High-Fidelity Design)

Figure 1.5.1.1b Login Page with Face ID (Low-Fidelity Design)

Based on ***Figure 1.4.1.1a*** previously**,** users are allowed to select Face ID as alternative login in ***Figure 1.5.1.1a*** as shown as above. Firstly, users are required to prepare their physical face infront devices' front camera, in condition the camera must be accessed. The following process requires users to simply place a face according to the Face detection. Then click the “I’m ready” button to start detecting their faces.

Differences between the ***Figure 1.5.1.1a*** and ***Figure 1.5.1.1b*** are the Face detection functions simply display the representation, meanwhile, the GUI design is designed with human golden ratio face placement in order to make sure users are doing the correct way to place their faces.

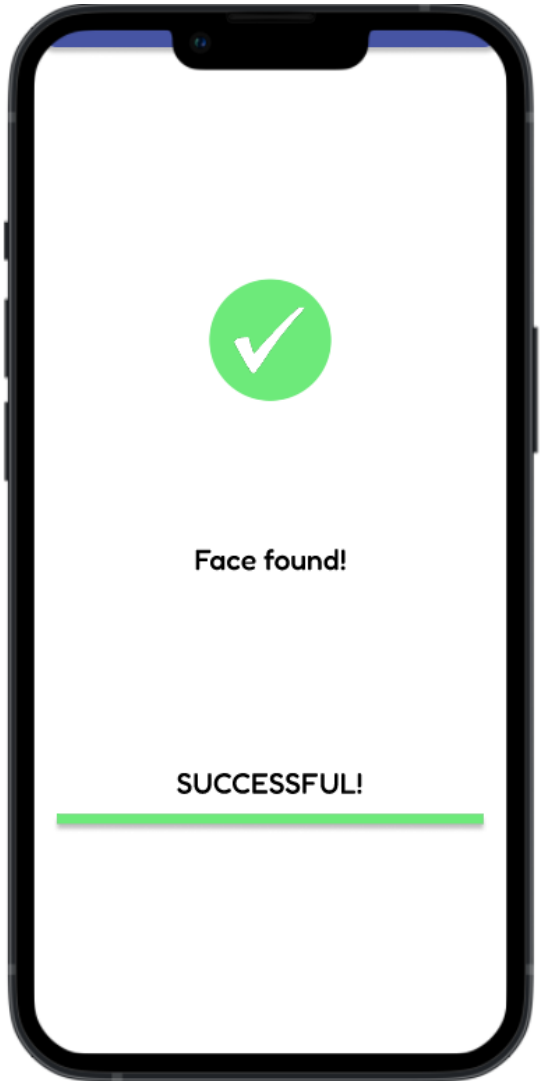

Figure 1.5.1.2 Login Face ID Successfully

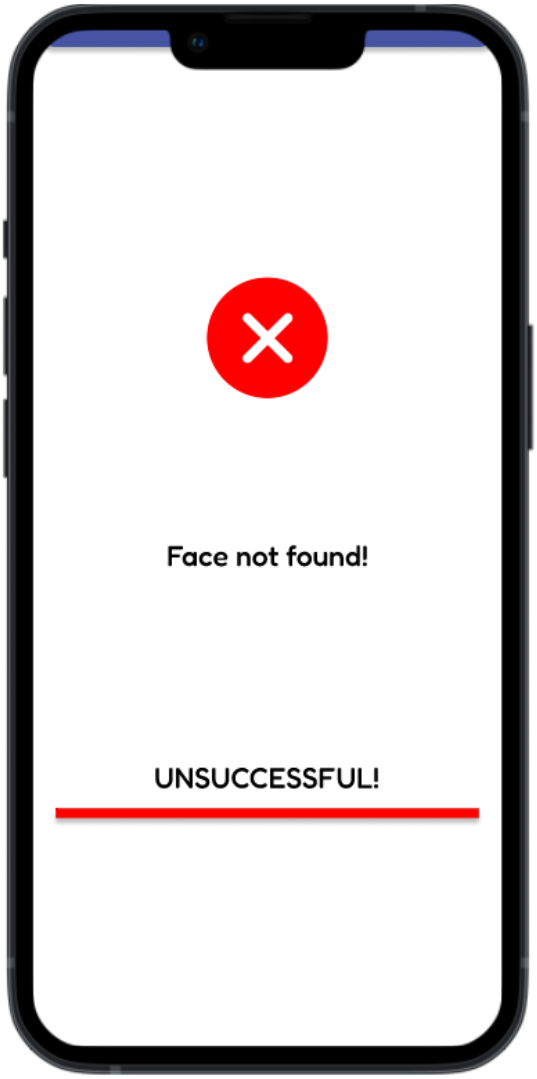

Figure 1.5.1.3 Login Face ID Unsuccessfully

When the face ID is collected from the user successfully, it will display ***Figure 1.5.1.2***. Whereas when the face ID is collected from the user unsuccessfully, it will go to ***Figure 1.5.1.3*** which indicates that the face wasn't been registered. Then, the user needs to go back to ***Figure 1.3.2.1*** in order to redo the registration face ID again.

1.6. Main Page & Side Bar

1.6.1. Main Page

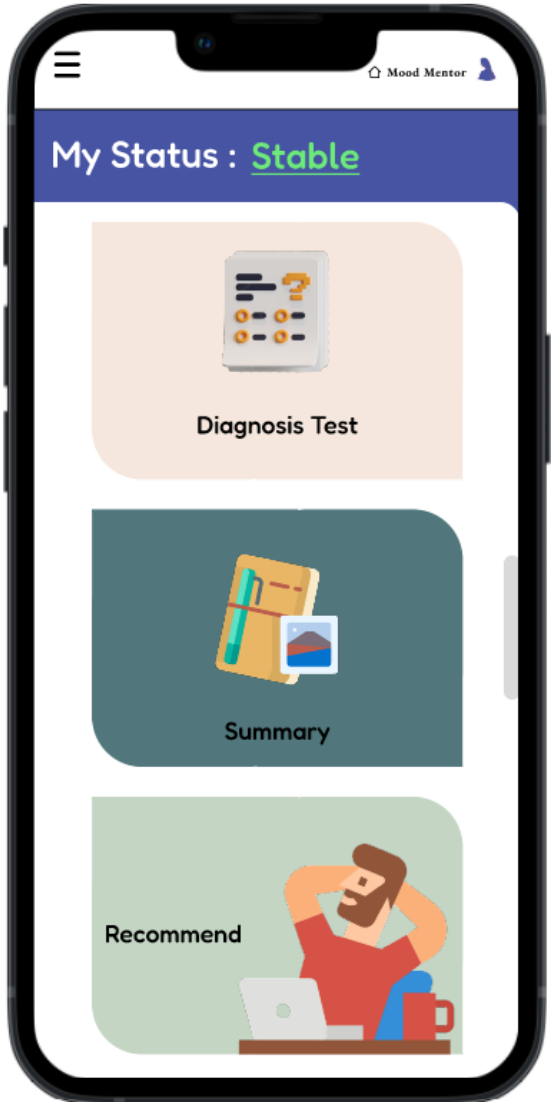

Figure 1.6.1.1a "Mood Mentor" Home Page (High-Fidelity Design)

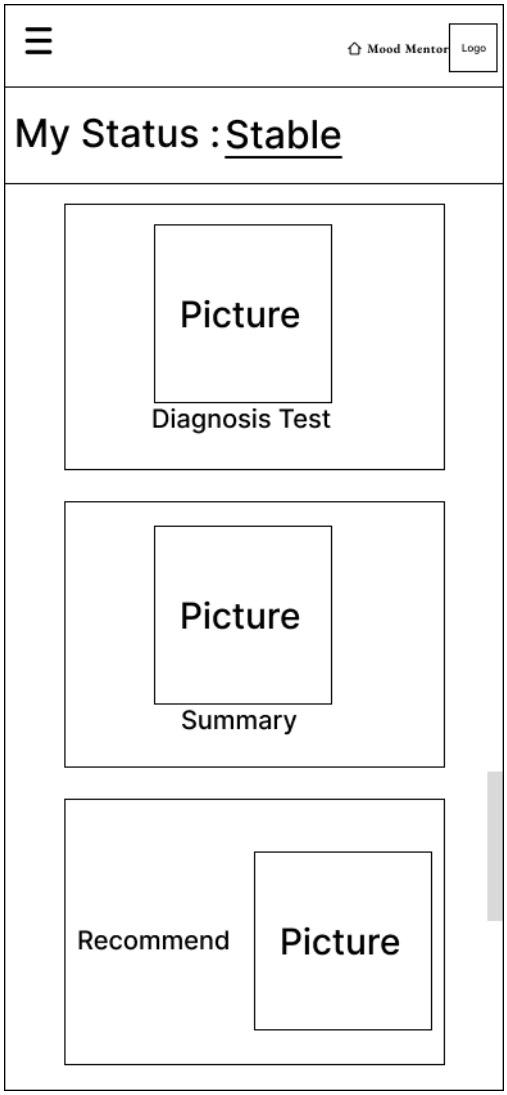

Figure 1.6.1.1b "Mood Mentor" Home Page (Low-Fidelity Design)

Based on ***Figure 1.6.1.1a*** shows the "Mood Mentor " main or home page**,** users mostly interact in the homepage. Homepage can be clicked from the logo name from the navigation button.

Differences between the ***Figure 1.6.1.1a*** and ***Figure 1.6.1.1b*** are the design must be significantly relaxed and color in light. Each of the functions displayed in the functions are added

with pictures and titles as well. Lastly, the apps emphasize the depression condition as well to remind users to control their emotions.

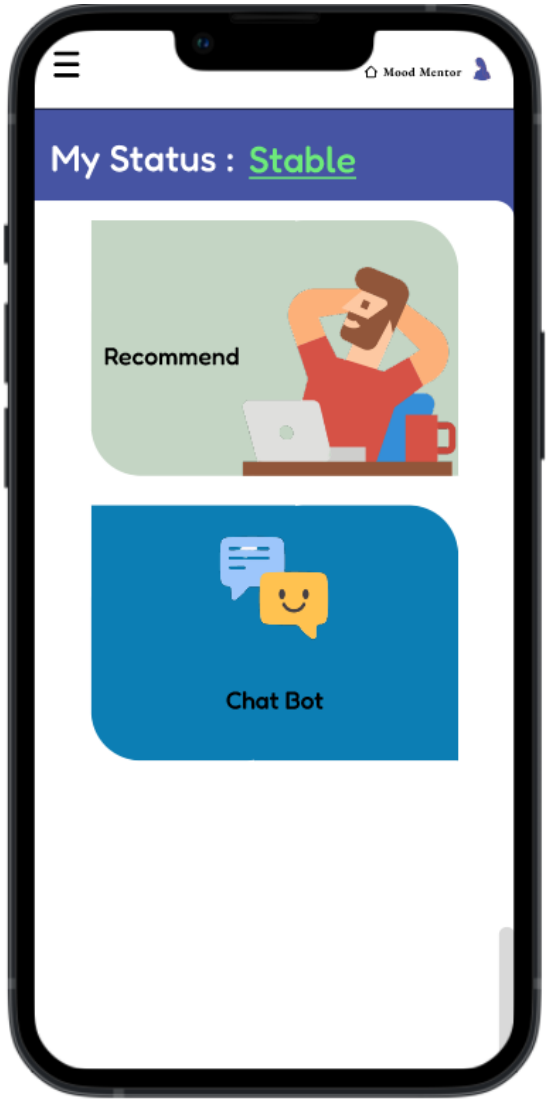

Figure 1.6.1.2 "Mood Mentor" Home Page below part

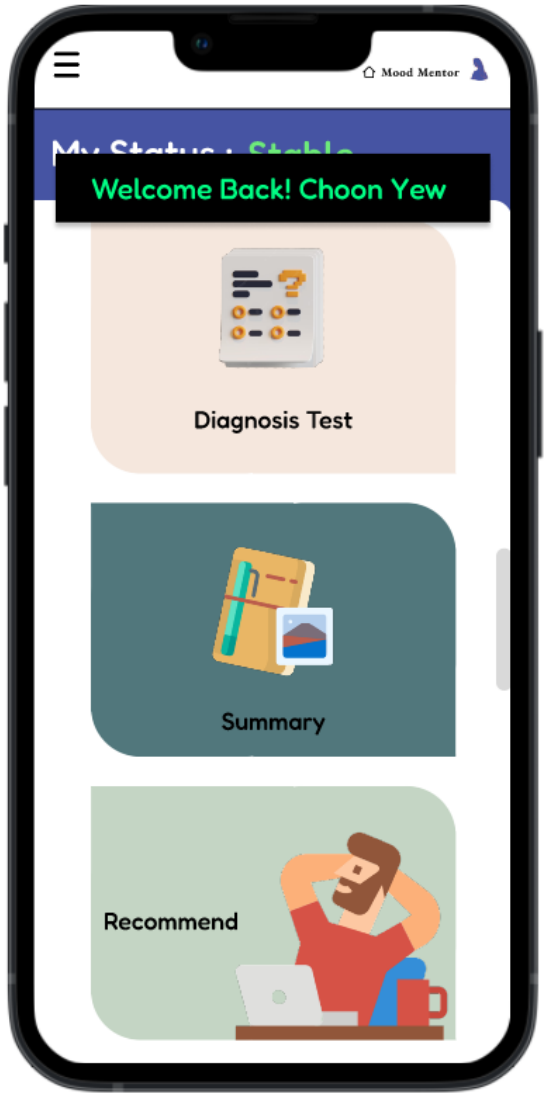

Figure 1.6.1.3 Successful message when the user successfully logs in to the "Mood Mentor"

Based on ***Figure 1.6.1.2*** shows that the remaining function of the application is the chatbot, to get into that page, all the user needs to do is just scroll down the home page to the bottom. Besides that, ***Figure 1.6.1.3*** shows the welcome message to the user who logged into the system successfully.

1.6.2. Sidebar & Sign Out

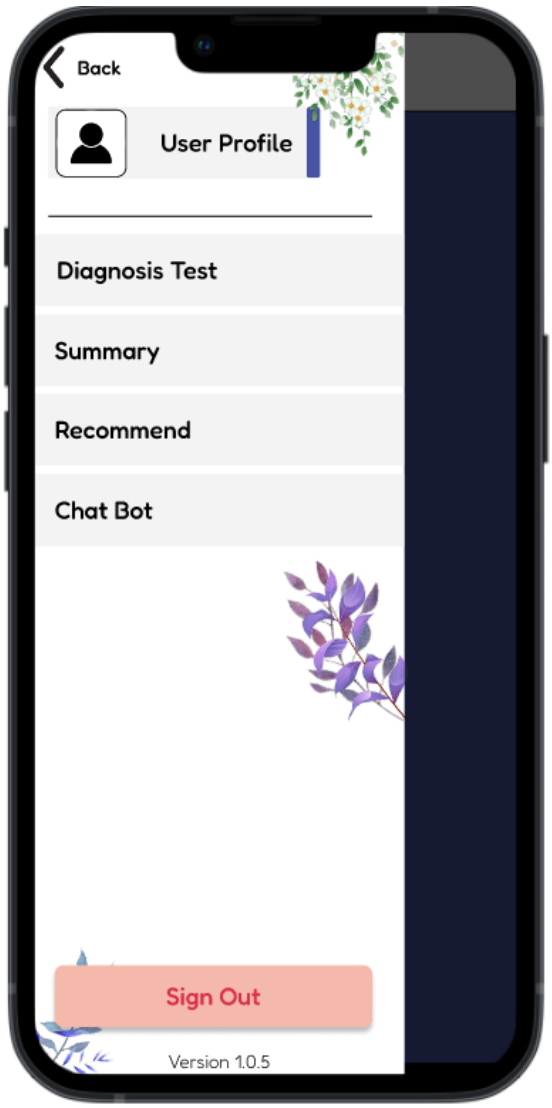

Figure 1.6.2.1 Sidebar for the apps

Figure 1.6.2.2 Sign Out from the apps.

Based on ***Figure 1.6.2.1*** shows the sidebar design of the app. It will allow the user to choose a certain function of the application to use more quickly. For example, when the user is currently at the Chatbot page if the user wants to use the Diagnosis Test function, the user can directly use the sidebar instead of clicking on the homepage of the system and then only selecting the function that the user wants to use. Besides that, ***Figure 1.6.2.2*** shows the pop-up message to notify the user that they confirm to sign out from the system or they accidentally click the sign-out button.

1.7. User Profile

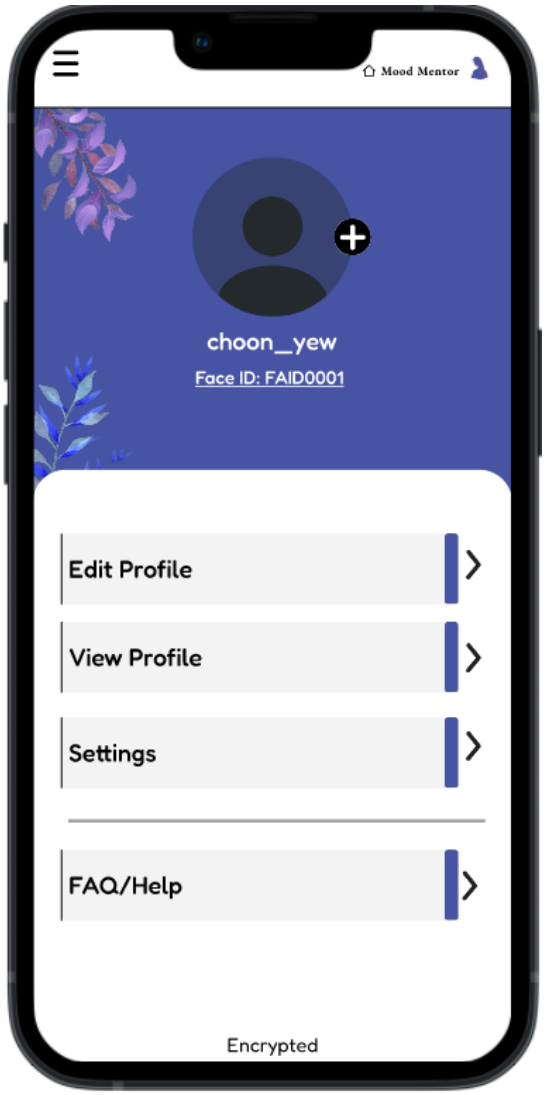

Figure 1.7a User Profile Page (High-Fidelity Design)

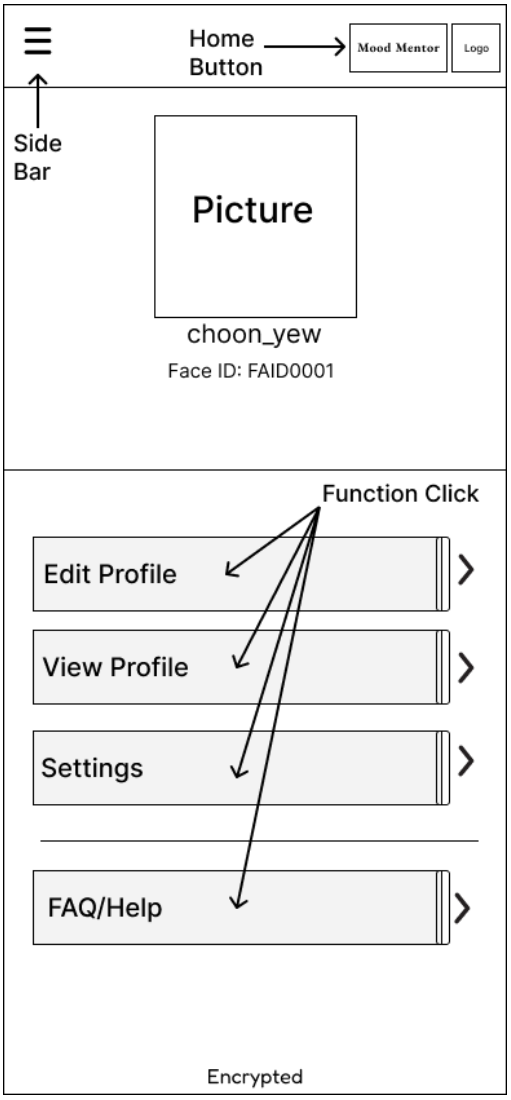

Figure 1.7b User Profile Page (Low-Fidelity Design)

Based on ***Figure 1.7a*** shows the User Profile page**.** User Profile page mainly allows users to access different activities such as Edit Profile, View Profile, Settings and FAQ/Help. From the main user Profile page, users are also able to change their profile pictures via the profile icon. For easier recognition, the user's name is displayed under it, Face ID prospectively as well.

Differences between the ***Figure 1.7a*** and ***Figure 1.7b*** are the color palette using themes which intend to meet consistency and also create soothing when users interact. The functions are clickable which redirect users to corresponding pages.

1.7.1. Edit Profile

Figure 1.7.1.1a Edit Profile Page (High-Fidelity Design)

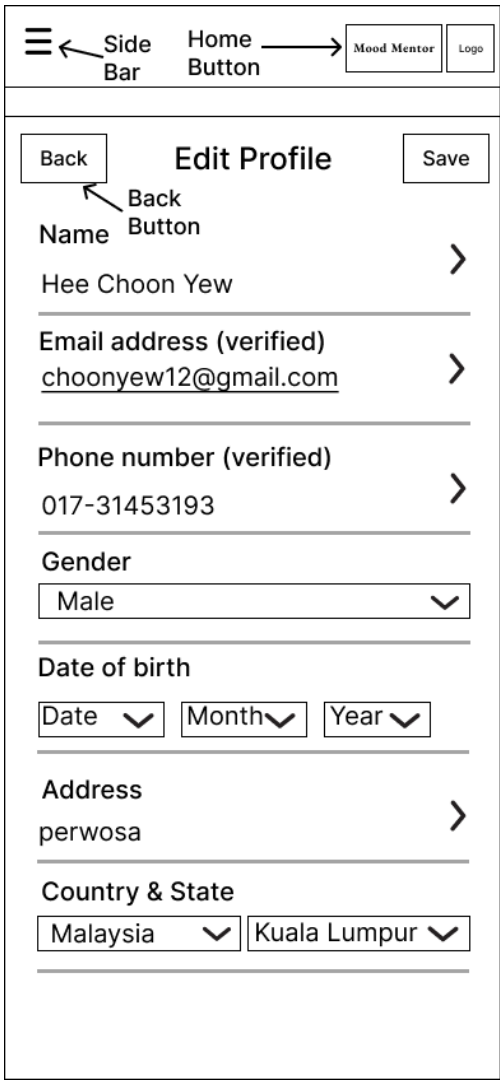

Figure 1.7.1.1b Edit Profile Page (Low-Fidelity Design)

Based on ***Figure 1.7.1.1a*** shows the Edit Profile page**.** This page signals users to edit profile information such as Name, Email address, phone number, etc. After the modification or any changes, users are recommended to click the Save button from the top right corner.

Differences between the ***Figure 1.7.1.1a*** and ***Figure 1.7.1.1b*** are as minor as possible for easier and faster modifications. Such as a dropdown list for gender choices, Date of birth and Country, and State.

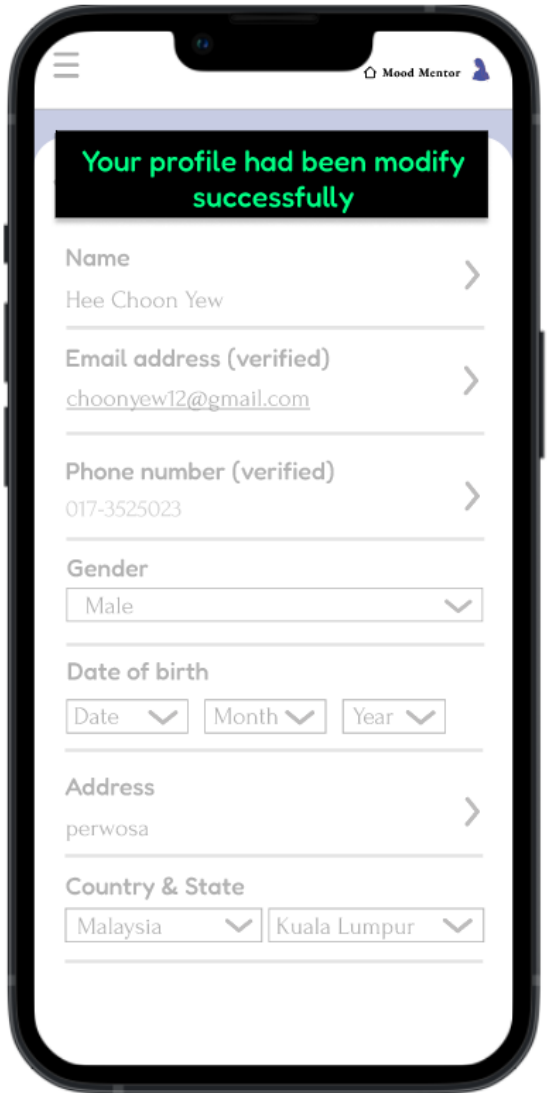

Figure 1.7.1.2 Successful Message when editing the profile successfully

Based on ***Figure 1.7.1.2*** shows that the user had edited their personal profile successfully. After the profile has been modified successfully, the system will redirect the user to ***Figure 1.7a*** user profile.

1.7.2. View Profile

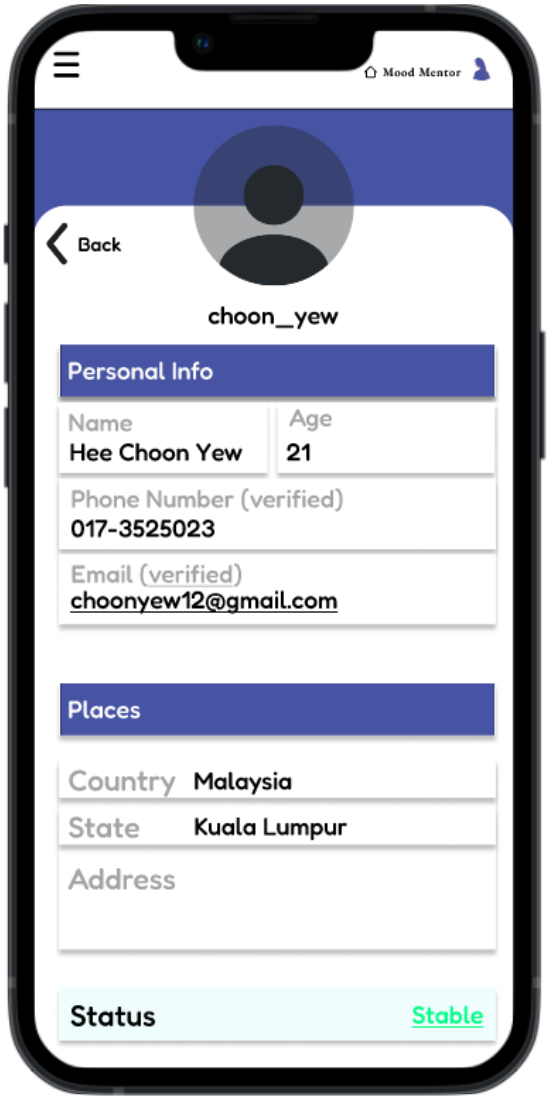

Figure 1.7.2.1a View Profile Page (High-Fidelity Design)

Figure 1.7.2.1b View Profile Page (Low-Fidelity Design)

Based on ***Figure 1.7.2.1a*** shows the View Profile Page. This page mainly only displays any user information as possible.

The difference between the ***Figure 1.7.2.1a*** and ***Figure 1.7.2.1b*** is the table design with separation which distributes personal information and places sections. Lastly, the user's depression conditions are mandatory to be displayed, and differences with color as well.

1.7.3. Settings

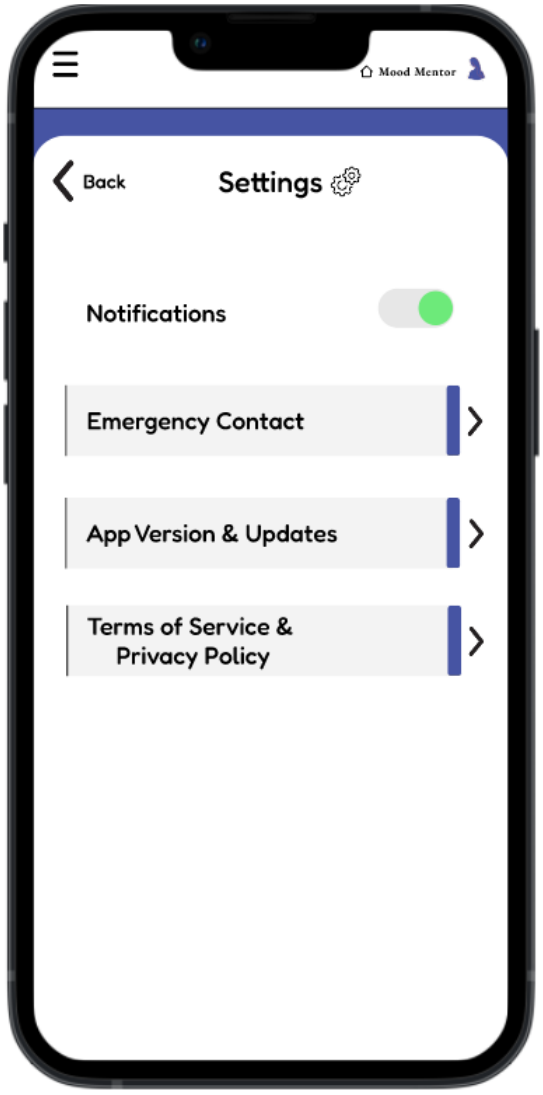

Figure 1.7.3.0.1a Setting Page (High-Fidelity Design)

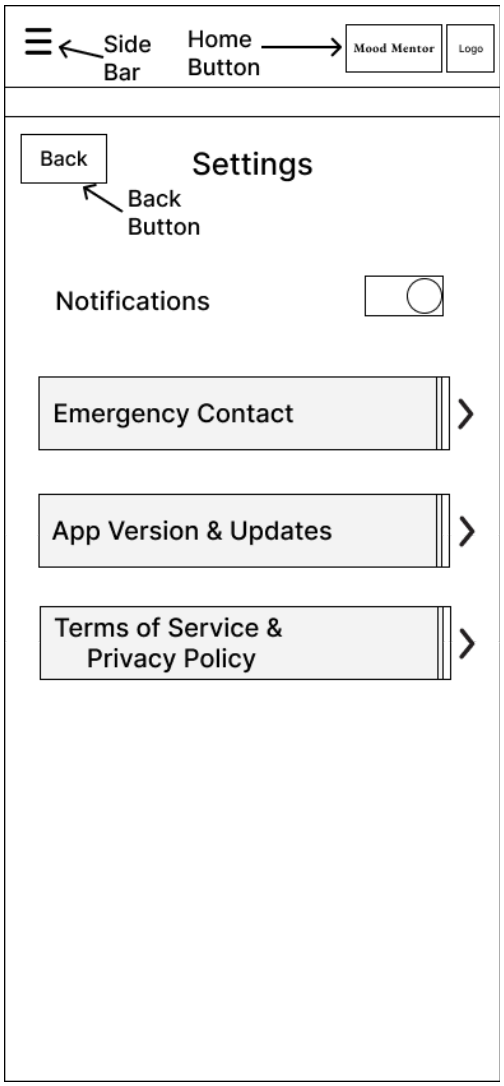

Figure 1.7.3.0.1b Setting Page (Low-Fidelity Design)

Based on ***Figure 1.7.3.0.1a*** shows the Settings Page. A settings page is mandatory designed in the "Mood Mentor" application, therefore settings are hereby to allow users to configure sectors such as Notifications, Emergency Contact, view App Version and Updates, and lastly Terms and Policy. This is the principle of designing the applications and creating reliability for users.

The difference between the ***Figure 1.7.3.0.1a*** and the ***Figure 1.7.3.0.1b*** is the notifications. Notifications are designed using push notifications buttons so that users can easily recognize the notifications settings either on or off based on desire.

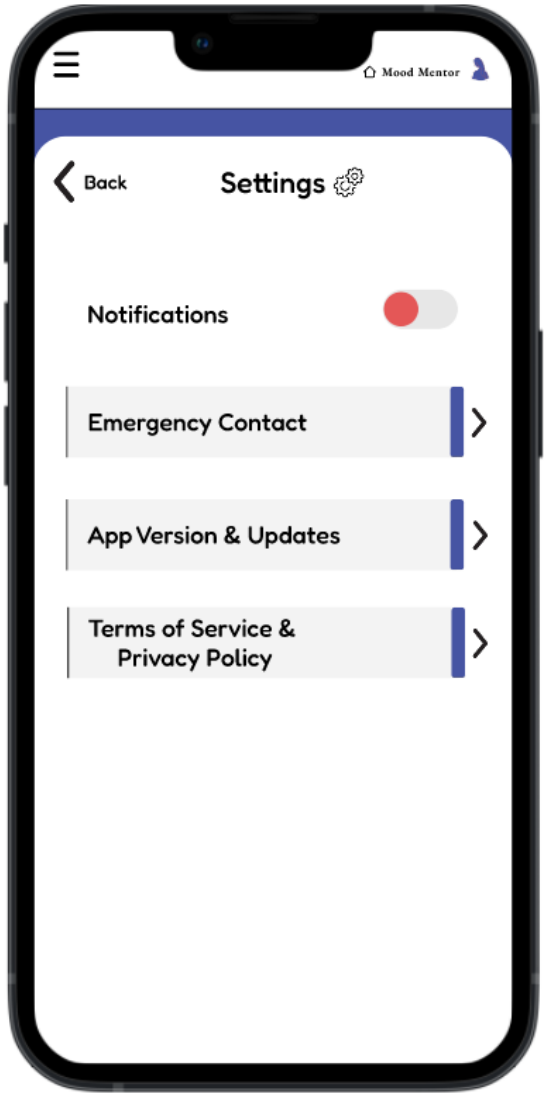

Figure 1.7.3.0.2 Notification of the Settings Page

Based on ***Figure 1.7.3.0.2*** shows that the button of the notification had changed to red color which shows that the user doesn't want to receive any of the notifications from the application.

1.7.3.1. Emergency Contact

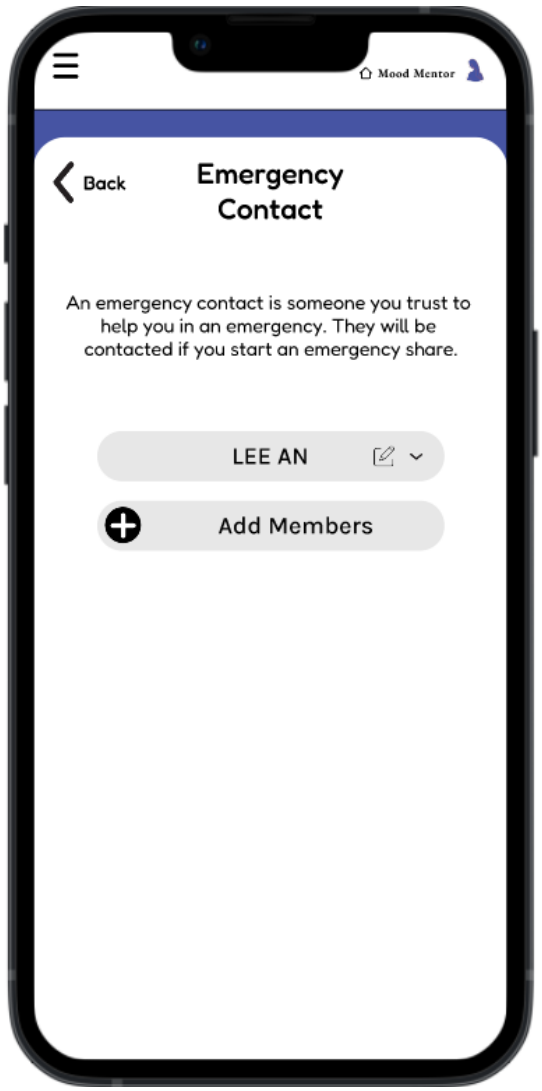

Figure 1.7.3.1.1 Emergency Contact page

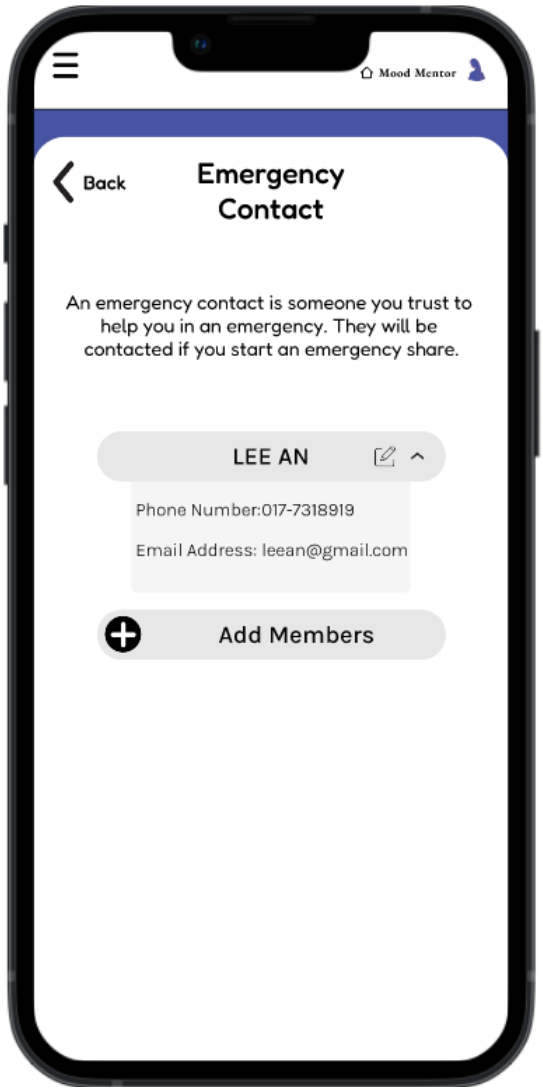

Figure 1.7.3.1.2 DropDown user contact details.

Based on ***Figure 1.7.3.1.1*** shows the emergency contact of the user. It's to help the user when there are any unexpected cases happen, there will be always at least one contact number that is able to be contacted. Besides, Figure 1.7.3.1.2 shows the details information of each emergency contact person.

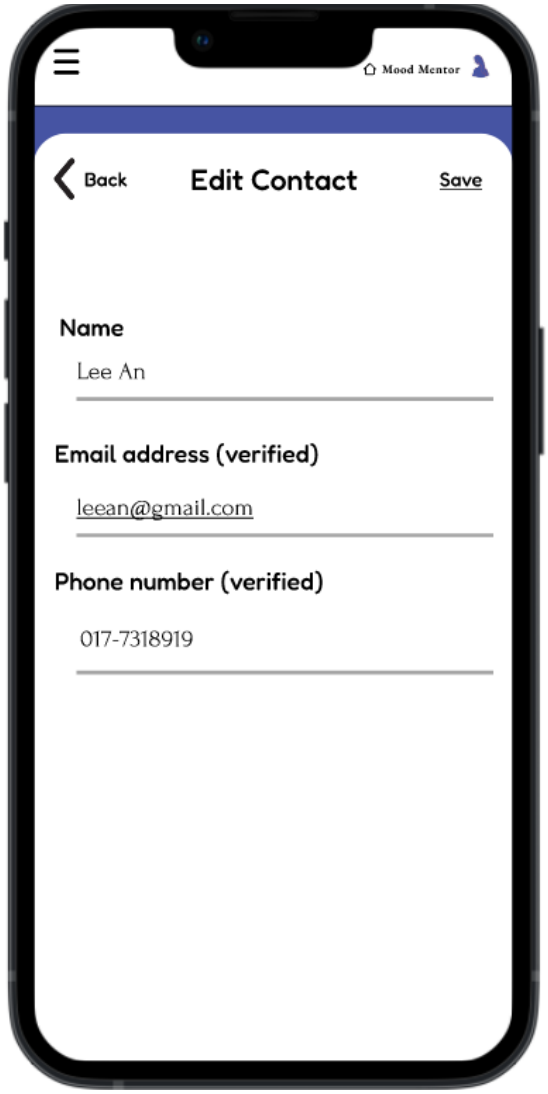

Figure 1.7.3.1.3 Edit Emergency Contact

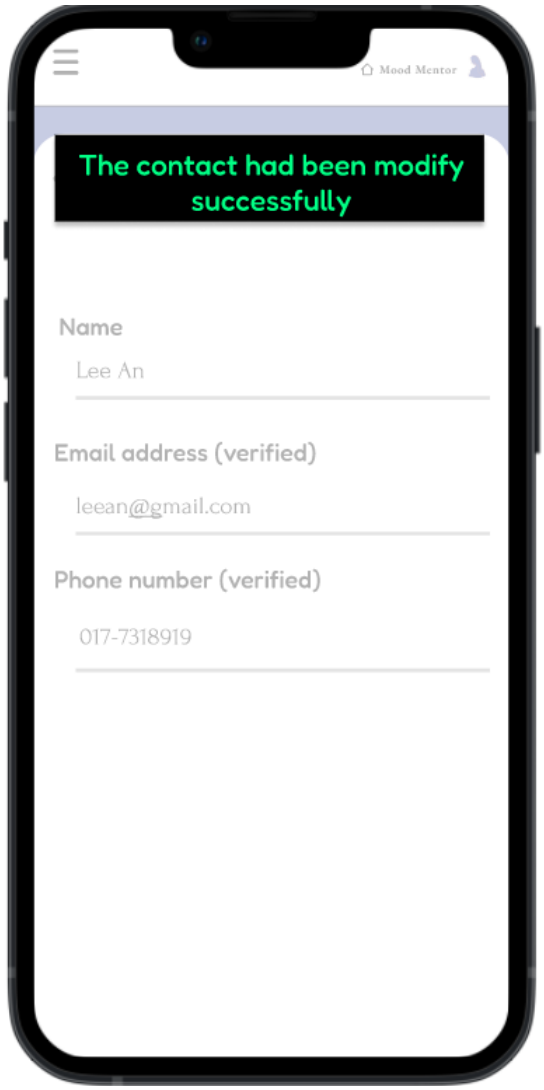

Figure 1.7.3.1.4 Successful message when contact modified

Based on ***Figure 1.7.3.1.3,*** users are allowed to edit their emergency contact as known as contact personal contact information such as name, email address, and phone number. After the modification, users are recommended to click the Save button from the top right corner. A pop-out message will then be displayed on top to remind users the changes have been made which show same as the ***Figure 1.7.3.1.4***.

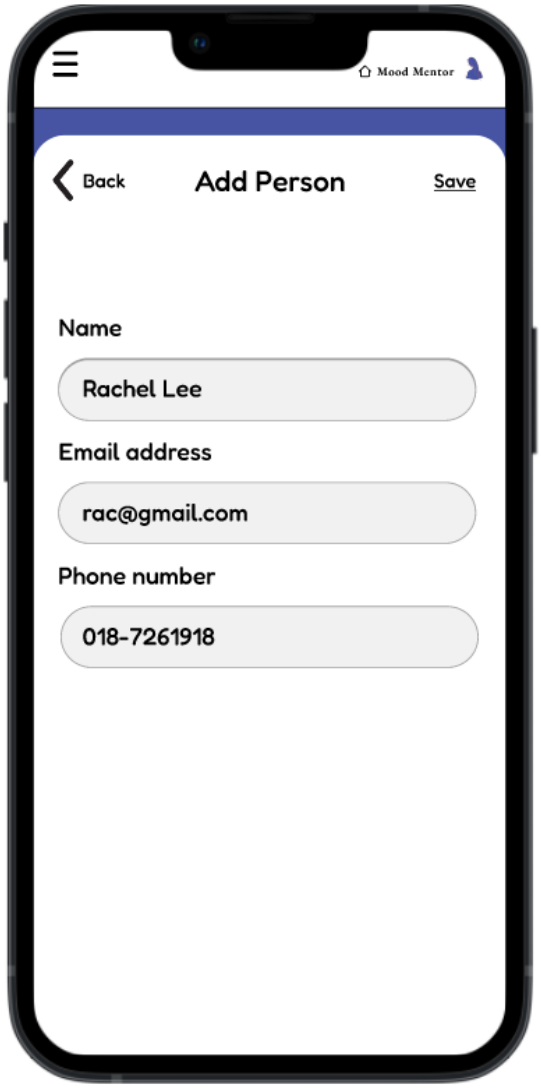

Figure 1.7.3.1.5 Emergency Contact add person

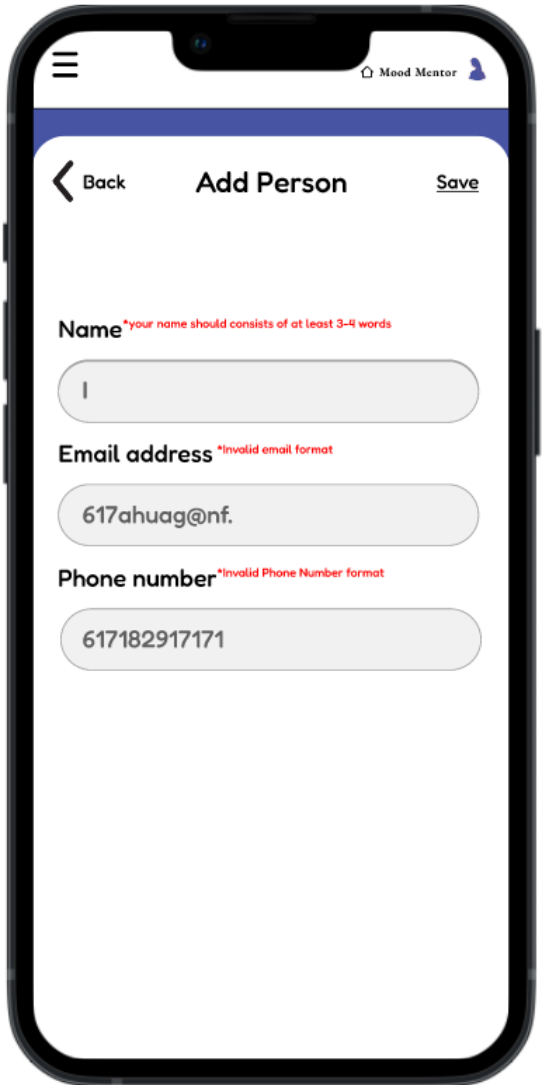

Figure 1.7.3.1.6 Validation when adding the person

Based on ***Figure 1.7.3.1.5*** shows the emergency contact of the adding the new contact. There will be few format validations on the input field as shown in ***Figure 1.7.3.1.6*** which help the user to know what should be input correctly.

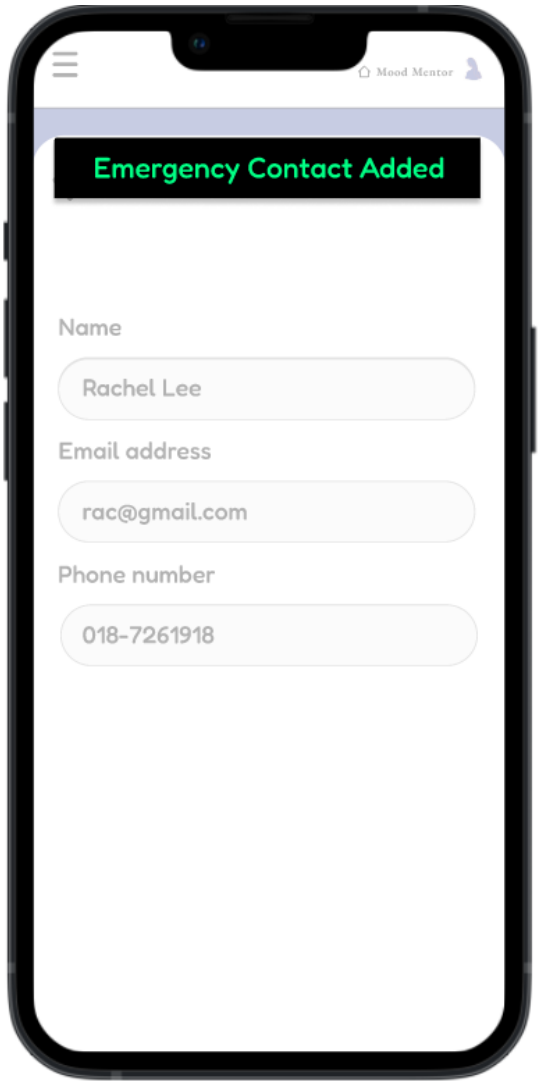

Figure 1.7.3.1.7 Emergency Contact added person successfully

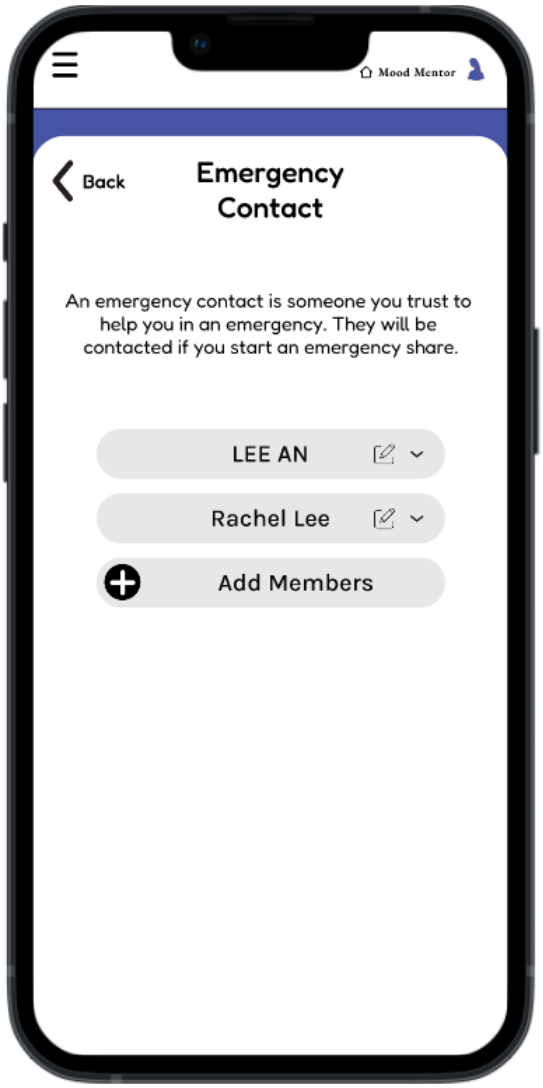

Figure 1.7.3.1.8 A new contact had been added to the system

Based on ***Figure 1.7.3.1.7*** shows a successful message on adding a new contact to the system. After the contact had been added to the system, which is shown in ***Figure 1.7.3.1.8***.

1.7.3.2. App Version & Updates

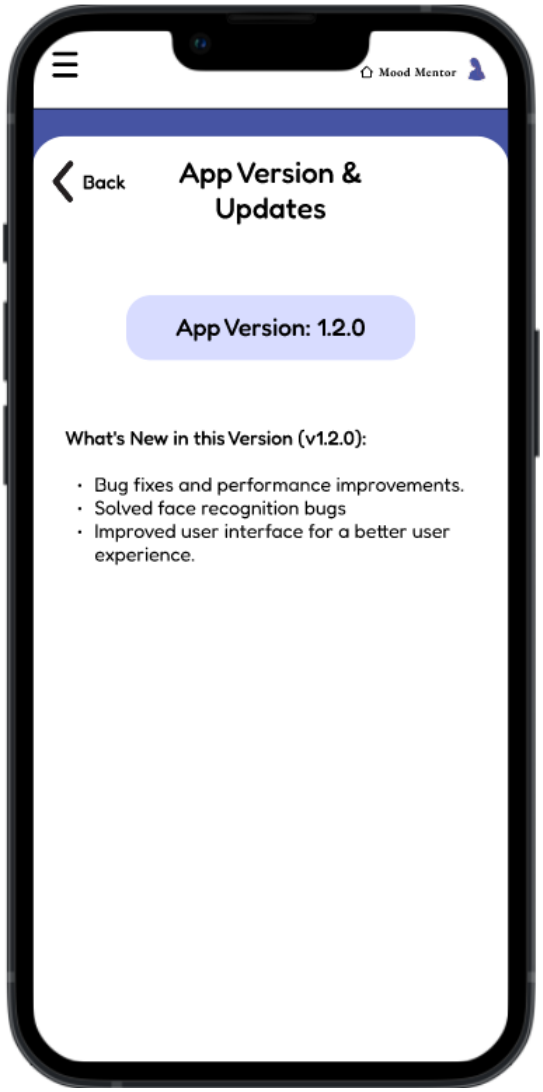

Figure 1.7.3.2.1 The Current Version of the Apps

Figure 1.7.3.2.1 shows the current version of the apps and also specifies the new features that allow the user to explore. Clicking the "Back" button from ***Figure 1.7.3.2.1*** above will help the user go back to the ***Figure 1.7.3.0.1a*** setting page.

1.7.3.3. Term of Service & Privacy Policy

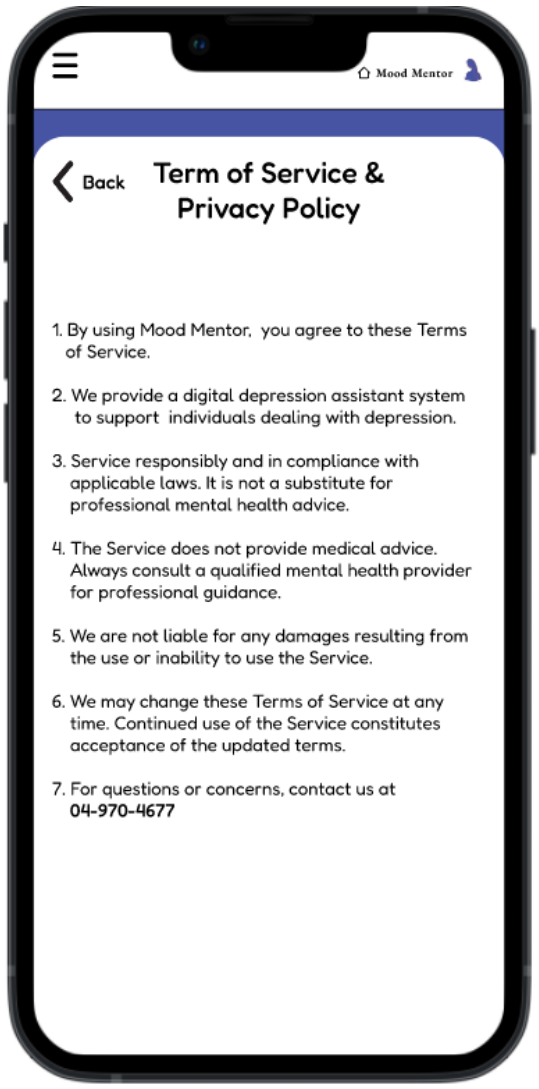

Figure 1.7.3.3.1 The Term of Service & Privacy Policy of the Apps

Figure 1.7.3.3.1 shows the term of service and privacy policy that should be read by the user before they start to use the system. Clicking the "Back" button from ***Figure 1.7.3.3.1*** above will help the user go back to the ***Figure 1.7.3.0.1a*** setting page.

1.7.4. FAQ/Helps

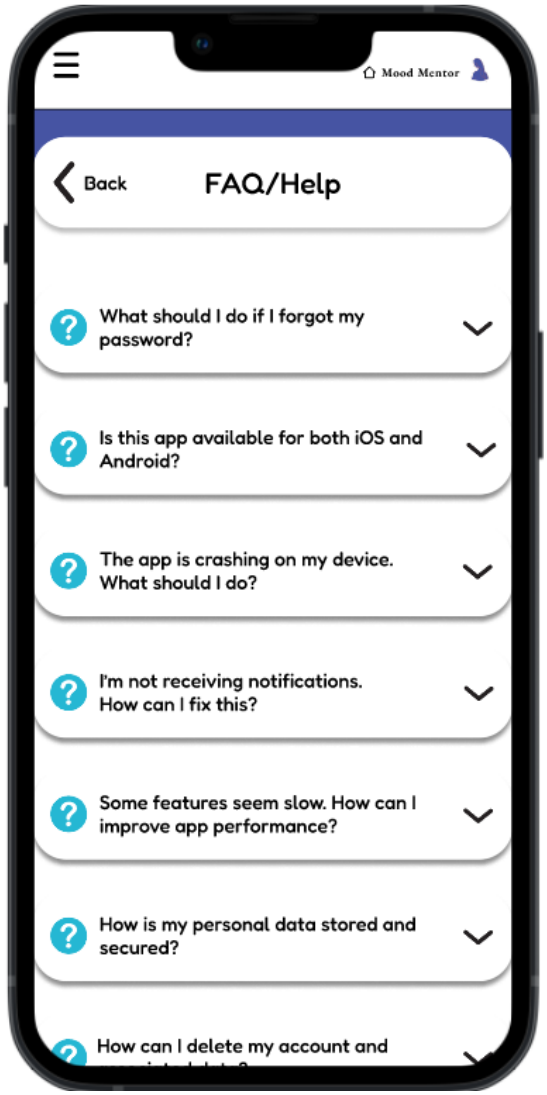

Figure 1.7.4.1a FAQ/Help Page (High-Fidelity Design)

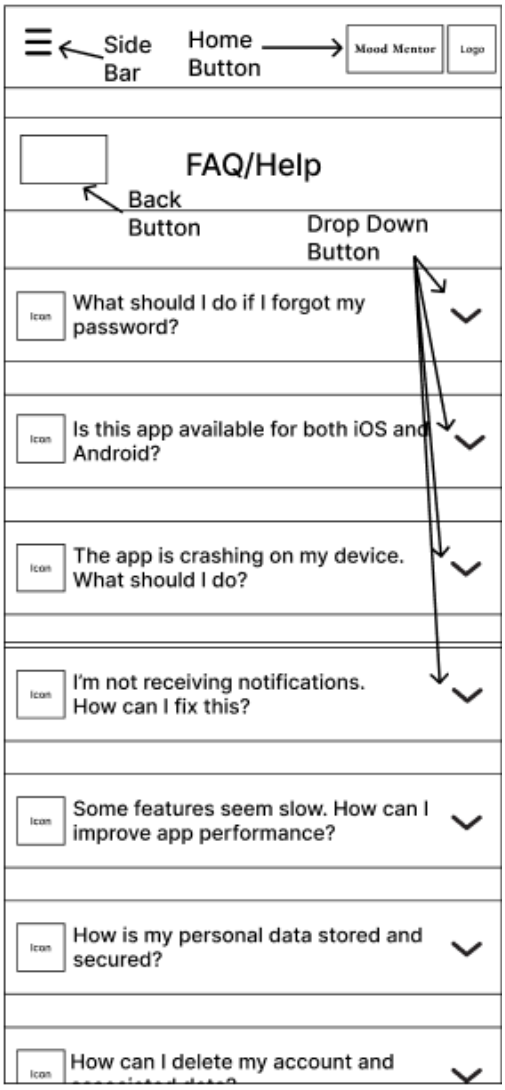

Figure 1.7.4.1b FAQ/Help Page (Low-Fidelity Design)

Based on ***Figure 1.7.4.1a*** shows the FAQ/Help Page. A FAQ/Help page is mandatory in the "Mood Mentor" application, therefore the FAQ/Help page is at this moment to allow users to check the questions that are prepared with the standard answer. This is the principle of designing the applications and creating reliability for users.

The difference between the ***Figure 1.7.4.1a*** and the ***Figure 1.7.4.1b*** is that the icon design is represented with a "question mark" that indicates a list of FAQs. Meanwhile, the dropdown

arrow is designed in each of the FAQ questions, so that the users can click and drop down the details.

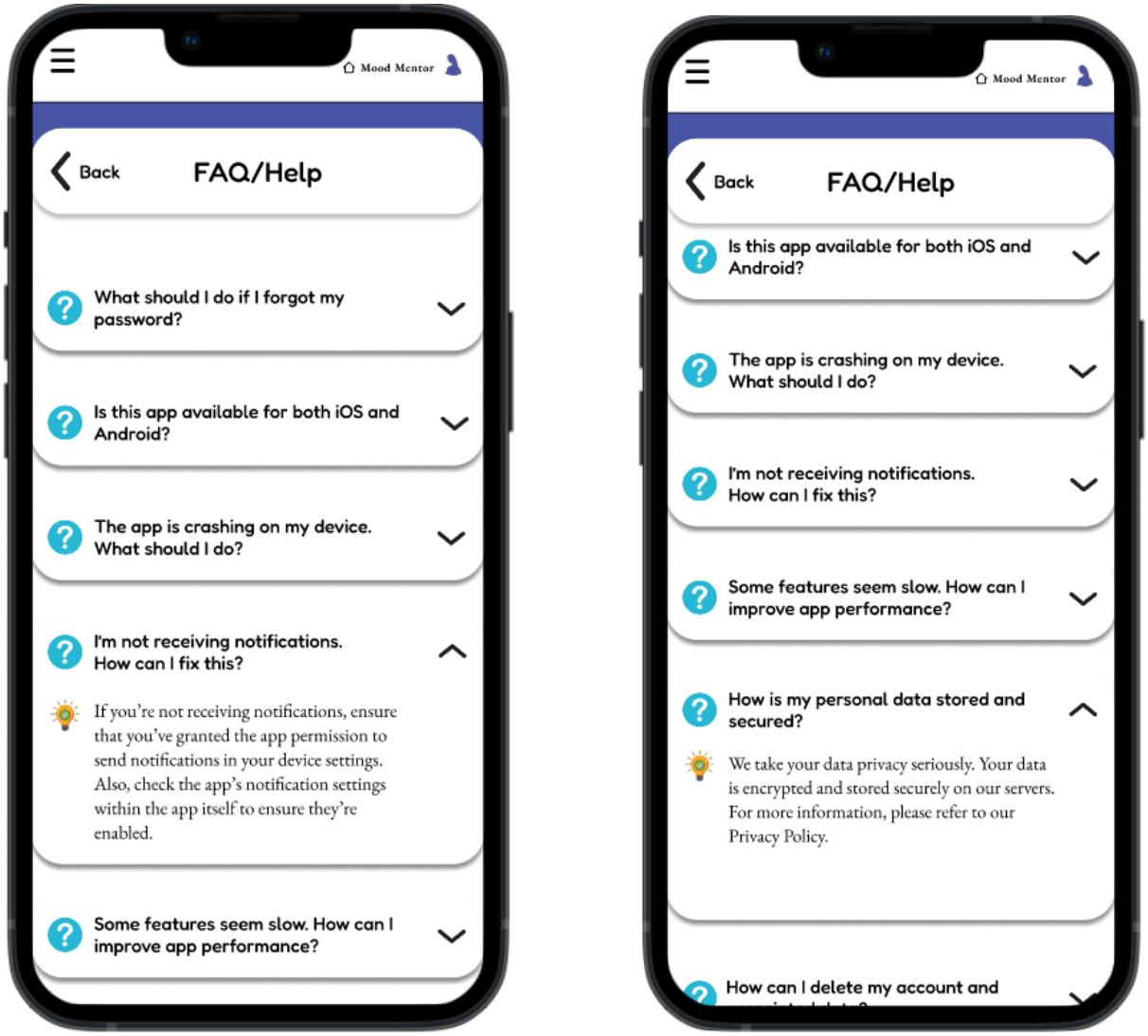

Figure 1.7.4.2 Sample Question & Answer of the FAQ/Help page

Based on ***Figure 1.7.4.2*** shows some question and answer that the user commonly asks by using the dropdown button. Clicking the "Back" button from ***Figure 1.7.4.2*** above will help the user go back to the ***Figure 1.7.3.0.1a*** setting page.

1.8. Depression Diagnosis Page

Figure 1.8.1a Depression Diagnosis Page 1 (High-Fidelity Design)

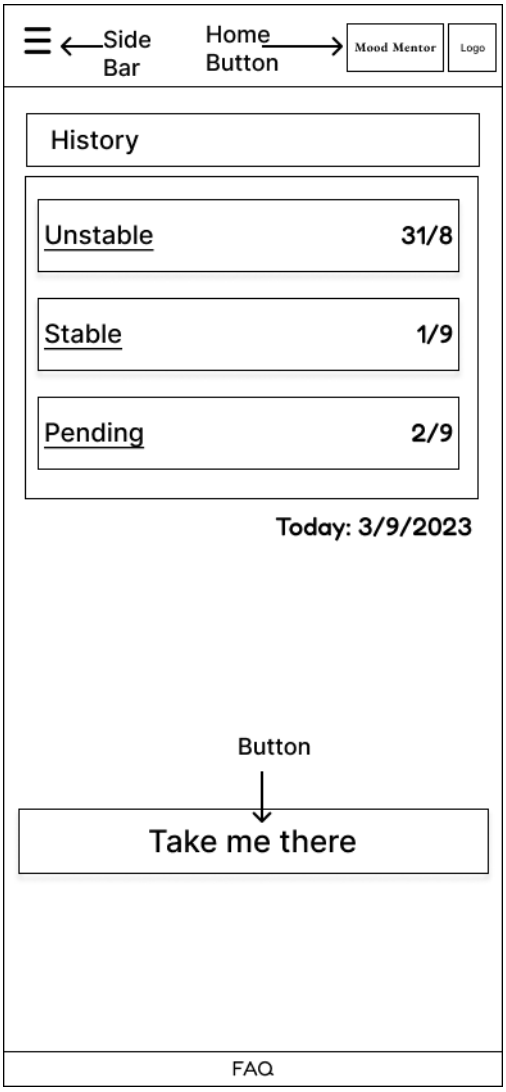

Figure 1.8.1b Depression Diagnosis Page 1 (Low-Fidelity Design)

Based on ***Figure 1.8.1a*** shows the Depression Diagnosis Page. Firstly, the page is designed to ease users to view and check on histories about diagnosis conditions such as Stable, Unstable, and Pending. Each condition indicates the diagnosis stability accordingly. For convenience, the current/global timestamp is designed right below histories. Lastly, users are allowed to click the "Take me there" button to take diagnostic tests which is proposed by the system.

The difference between the ***Figure 1.8.1a*** and the ***Figure 1.8.1b*** is the table form was first designed to table or contain the whole history of functions. The table color is consistent with the theme color, most importantly, color palettes introduce meaning themselves. As design color logic, color represents danger, calm, and slow. If the user's condition is not stable, the color implementation then displays red. Green indicates stability accordingly. Last but not least, pending condition indicates or slowly reminds users to complete diagnosis tests as prepared. It is necessary to indicate color differences to ease or indirectly remind users of their depression condition.

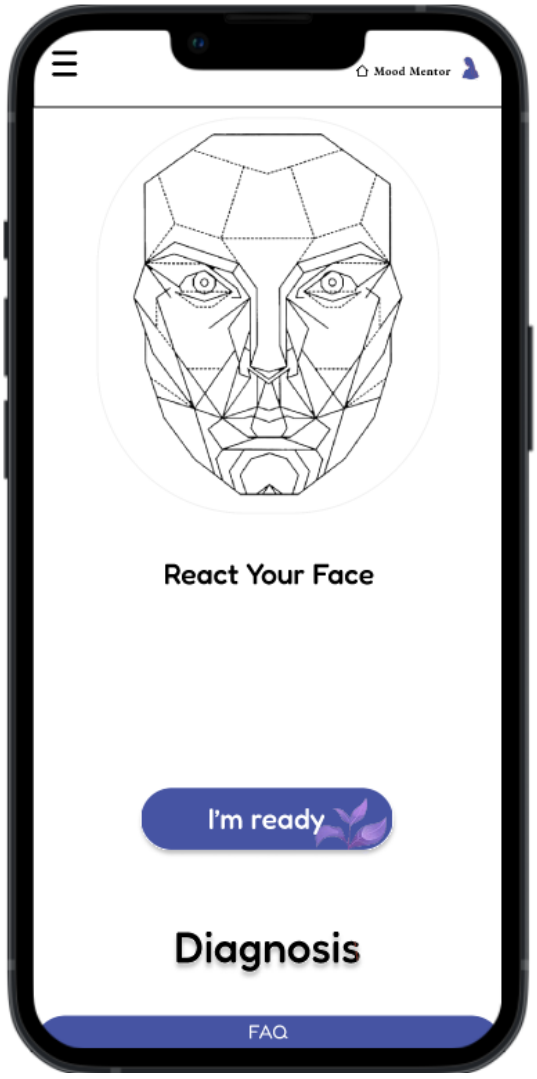

Figure 1.8.2a Depression Diagnosis Page 2 (High-Fidelity Design)

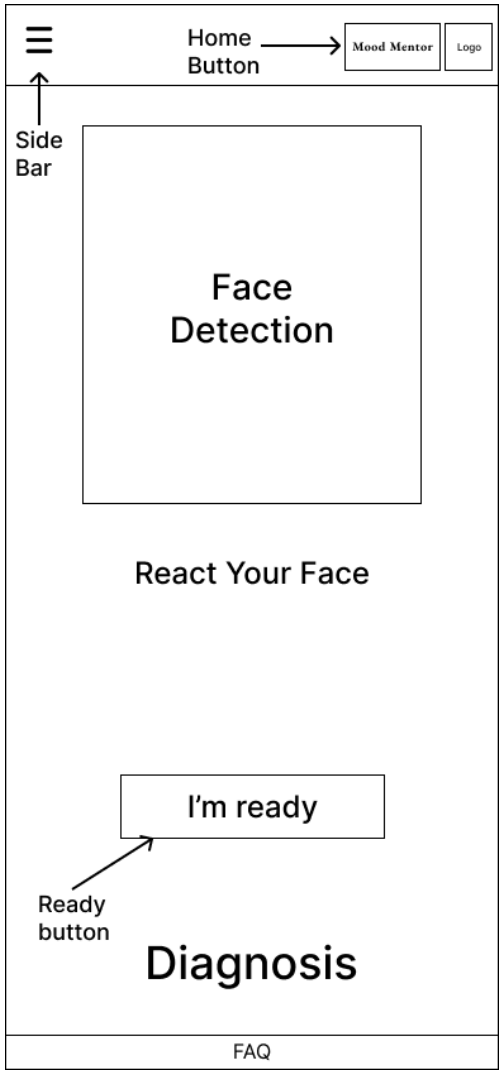

Figure 1.8.2b Depression Diagnosis Page 2 (Low-Fidelity Design)

Based on ***Figure 1.8.2a*** shows the continuous Depression Diagnosis Page. Obviously, users are required to react to their facial expression in ***Figure 1.8.2a*** as shown above. Firstly, users are required to prepare their physical face in front device's front camera, in condition the camera must be accessed. The following process requires users to simply place a face according to the Face detection. Then click the "I'm ready" button to start detecting their faces. Then in the following process, one of the depression diagnosis functions will capture the user's facial expression as one of the emotional inputs to perform any further inner processing and calculation results in users' depression stability.

Differences between the ***Figure 1.8.2a*** and ***Figure 1.8.2b*** are the Face detection functions simply display the representation, meanwhile, the GUI design is designed with human golden ratio face placement in order to make sure users are doing the correct way to place their faces.

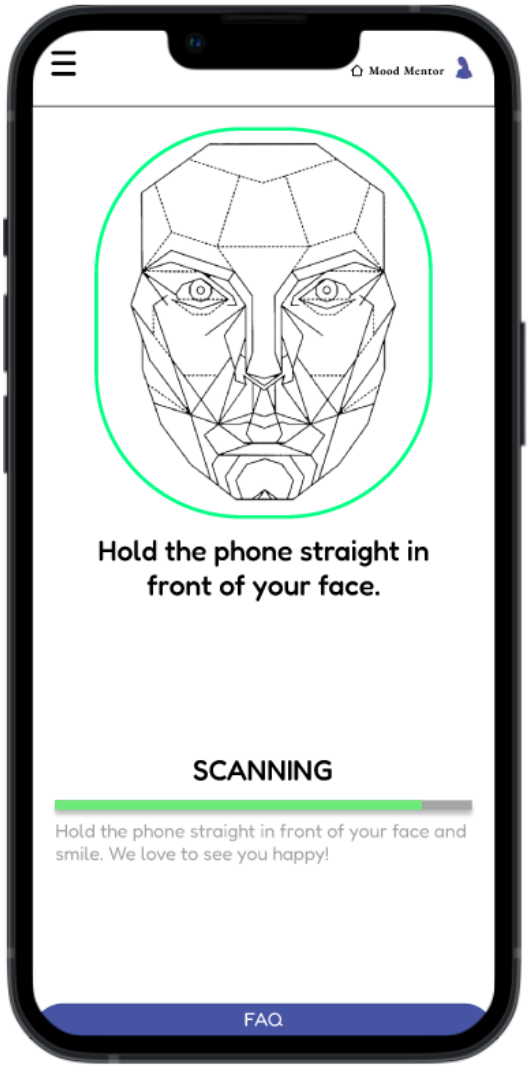

Figure 1.8.3a Depression Diagnosis Page 3 (High-Fidelity Design)

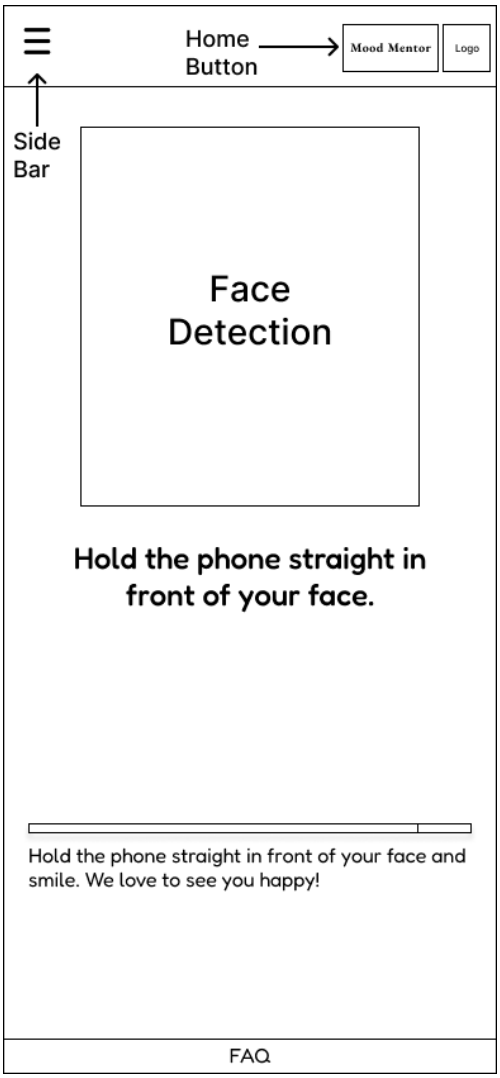

Figure 1.8.3b Depression Diagnosis Page 3 (Low-Fidelity Design)

Based on ***Figure 1.8.3a*** shows the continuous from previous figures. Users are required to follow the instructions as mentioned in the figures, positioning, and face placement. Once the instructions are clear to be followed, the scanning process starts to progress. A progress bar indicates the process is being processed so that it creates a sense of high reliability and trustworthiness along the facial expression process.

Differences between the ***Figure 1.8.3a*** and ***Figure 1.8.3b*** can be seen through the high contrast green overall. Firstly, the circling surrounds the user's face and progress bar, both implementing the green color to remind and tell the process is under control and processing. It is necessary to

put a processing bar so that users cannot feel to be controlled by the Facial Expression Recognition function.

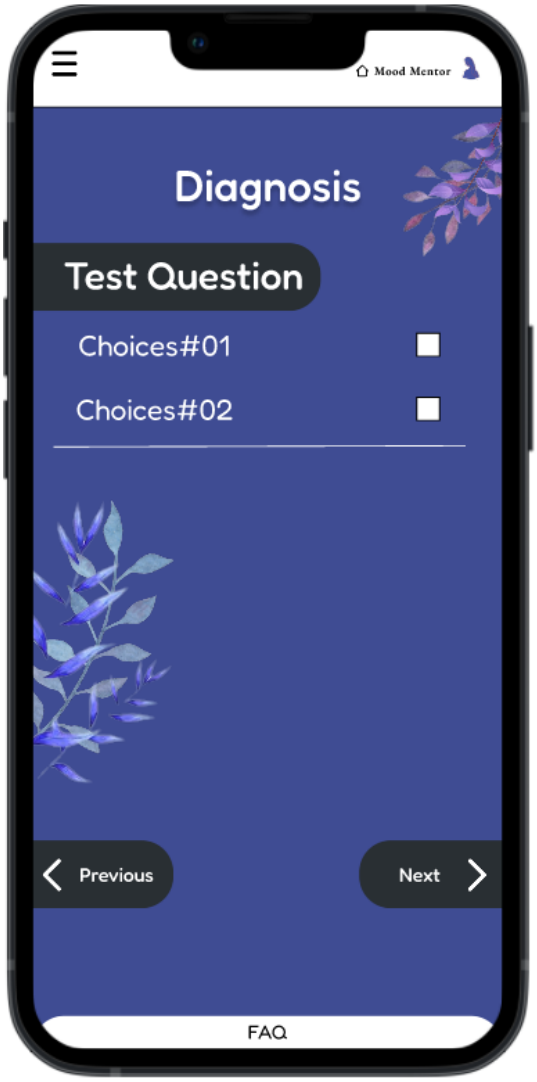

Figure 1.8.4a Depression Diagnosis Page 4 (High-Fidelity Design)

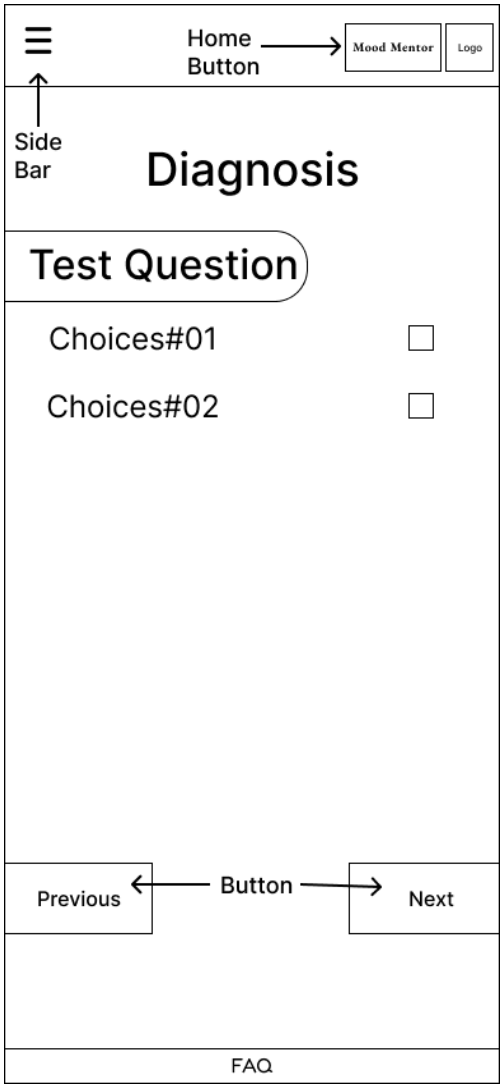

Figure 1.8.4b Depression Diagnosis Page 4 (Low-Fidelity Design)

Based on ***Figure 1.8.4a*** shows the continuous from previous figures. Users are required to follow the instructions including answering test questions prepared. There are a variety of question-answering designs such as ticking boxes, choosing answers from a drop-down list, writing, and ignoring it. The depression results known as diagnosis status or conditions are highly dependent on answering. There are no exact correct or wrong answers given, it must be designed for the user's desired choices which leads to unique results.

Differences between the ***Figure 1.8.4a*** and ***Figure 1.8.4b*** can be seen in the color palette and flowering environment to create a sense of soothing as promised during the answering phases.

The questions must not be long to avoid any frustration and annoyance. From the figures above, the previous and next buttons are designed for the previous and next questions as desired. Lastly, users are required to click the “Finish” button upon completion of the diagnosis function as the GUI *Figure 1.8.6* shown below.

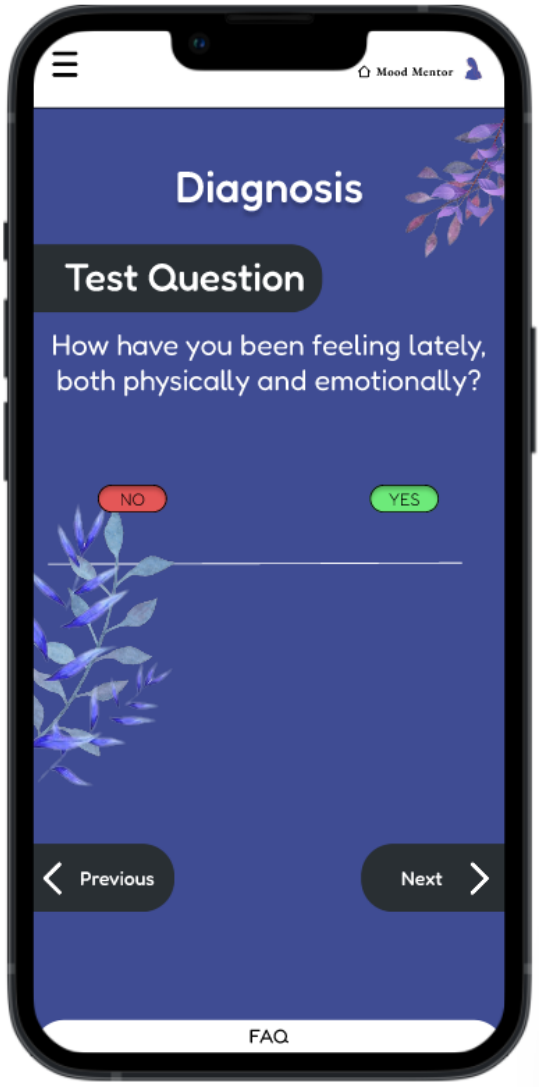

Figure 1.8.5 Example Depression Diagnosis Question

Based ***Figure 1.8.5*** shows the example questions of the diagnosis test. Users are required to answer the question or they are allowed to skip the question if they do not prefer to answer the particular question.

Figure 1.8.6 Last Depression Diagnosis Page 5

Based ***Figure 1.8.6*** shows the last page of the diagnosis test. Users are required to press the "Finish" button when they are done answering the diagnosis test.

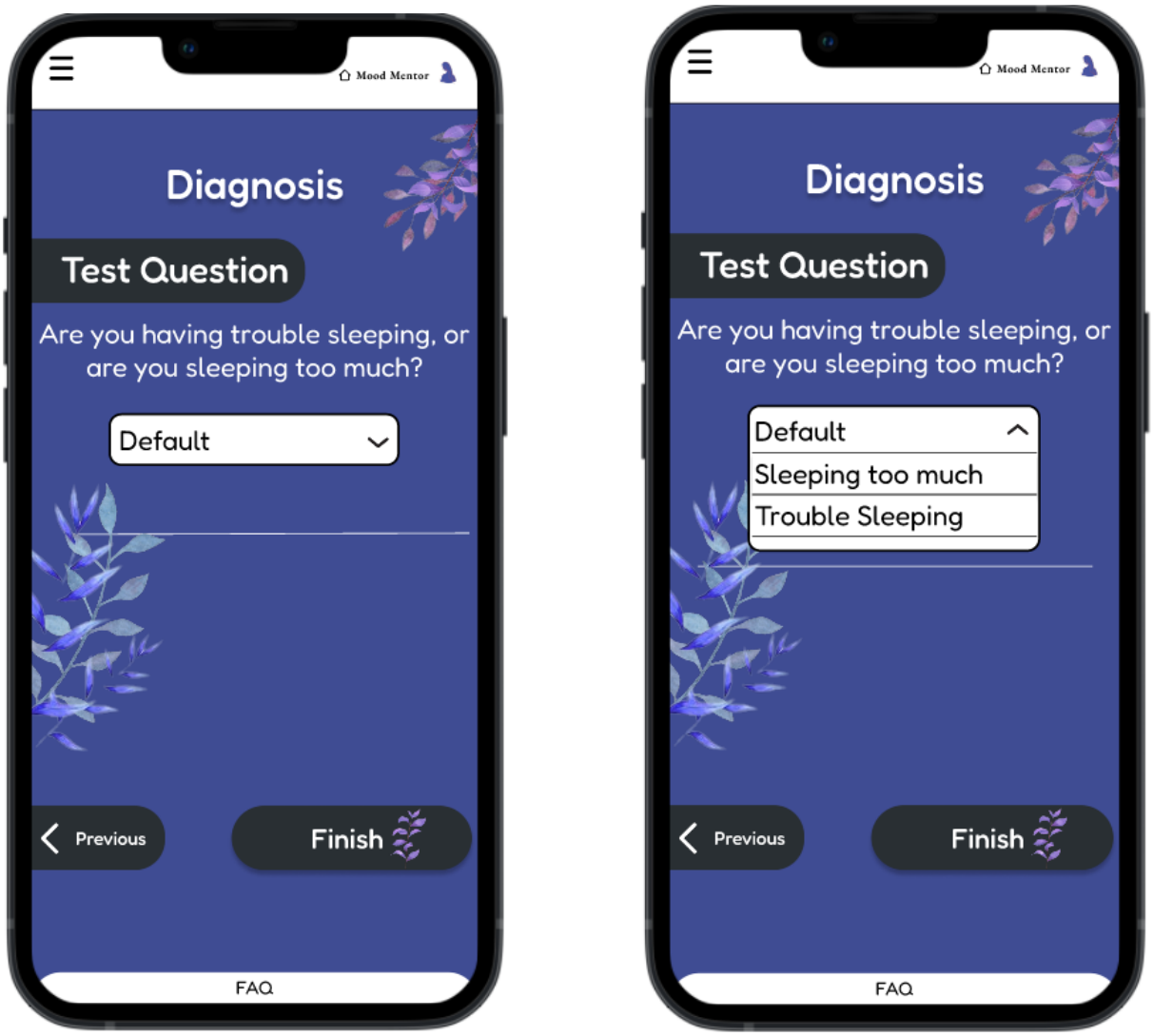

Figure 1.8.7 Last Depression Diagnosis Page

Based ***Figure 1.8.7*** shows the last page of the diagnosis test. Users are required to press the "Finish" button when they are done answering the diagnosis test.

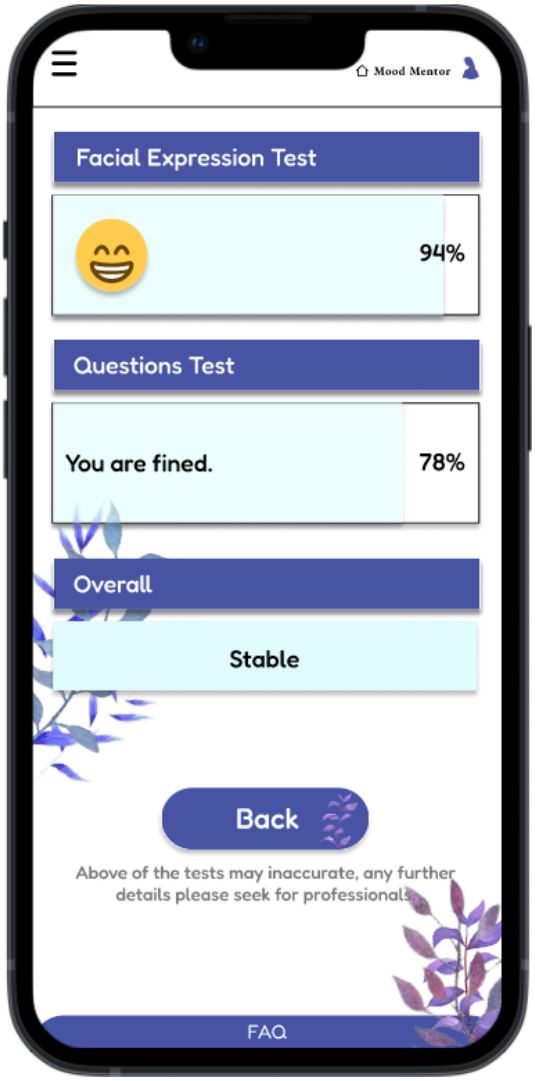

Figure 1.8.8a Depression Diagnosis Page 6 (High-Fidelity Design)

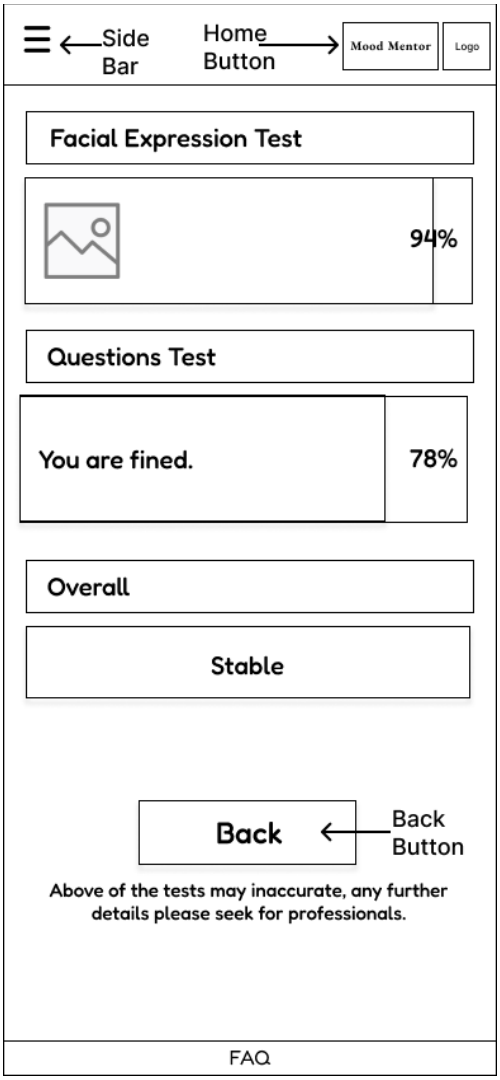

Figure 1.8.8b Depression Diagnosis Page 6 (Low-Fidelity Design)

Based on ***Figure 1.8.8a shows*** the Depression Diagnosis Details Page. If the users click one of the list results from ***Figure 1.8.1a*** The above figures tell users to understand how the tests have been calculated and concluded as well.

Differences between the ***Figure 1.8.8a*** and ***Figure 1.8.8b*** can be seen from the percentages remark design. If the user is found happy from a Facial Expression Test with ninety-four percent from happiness, the colored bar may follow the percentage as a progression bar for easier recognition. The same design was for the Question Test as well. Last but not least, it is vital to

display overall results as concluded to remind users again. Lastly, users are allowed to proceed back to the Depression Diagnosis Page as desired.

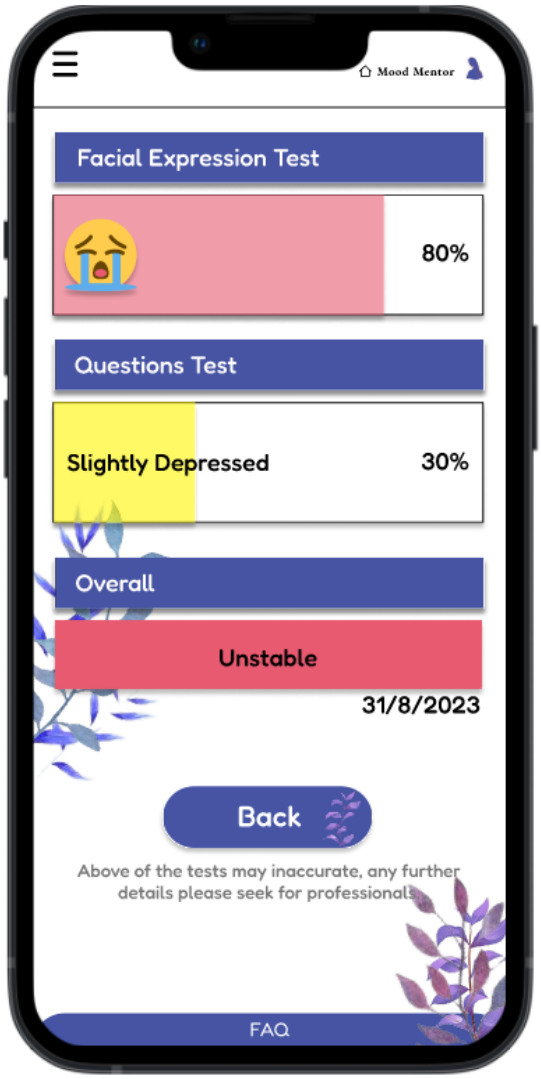

Figure 1.8.9 Depression Diagnosis Page 7

Based on ***Figure 1.8.9 shows*** the Depression Diagnosis Details Page with unstable depression conditions. If the users click one of the list results from ***Figure 1.8.1a.*** The overall test is designed with a red and yellow color status bar which represents and indirectly reminds the users the diagnosis condition overall results in an “Unstable” state.

Figure 1.8.10 Successful Message after done the diagnosis

Once the users have finished the diagnosis, a pop-out message will displayed on top, yet again to remind users that changes have been made which shows the same as ***Figure 1.8.10***. Then, the following day will be updated with the latest depression condition and color changes as well.

1.9. Mood Diary Page

Figure 1.9.0.1a Mood Diary Page (High-Fidelity Design)

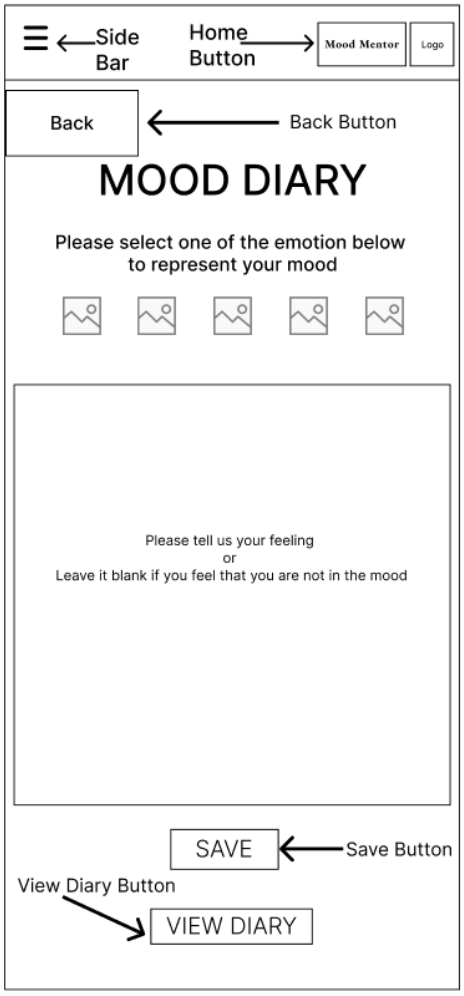

Figure 1.9.0.1b Mood Diary Page (Low-Fidelity Design)

Based on ***Figure 1.9.0.1a***, when users access the Mood Diary Feature, they will first need to select one of the emoji to represent their mood on that day. Besides that, they can express their feelings by filling in the text field provided. On the other hand, if they think that they are not in the mood, they can just ignore it and click save after selecting the emoji. If they want to view their previous diary, they can also click on the "View Diary" button.

The difference between the ***Figure 1.9.0.1a*** and the ***Figure 1.9.0.1b*** is that the list of the emoji are replaced with actual colourful emoji. Furthermore, the input field such as text field and button are implemented with better design such as increased circular corner that makes it more

attractive. Most importantly, all of the information in the feature has a white background that separates them between the blue themed background of the application that increases the usability of the application. The buttons are also applied with colour changes when mouse hover over it.

1.9.1. Enter Diary

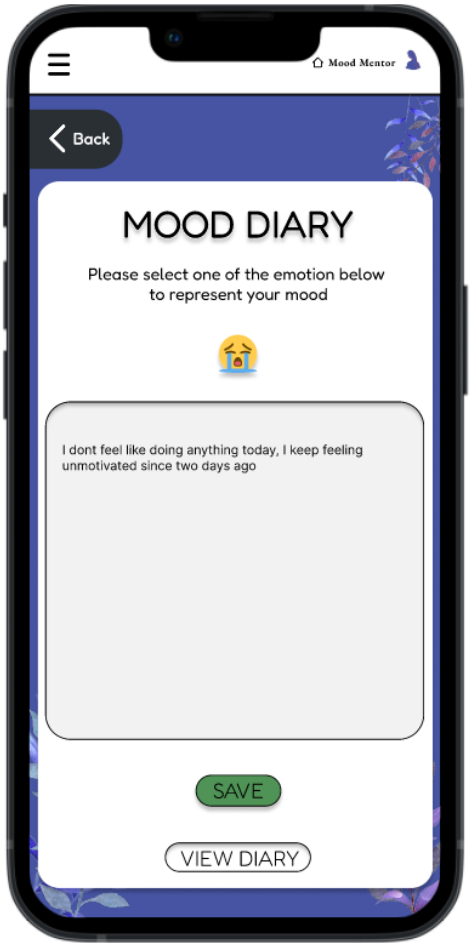

Figure 1.9.1.1 Detailed Design of Mood Diary Page

Based on ***Figure 1.9.1.1***, when users select on the crying emoji, other emojis will disappear, creating a contrast between the selected and the unselected one. Besides that, when users hover on the "Save" button after selecting the emoji and expressing their feelings, the "Save" button will also become green. The information in the mood diary of the users will be saved after clicking the button.

Figure 1.9.1.2 Detailed Design of Mood Diary Page

Based on ***Figure 1.9.1.2***, after users have clicked on the "Save" button on the previous page, the application will display "Your Mood Diary has been saved successfully !" to let users know that the application has saved their diary. Besides that, the page will also ask users whether they want to view their previous diaries or not ? Users can click on the "Yes" or "No" button to choose. If users choose yes, they will be navigated to the view mood diary shown previously. On the other hand, if users choose no, they will be navigated to the main page.

1.9.2. View Diary

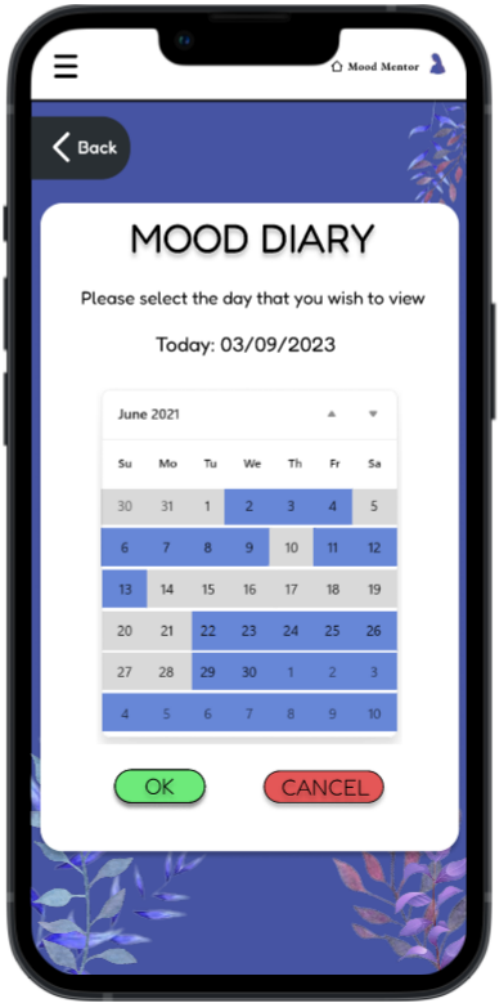

Figure 1.9.2.1a View Mood Diary Page (High-Fidelity Design)

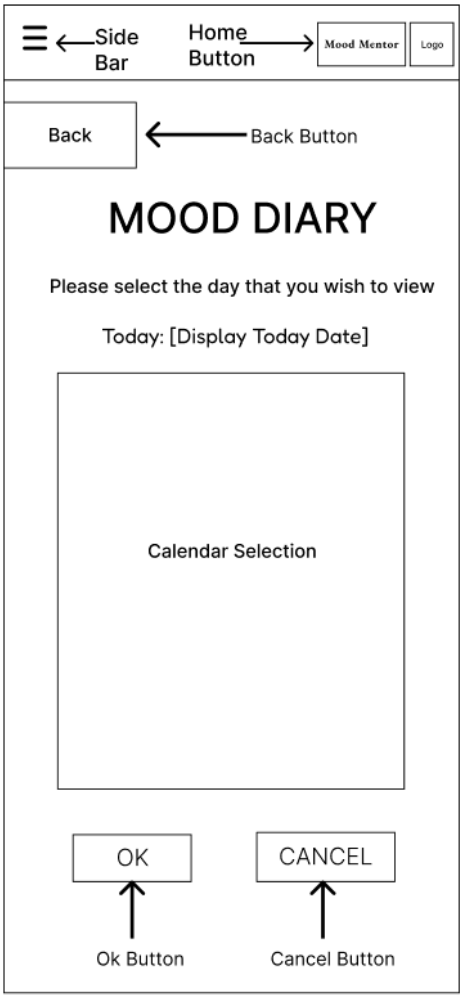

Figure 1.9.2.1b View Mood Diary Page (Low-Fidelity Design)

Based on ***Figure 1.9.2.1***, when users click on the “View Diary" button on the previous page, the application will navigate them to the page as shown above. The application will first display a calendar to let users select which date that they wish to view their diary. After selecting the date, users will need to click on the “Ok” button to proceed or the “Cancel” button to cancel their action. Most importantly, in this action, users are only allowed to choose a valid date which is the date before the specific date that is displayed on the page shown above. Besides that, users are also allowed to click on the date that has the record of mood diary only, if users does not have

record on 5th of June for instance, they are not allowed to click on the button of 5th of June in the calendar as there is no record of mood diary on that day.

The difference between the ***Figure 1.9.2.1a*** and the ***Figure 1.9.2.1b*** of the view mood diary page is the page had been replaced with the actual date of the day on the top of the page. Furthermore, the calendar is also replaced with a actual calendar with the contrast of grey and dark blue colour which indicates grey button is the button that users can't click on as there is no record of mood diary on that day while dark blue button is the button that users can click on as there is record of mood diary on that day and users are allow to view it. Finally, all of the information in the feature has a white background that separates them between the blue themed background of the application. The buttons are also applied with colour changes when the mouse hover over it.

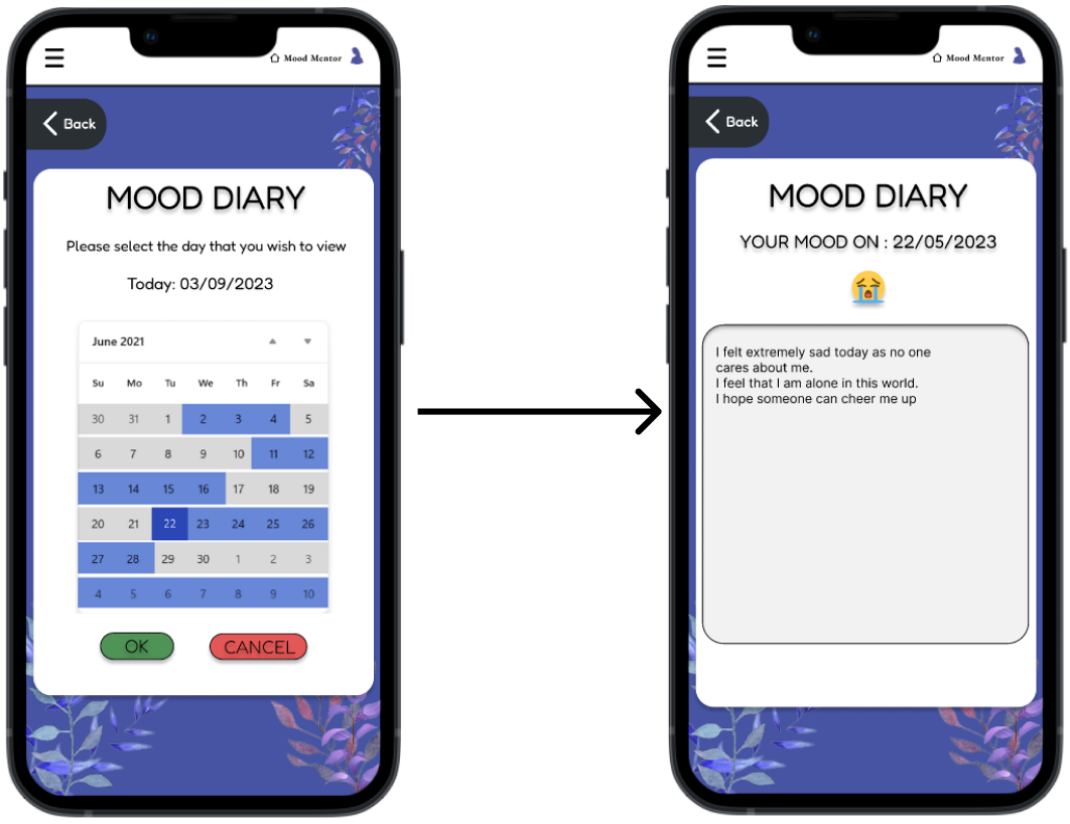

Figure 1.9.2.2 Detailed Design of Mood Diary Page

Based on ***Figure 1.9.2.2***, as mentioned previously, when users click on the “Yes” button when being asked whether they want to view previous diaries or not, they will be navigated to the view mood diary page. When users have selected the date they wanted to view, the text of the date will become white colour and the colour of the button will become dark blue which indicates that users have selected the date. Next, after selecting the date, when users clicked on the “Ok” button, the colour of the button will also become dark green indicating that users had clicked on the button. After that, the application will show the record of the mood diary of the date that users have chosen.

1.10. Recommender Page

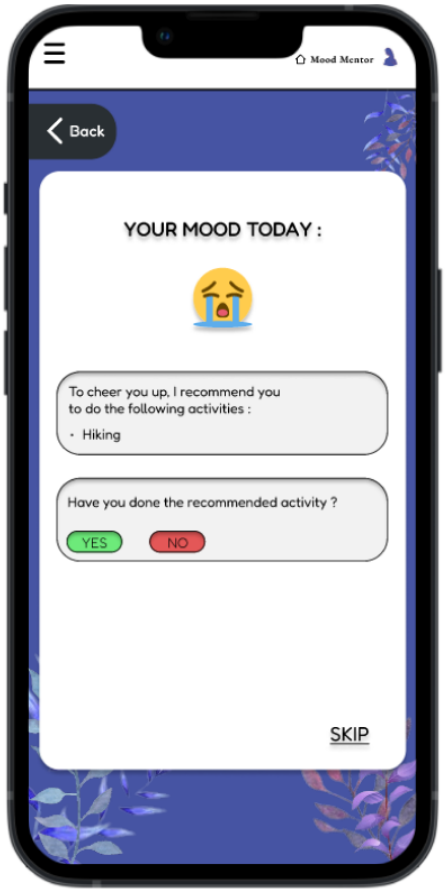

Figure 1.10.0.1a Recommender Page (High-Fidelity Design)

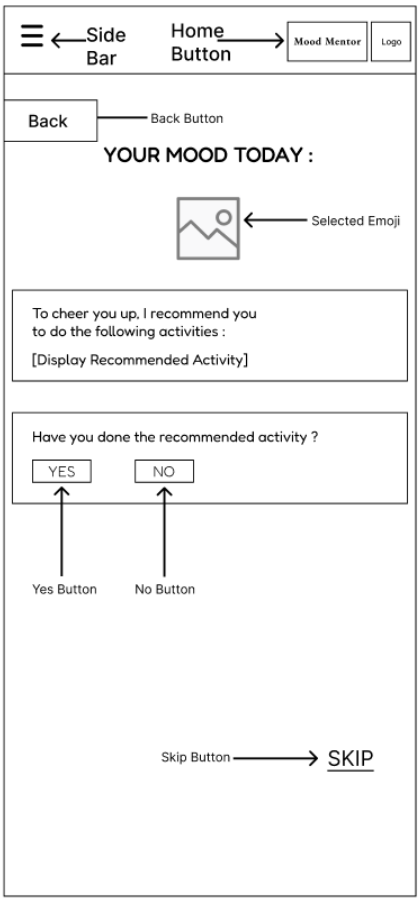

Figure 1.10.0.1b Recommender Page (Low-Fidelity Design)

Based on ***Figure 1.10.0.1a***, the recommendations of the recommender of "Mood Mentor" are based on the input in the mood diary For instance, if the user picks a crying emoji in the mood diary feature, the recommender will display since the user had picked a crying emoji today, the system will recommend activities to cheer the user, such as, hiking. After making recommendations, the system will also seek feedback from the user asking him whether he did the recommended activity or not ? The user can reply to the feedback by clicking the "Yes" or "No" button. On the other hand, if the user does not want to give any feedback, they can just click on the "Skip" button.

The difference between the ***Figure 1.10.0.1a*** and the ***Figure 1.10.0.1b*** is that the emoji is replaced by actual selected emoji by users. Besides that, the GUI design is also showing actual recommended activity. Similarly with the previous page, all of the input fields such as text field and button are implemented with better design such as increased circular corner that makes it more attractive. Besides that, all of the information in the GUI page is being applied with a shadow effect and also a white background that separates them between the blue themed background of the application. The buttons are also applied with colour changes when the mouse hover over it.

1.10.1. Provide Recommendations

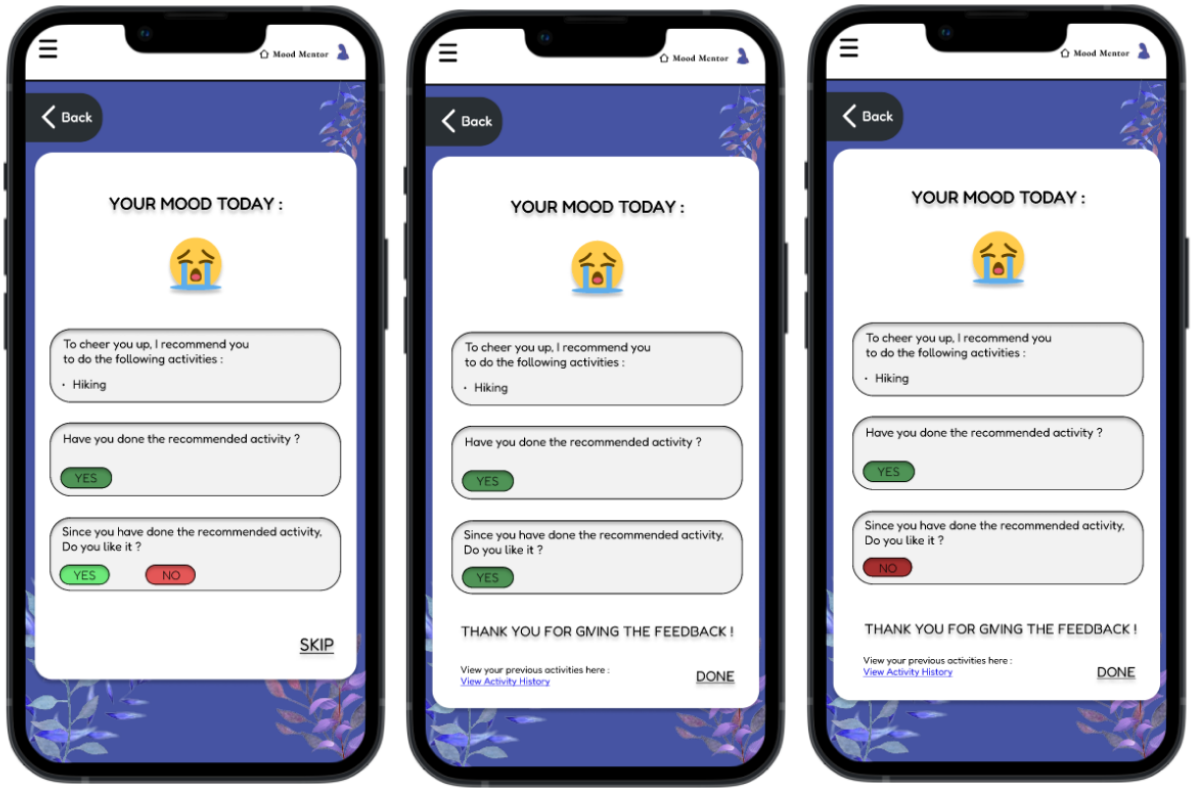

Figure 1.10.1.1 Detailed Design of Recommender Page

Based on ***Figure 1.10.1.1***, as mentioned previously, after giving recommendations the application will seek feedback from users in order to improve the attributes of giving recommendations in the future. For instance, when the application asks users whether they liked the recommended activity or not, users can choose "Yes" or "No". If users choose "Yes", the application will recommend similar activities in the future. On the other hand, if users choose "No" the application will recommend other activities. Furthermore, similarly to the previous page, the color of the button will become deeper which indicates they had clicked on the button. Moreover, the application will display a simple message to thank the user for spending their time to answer the feedback. Finally, if users want to view back their previous recommended activity as mentioned previously, they can click on the link on the bottom of the page that shows "View Activity History". They will be navigated to the recommended activity history page after clicking it.

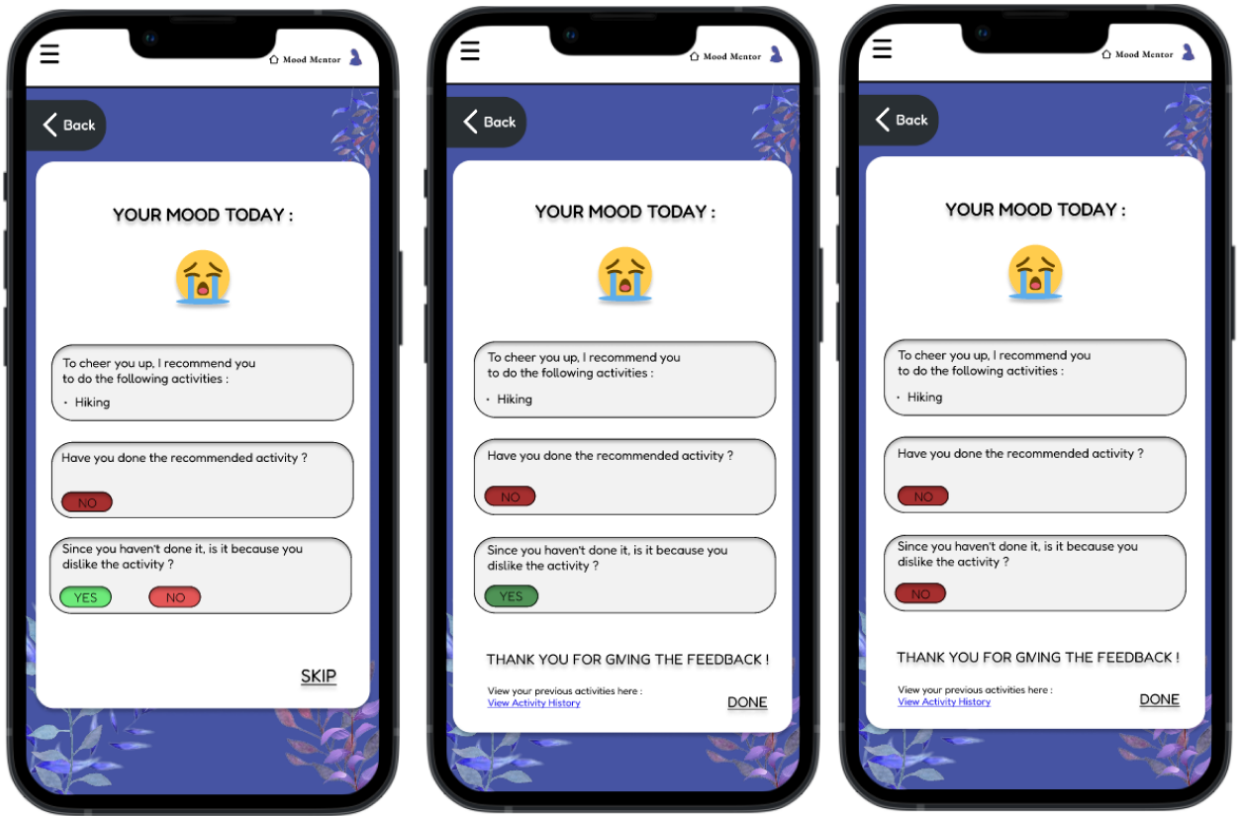

Figure 1.10.1.2 Detailed Design of Recommender Page

Based on ***Figure 1.10.1.2***, if users choose "No" when being asked whether they have done the recommended activity or not. The application will again ask users why they haven't done the recommended activity, is it because they dislike the activity. The answer of the users will be used to improve the attributes of giving recommendations in the future and similarly to the previous page, the colour of the button will become deeper that indicates they had clicked on the button and the application will display a simple message to thank the user for spending their time to answer the feedback. Finally, if users want to view back their previous recommended activity as mentioned previously, they can click on the link on the bottom of the page that shows "View Activity History". They will be navigated to the recommended activity history page after clicking it.

1.10.2. Recommendations History

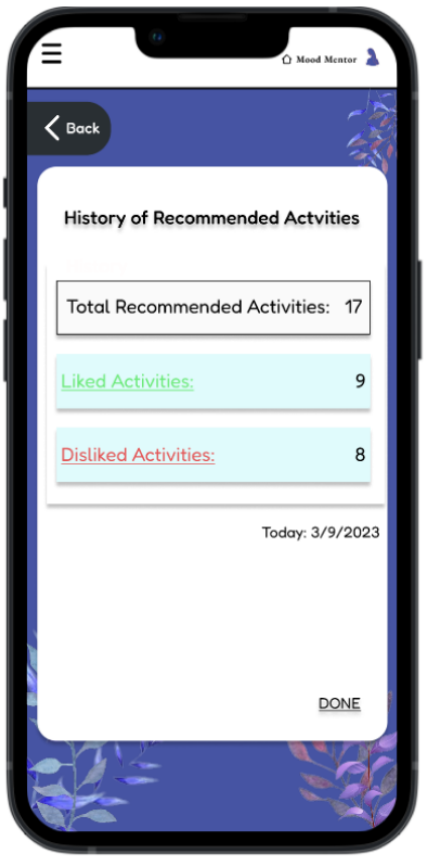

Figure 1.10.2.1a Recommender Page (High-Fidelity Design)

Figure 1.10.2.1b Recommender Page (Low-Fidelity Design)

Based on ***Figure 1.10.2.1a***, after giving recommendations and seeking feedback, users can view the history of recommended activities. The application will display the total of recommended activities and how many of them were liked and disliked. Therefore, users can choose to view whether they wanted to view liked or disliked activities. For instance, if the history of disliked activities were chosen, the application will display all of the activities that were disliked by the users along with the date that the recommended activities were given.

The difference between the ***Figure 1.10.2.1a*** and the ***Figure 1.10.2.1b*** is that the actual date and the actual number of recommended activities will be displayed. Similarly with the previous page, all of the information in the GUI page is being applied with a shadow effect and also a white

background that separates them between the blue themed background of the application. The buttons are also applied with colour changes when the mouse hover over it.

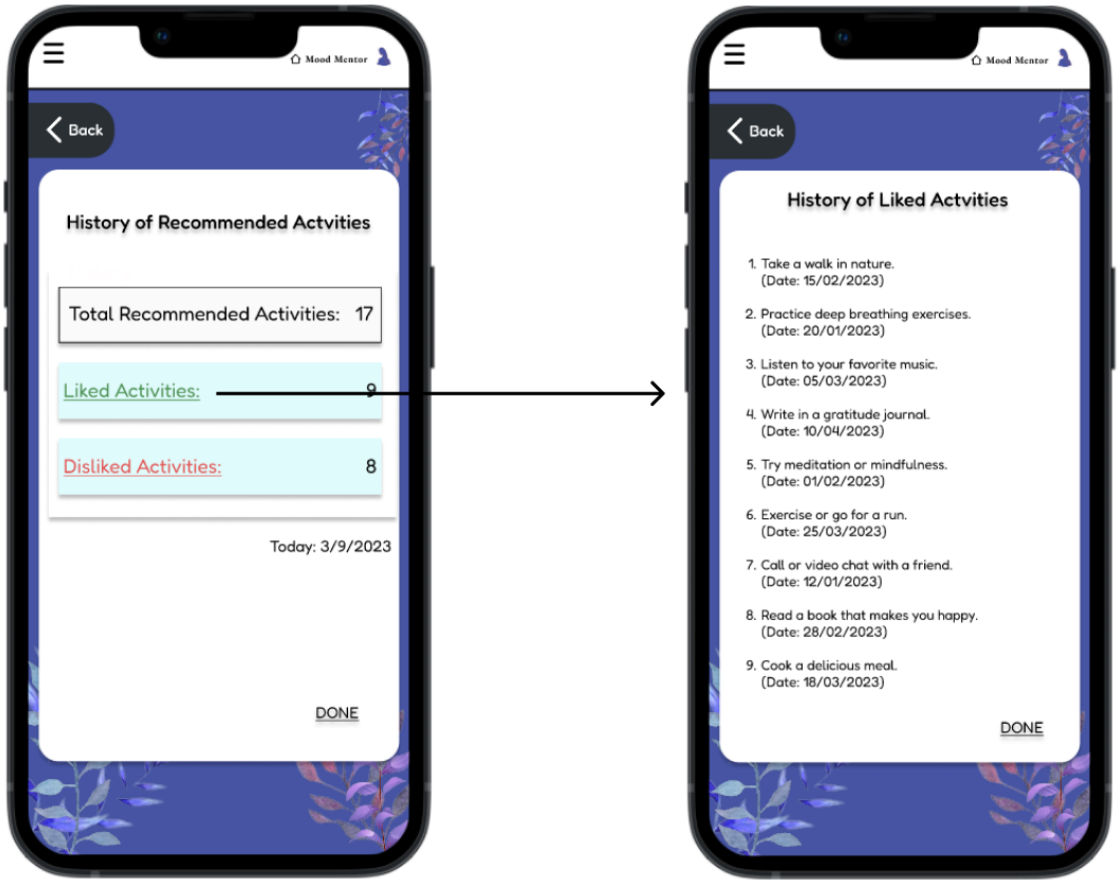

Figure 1.10.2.2 Detailed Design of Recommender Page

As mentioned previously when users clicked on the "View Activity History" link, they will be navigated to the page that shows the total number of recommended activities and allow users to choose whether they want to view liked or disliked activities. Based on ***Figure 1.10.2.2*** , when users click on the "Liked Activities" button, the application will display a list of liked activities along with the date that the recommendations were given. Users can click on the "Back" button and choose the "Disliked Activities" button in order to view the activities that they disliked or click the "Done" button to go back to the main page.

1.11. Chatbot Page

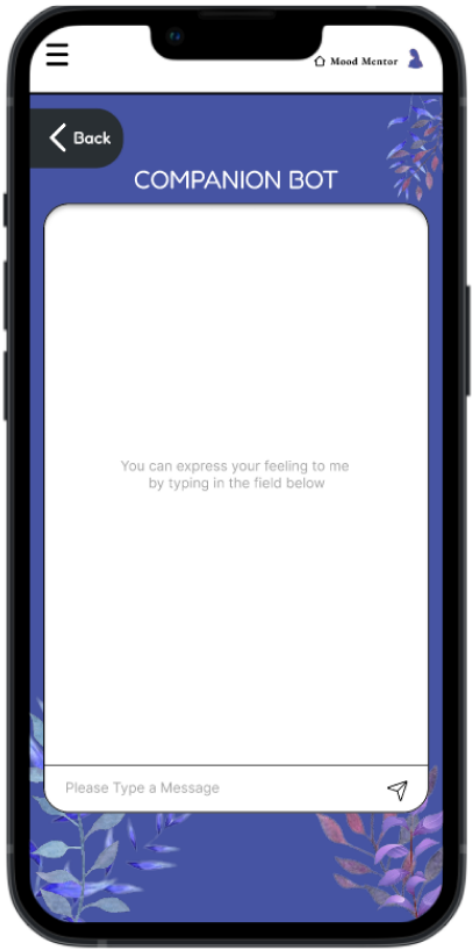

Figure 1.11.1a Chatbot Page (High-Fidelity Design)

Figure 1.11.1b Chatbot Page (Low-Fidelity Design)

Based on ***Figure 1.11.1a***, users are displayed with clear instructions that they can start a conversation with the chatbot by just typing in the field provided. Once users have started the conversation, the instructions will disappear and the user profile picture and bot will appear on each left and right. The chatbot is responsible for letting users express their feelings and it will respond with appropriate answers. For instance, if users start the conversation with "I am sad and nobody cares for me in this world." The chatbot will then respond with supportive messages such as "You are not alone in this world, you are definitely stronger than you thought.

The difference between ***Figure 1.11.1a*** and ***Figure 1.11.1b*** is that the feature name is replaced by the actual feature name which is “Companion Bot”. The rest are similar to the previous page, all of the input fields such as text field and button are implemented with better design such as increased circular corner that makes it more attractive. Besides that, all of the information in the GUI page is being applied with a shadow effect and also a white background that separates them between the blue themed background of the application.

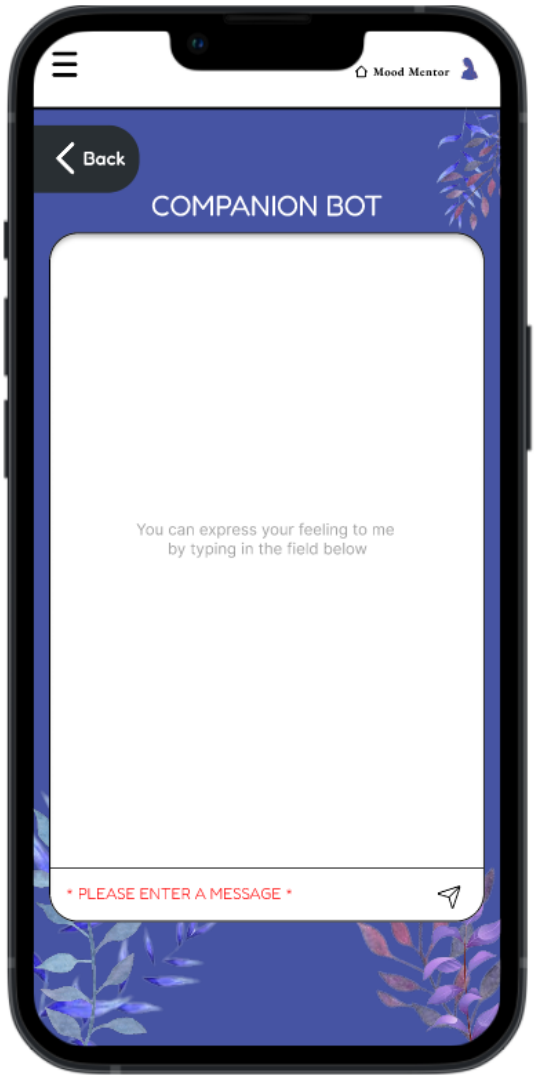

Figure 1.11.2 Detailed Design of Chatbot Page

Based on ***Figure 1.11.2***, when users leave the text field of the chatbot empty and press on the send button, an error message in red colour will appear, letting users know that they need to enter a message in order to start a conversation.

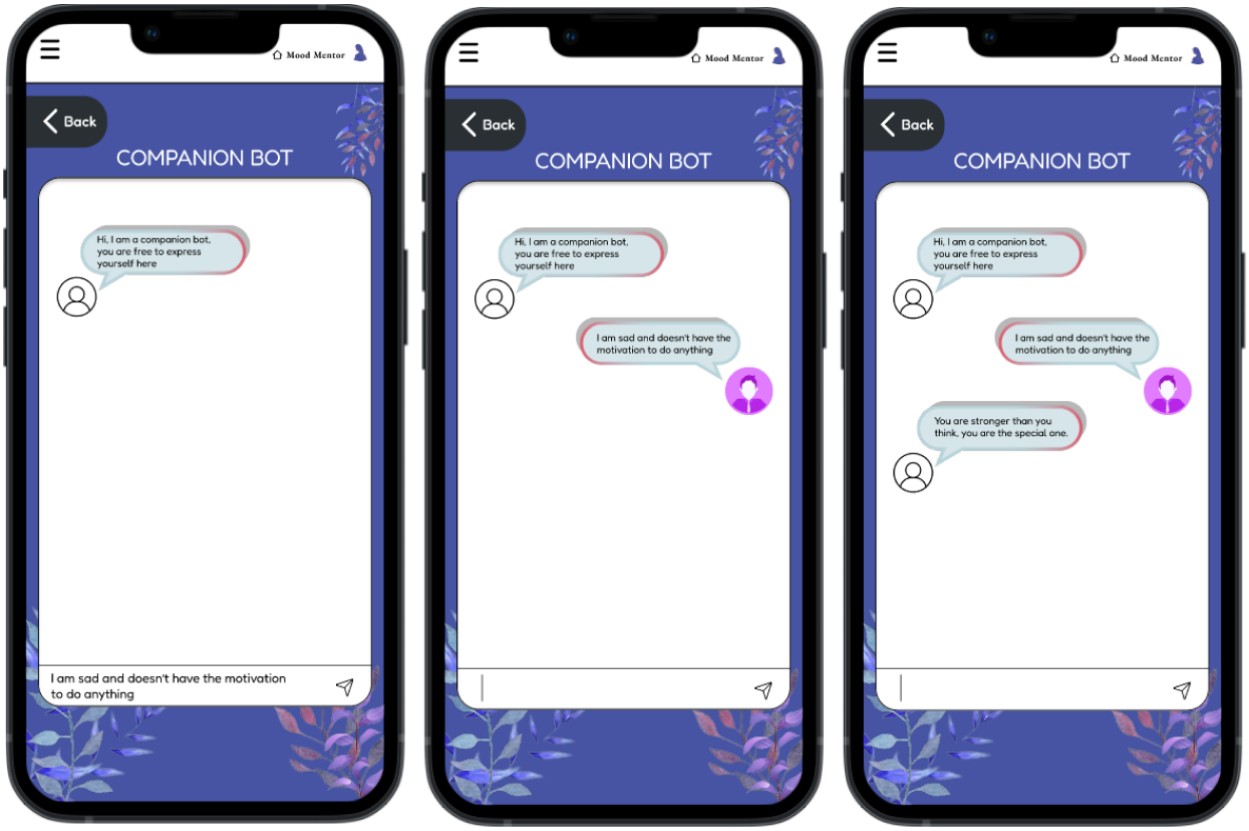

Figure 1.11.2.1 Detailed Design of Chatbot Page

Based on ***Figure 1.11.2.1***, after leaving the chatbot without performing any action for a while, the chatbot will automatically start a conversation by introducing itself. Next, users feel free to express their feelings to the chatbot as the chatbot will detect whether there are negative vectors in the sentences provided by the users. If negative vectors are detected in the sentences, the chatbot will provide supportive answers to cheer the users. Therefore, users feel safe to express themselves as there are nor privacy concerns and they will not be judged either.

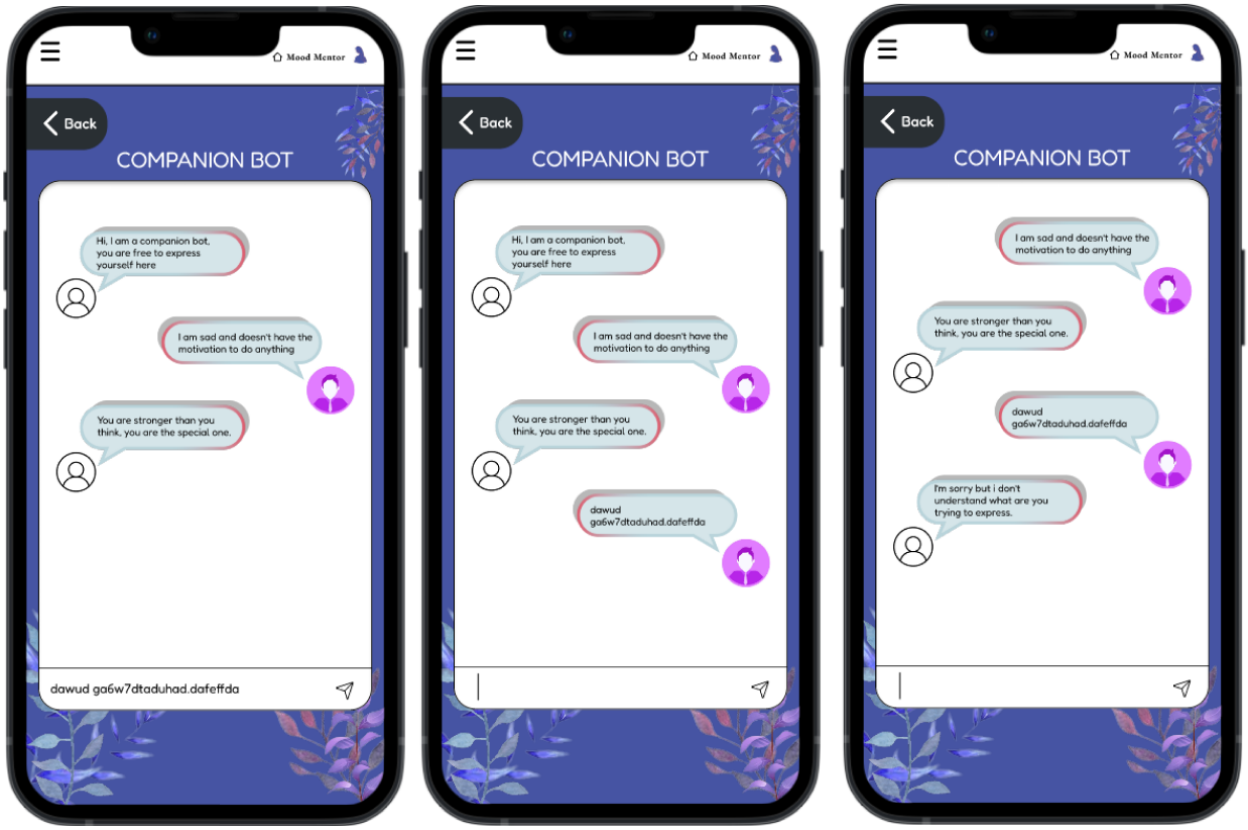

Figure 11.11.2.2 Detailed Design of Chatbot Page

However, based on ***Figure 11.11.2.2***, when users enter something that is understandable or accidentally typo, the chatbot will respond to the users by letting them know that it didn't understand what they are trying to express.

2. Design Decision

2.1. Welcome Page

Figure 2.1

The design of ***Figure 2.1*** is according to the **Gestalt principles** which is the **law of Closure**. As seen in the logo for "Mood Mentor," the blue silhouette of a woman with long hair creates the illusion of a face using the law of closure. The law of closure is effective in the logo because it creates mystery and intrigue. In this logo, the viewer is drawn to the face hidden behind the hair

because they want to see it. Having a sense of mystery is appropriate for a mental health app since it suggests it can help users understand how they feel and how they think.

Also, the logo is simple and easy to remember, which is important for a mobile app. In addition to being calming and soothing, blue is also appropriate for an app that promotes mental health.

2.2. Registration Page

2.2.1. Register User Details

Figure 2.2.1.1

The design of the eyes symbol in the password and confirm password fields of the design above match Norman's Design Principles which is Affordance. In reality, the eye symbols depict the eyes that human beings use to see. A click on the eye symbol will reveal the encrypted data that was entered by the user, and the encrypted data will be changed back to the original data. The people surrounding the user will not be able to see the password when the user uses the eye symbols, therefore we can say that the password will be better protected. Using this icon will make novice users understand the meaning of it because it can directly refer to real-world things. Users may feel more satisfied using the system since they know what the icons mean.

Figure 2.2.1.2

There is a few error message validation on the user input fields which involved Shneiderman's Eight Golden Rules - Offer Simple Error Handling. The main purpose of implementing these rules is to make the user understand what mistake they have made instead of letting them guess by themselves. For example, when the user enters the correct password but enters the wrong confirm password, a message with a red color will pop up and notify the user that they have done the wrong thing. Then, all they need to do is just re-enter the correct confirm password. Besides, there is also the validation of the format of the e-mail and length of the phone on the user input text field respectively. The exist of these rules is to help the user, especially for novice users to use the system more comfortably without any worrying.

2.2.2. Register Face ID

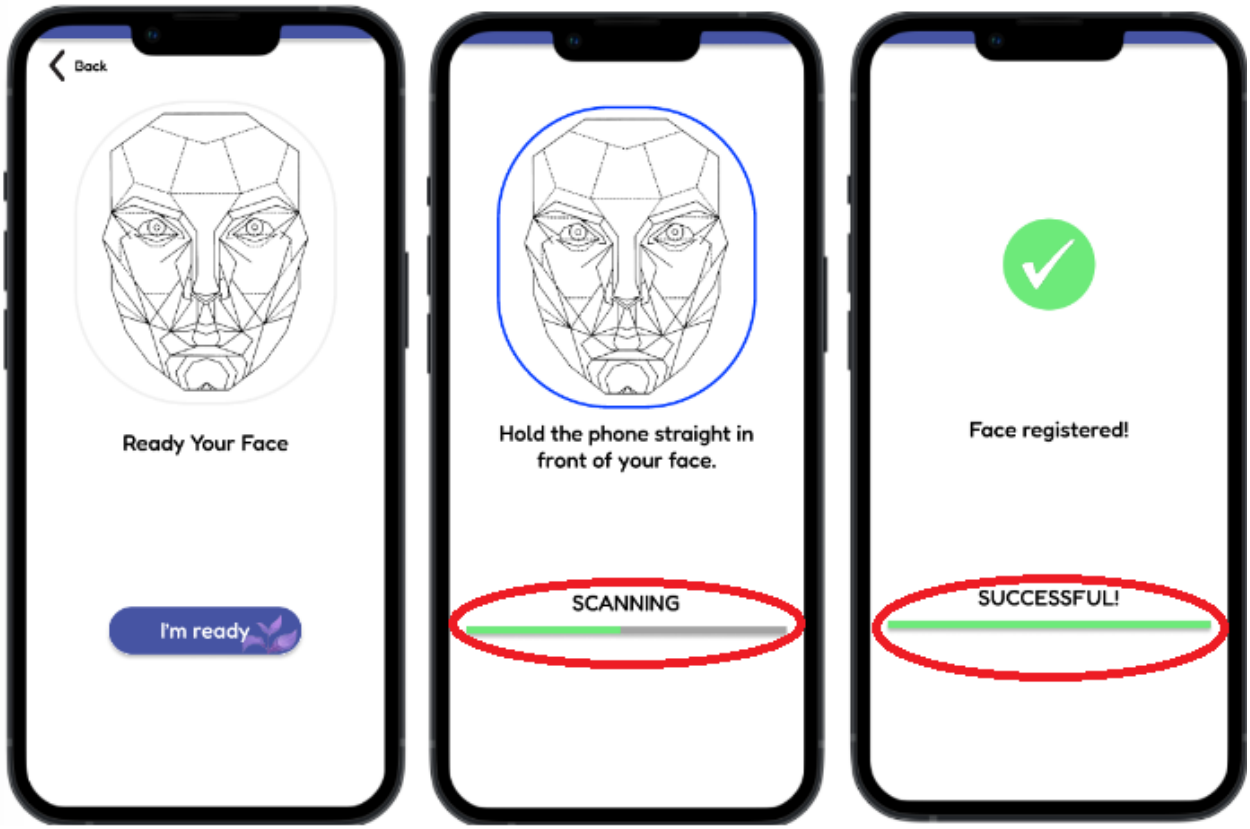

Figure 2.2.2

The figures above are showing the flow of the face ID registration process. There are involved two design decisions from the high-fidelity design. Firstly will be the Law of Continuity, which is a Gestalt principle that states that our eyes tend to follow smooth, continuous lines. This can be seen in the UI design of the Face ID registration page, where the text and icons are all aligned in a straight line, following the natural flow of the page. This makes the page easier to scan and understand, and it also helps to create a sense of order and consistency.

Besides, the Feedback of Norman's Design Principles is also evident in the UI design of the Face ID registration page. These principles state that users should be given clear and concise feedback about their actions so that they know what is happening and what to do next. In the Face ID registration page, this is done through the use of clear and simple language, as well as visual cues such as the progress bar. This helps to ensure that users are able to complete the registration process smoothly and efficiently.

2.3. Login Page

2.3.1. User Login

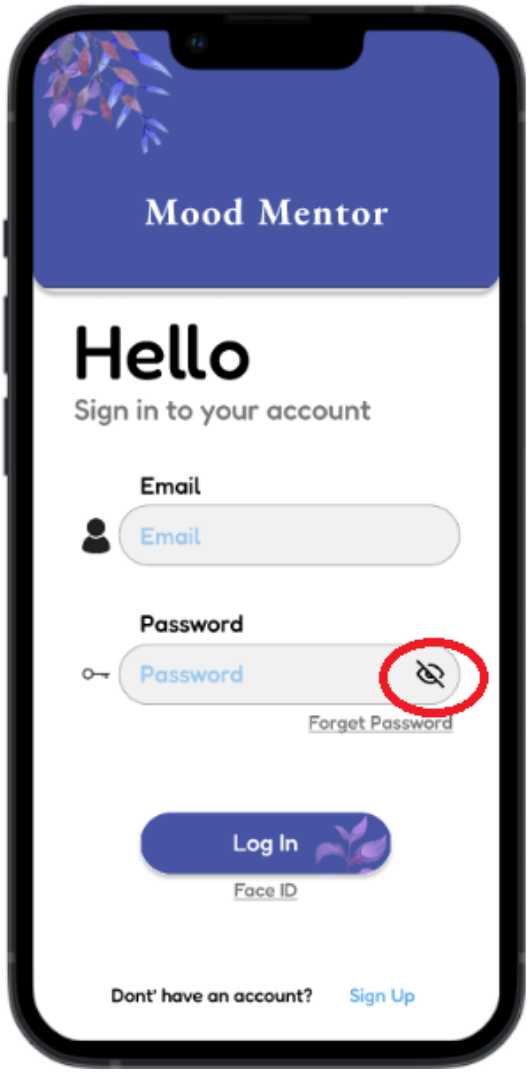

Figure 2.3.1.1

The design of the eyes symbol in the password fields of the high-fidelity design above also matches Norman's Design Principles which is Affordance that same as the ***Figure 2.2.1.1***. In reality, the eye symbols depict the eyes that human beings use to see. When the user clicks on the eye symbol, it will change the encrypted data to the original data and will change from the original data to the encrypted data if the user clicks it again. The people surrounding the user will not be able to see the password when the user uses the eye symbols, therefore we can say that the password will be better protected.

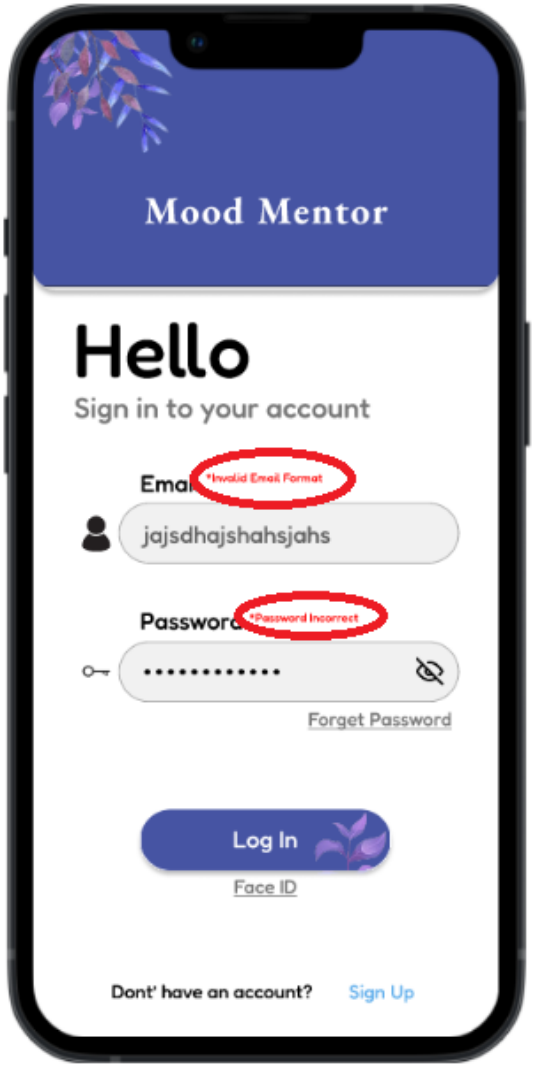

Figure 2.3.1.2

There is a few error message validation on the user input fields which involved Shneiderman's Eight Golden Rules - Offer Simple Error Handling. The main purpose of implementing these rules is to make the user understand what mistake they have made instead of letting them guess by themselves. For example, there will be the e-mail format and the password matches validation which found from the high-fidelity design above. It's to help the user to understand whether the information that they input is correct or not, therefore the user will feel more easier to use the system.

2.3.2. User Enter OTP

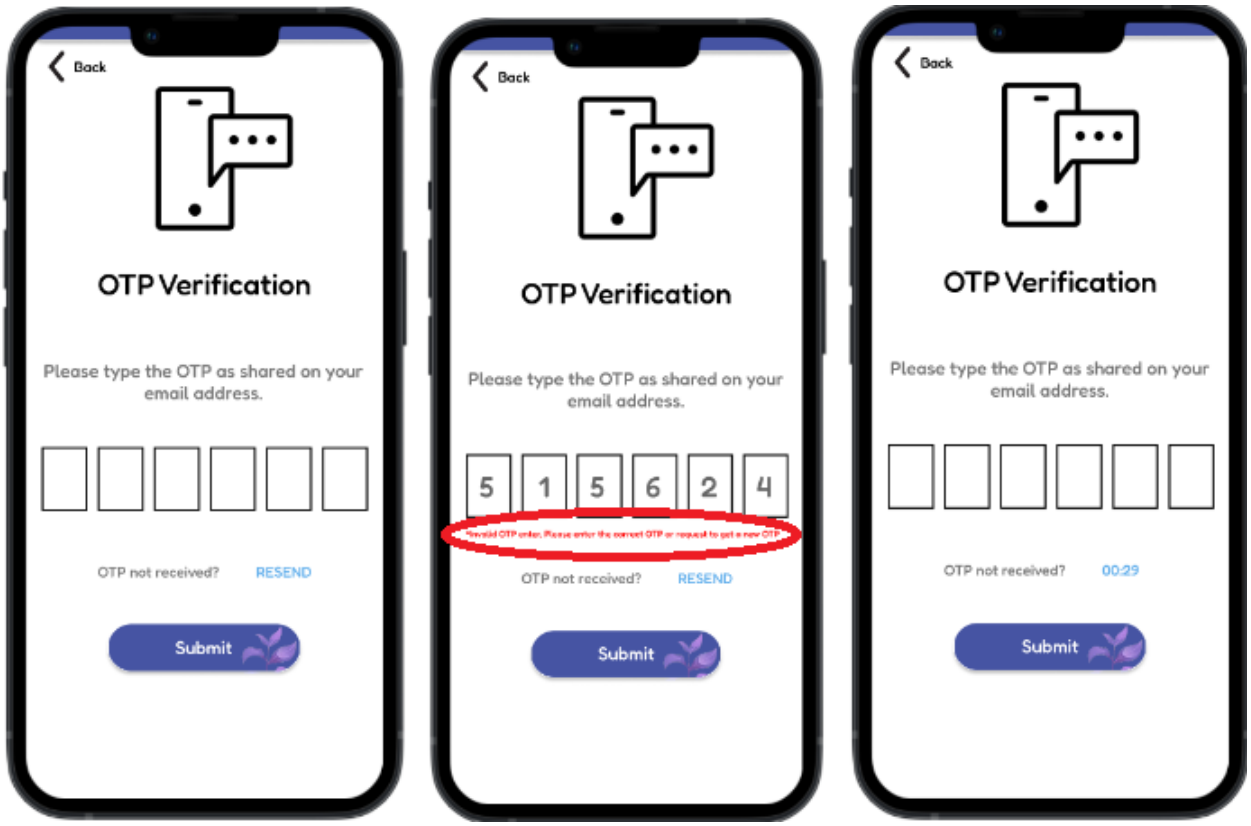

Figure 2.3.2

The figure above has implemented the Law of Continuity which is one of the Gestalt principles that states that our eyes tend to follow smooth, continuous lines. This can be seen in the UI design of the OTP verification screen, where the text and buttons are all aligned in a straight line, following the natural flow of the page. This makes the page easier to scan and understand, and it also helps to create a sense of order and consistency.

The error message "Invalid OTP enter. Please enter the correct OTP or request to get a new OTP" is an example of the Offer Simple Error Handling rule from Shneiderman's Eight Golden Rules. This rule states that error messages should be clear, concise, and actionable. The error message in this case is clear and concise, and it tells the user what to do next.

2.3.3. Forgot Password

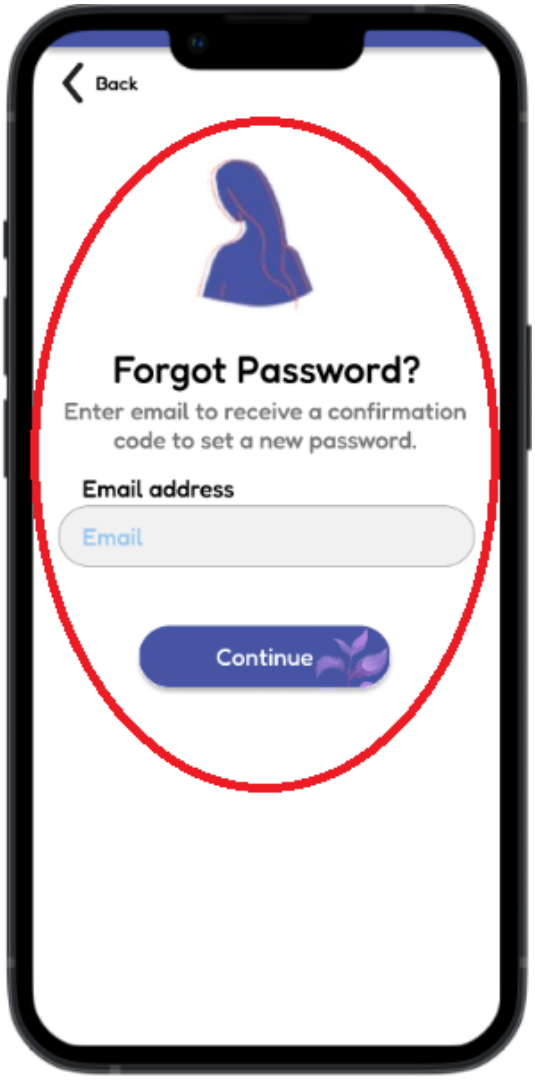

Figure 2.3.3.1

The Forgot Password Page design placement is centered according to Fitt's law as the page is major in users to enter email addresses to reset their password. Therefore, the users can capture the "Forgot Password" icon, and the title is placed in the center, meanwhile, the distance between is minor so that the users are able to read the instructions and then straight away input their login credentials such as email address. This helps the users save time in finding any textbox.

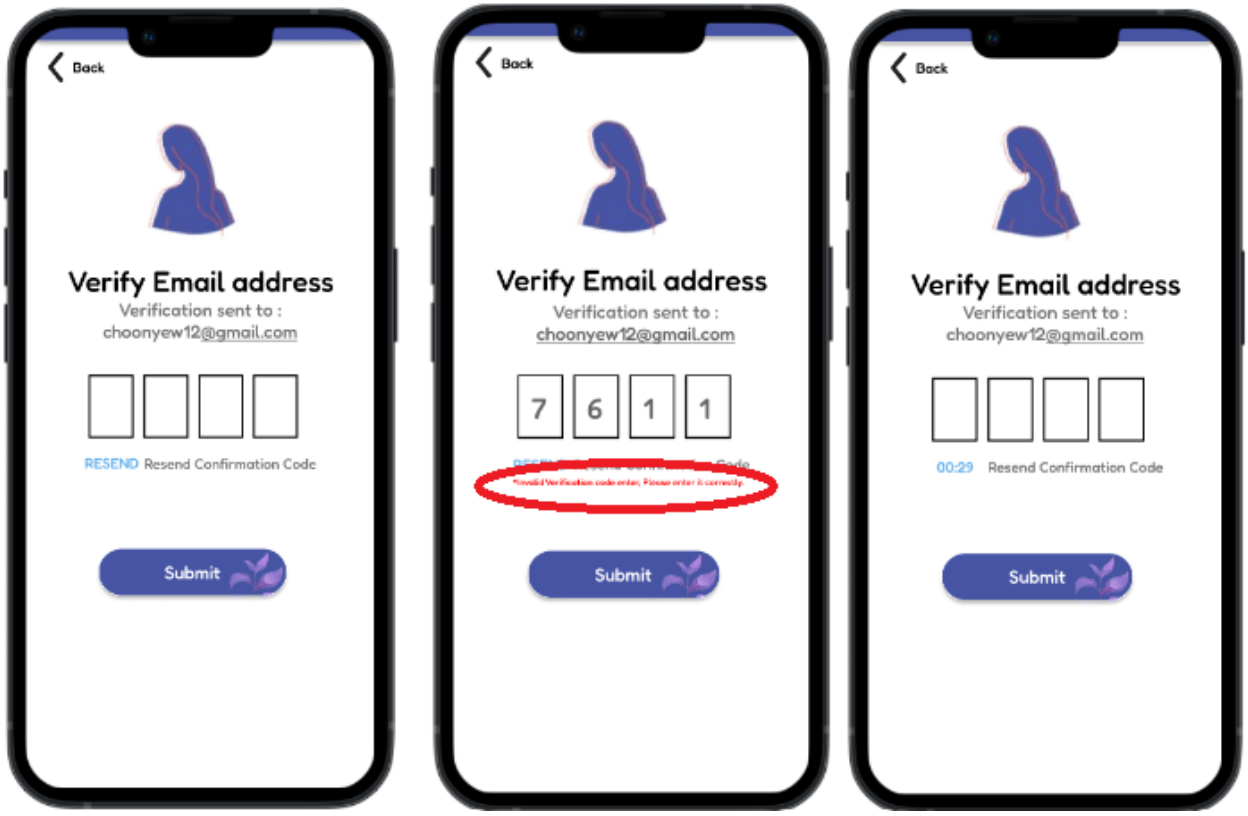

Figure 2.3.3.2

The figure above involves the Law of Continuity which is a Gestalt principle that states that our eyes tend to follow smooth, continuous lines. This can be seen in the UI design of the OTP verification screen, where the text and buttons are all aligned in a straight line, following the natural flow of the page. This makes the page easier to scan and understand, and it also helps to create a sense of order and consistency.

The error message "Invalid Verification Code enter. Please enter it correctly" is an example of the Offer Simple Error Handling rule from Shneiderman's Eight Golden Rules. This rule states that error messages should be clear, concise, and actionable. The error message in this case is clear and concise, and it tells the user what to do next.

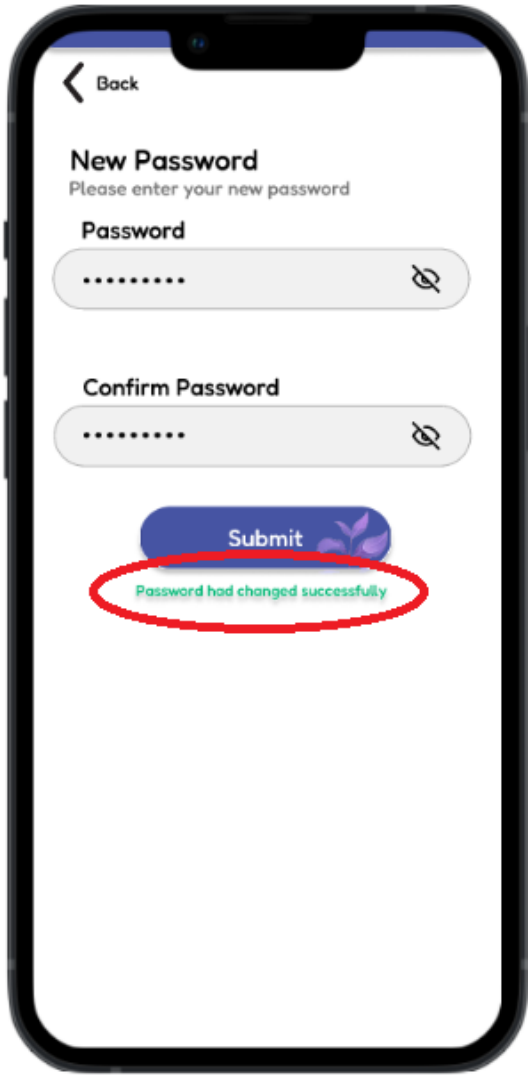

Figure 2.3.3.3

The affordance from Norman's Design Decision that can be applied to the UI design in the figure is to always show messages on the suitable situation. This means that the messages should be displayed only when they are relevant and helpful to the user. For example, the message "Password had changed successfully" should only be displayed after the user has successfully changed their password.

2.4. Main Page & Side Bar

2.4.1. Main Page

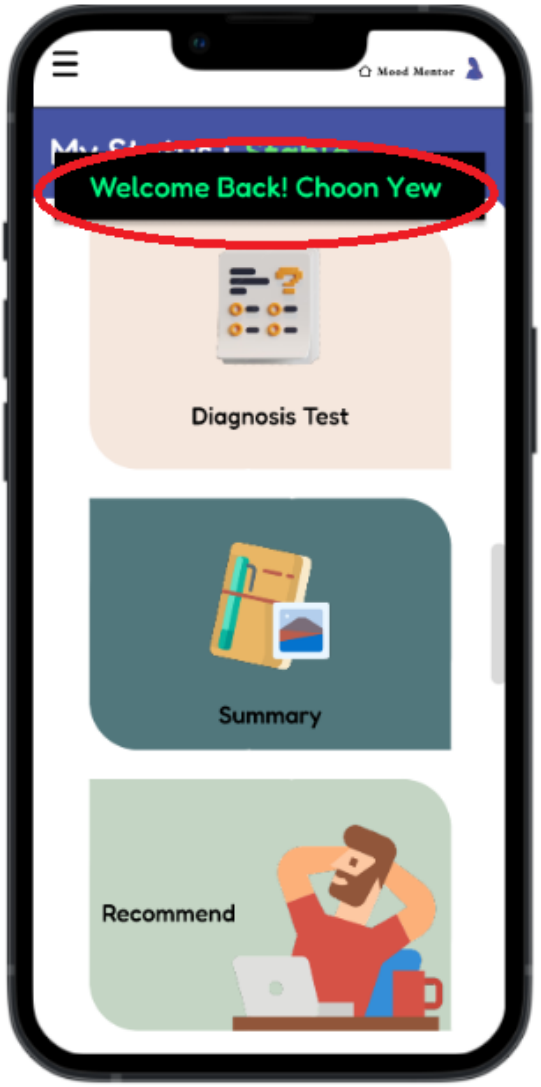

Figure 2.4.1

The figure above shows the Design Dialog to yield closure rule from Shneiderman's Eight Golden Rules which states that dialogs should be designed to give users a sense of closure after they have completed an action. This means that the dialog should provide clear and concise feedback to the user, and it should allow the user to easily exit the dialog.

The pop-up welcome message above is a good example of a dialog that yields closure. The message is clear and concise, and it tells the user that they have successfully logged in to the app.

Use a clear and concise title for the dialog. This will help the user understand what the dialog is about. Use a positive and encouraging tone in the dialog. This will help the user feel good about completing the action.

2.4.2. Sidebar & Sign Out

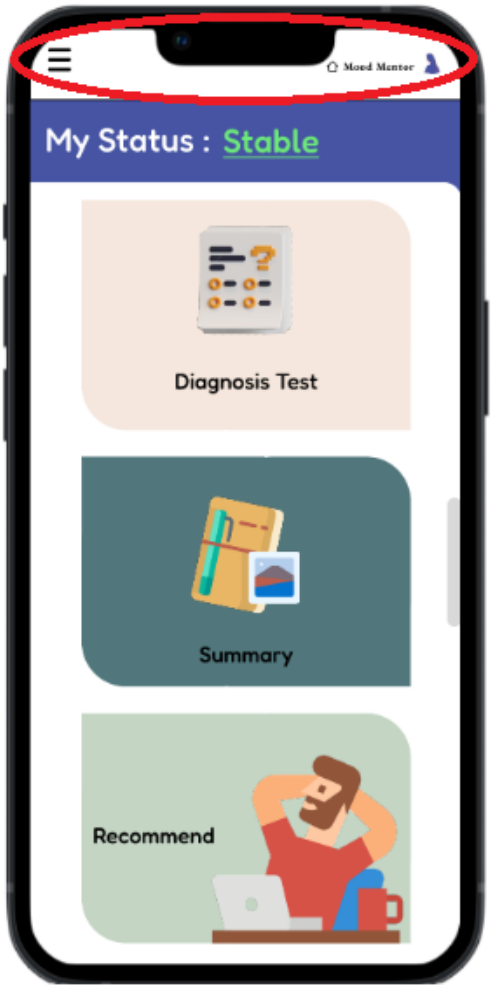

Figure 2.4.2.1

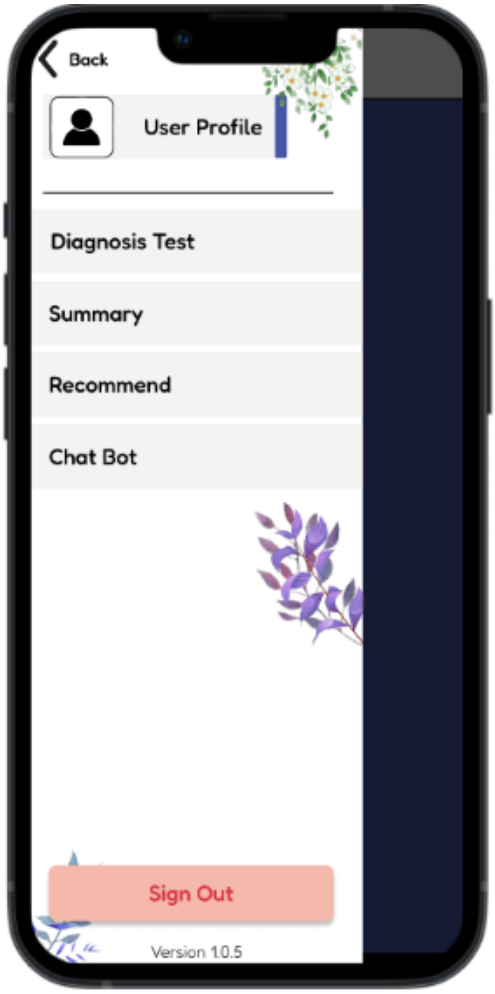

Figure 2.4.2.2

The ***Figure 2.4.2.1*** shows the Strive for consistency rule from Shneiderman's Eight Golden Rules states that UI elements should be consistent throughout the design. This means that the same elements should be used in the same way, and they should have the same meaning.

For example, the navigation bar above is consistent across all of the pages. The same icons are used for the same actions, and the icons are in the same location. This makes it easy for users to navigate the app and find the features they are looking for.

The ***Figure 2.4.2.2*** also shows the Visibility principle from Norman's design states that the more visible an element is, the more likely users will know about it and how to use it. This means that important elements should be prominently displayed and easy to find.

For example, the hamburger icon that is inside the figure is a good example of an element that is visible and easy to find. The icon is located in the top left corner of the screen, and it is a standard icon that is used in many apps. This makes it easy for users to understand what the icon means and how to use it.

Figure 2.4.2.3

The ***Figure 2.4.2.3*** involves the Permit Easy Reversal of Actions (POA) rule from Shneiderman's Eight Golden Rules states that users should be able to easily undo or reverse their actions. This means that users should be able to easily go back to a previous state if they make a mistake.

In the figure above , the POA rule is applied by providing the user with the option to press "Just Kidding" to cancel the sign out action. This allows the user to easily reverse their action and stay on the app.

The POA rule can also be applied by providing the user with the option to go back to the previous page. In this case, the user could press the "Back" button in the top left corner of the screen. This would take the user back to the sidebar page.

By providing users with the ability to easily reverse their actions, we can help to prevent them from making mistakes and ensure that they have a positive experience using our app.

2.5. User Profile

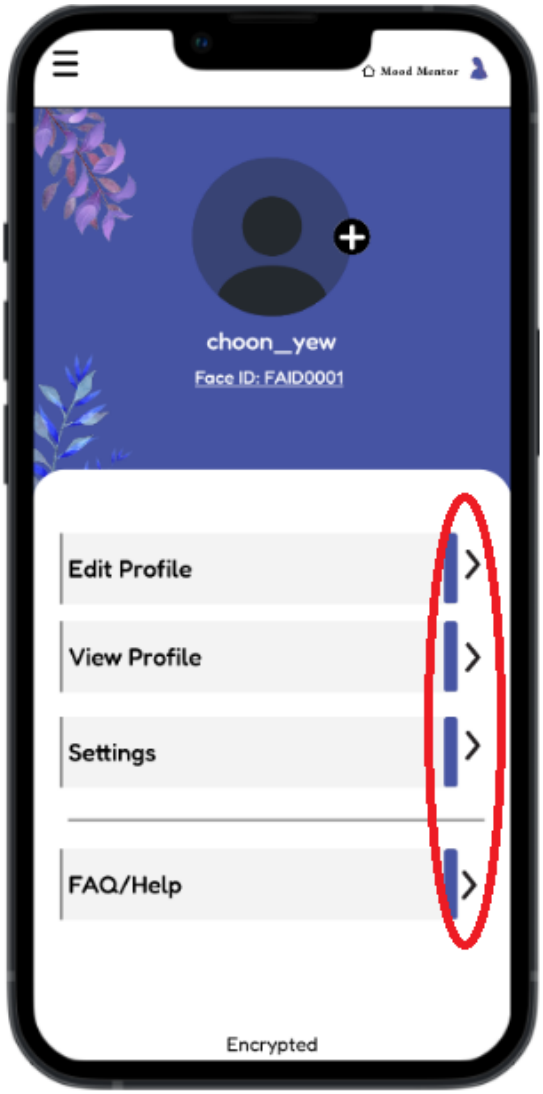

Figure 2.5.0

The ***Figure 2.5.0*** shows the affordance from Norman's Design Principles that is applied to the UI design in the image is the button that is beside the edit profile, view profile, settings, and faq/help. This button is a call to action that allows users to interact with the UI. The button is clearly labelled and has a clear purpose, making it easy for users to understand what it does.

The affordance of the button is also enhanced by its visual design. The button is a different color than the other elements on the page, and it has a slightly raised border. This makes the button stand out and draws attention to it.

2.5.1. Edit Profile

Figure 2.5.1.1

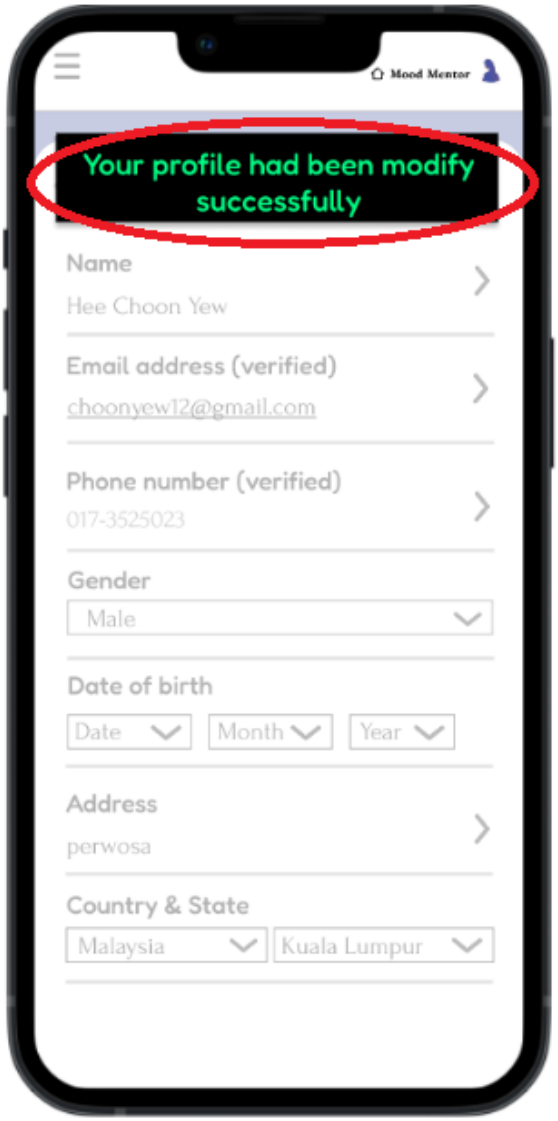

Figure 2.5.1.2

The figure above shows the Design Dialog to yield closure rule from Shneiderman's Eight Golden Rules which states that dialogs should be designed to give users a sense of closure after they have completed an action. This means that the dialog should provide clear and concise feedback to the user, and it should allow the user to easily exit the dialog.

From the UI design above, there's a pop-up message "Your profile had been modify successfully" is a good example of a dialog that yields closure. The message is clear and concise, and it tells the user that their profile has been successfully modified.

This dialog follows the Design Dialog to yield closure rule by providing clear and concise feedback to the user and allowing them to easily exit the dialog. This helps to ensure that the user has a positive experience and that they know what has happened after they have completed the action of modifying their profile.

2.5.2. View Profile

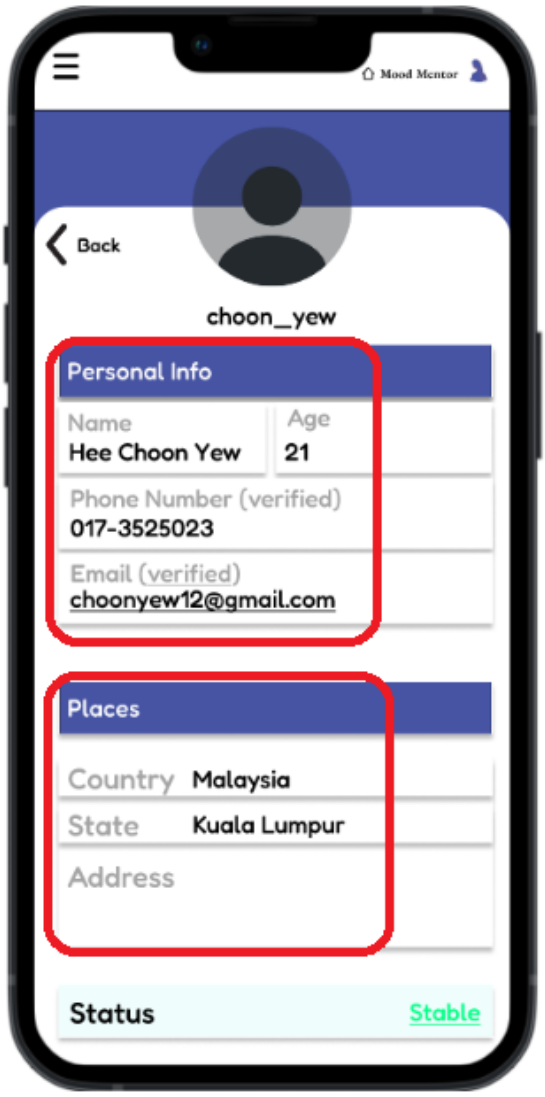

Figure 2.5.2

The figure above shows the Gestalt principle of similarity states that elements that are similar in appearance are perceived as belonging together. This can be used in UI design to group related elements together and make them easier to scan and understand.

From the UI design above, the Similarity principle is applied to the personal information section. The name, age, phone number, and email address are all in the same font and colour, which makes them appear to be part of the same group. This makes it easy for users to scan the information and find the specific details they are looking for.

The Similarity principle is also applied to the places section. The country, state, and address are all in the same font and color, which makes them appear to be part of the same group. This makes it easy for users to scan the information and find the specific details they are looking for.

2.5.3. Settings

Figure 2.5.3

The Support Internal Locus of Control rule from Shneiderman's Eight Golden Rules states that designers should give users a sense of control and ownership over the system. This can be done by giving users clear and concise options, allowing them to undo their actions, and providing them with feedback on their choices.

In the image you sent, the notification button is a good example of how this rule can be applied. The button is clearly labeled and easy to find, and it gives users the option to turn notifications

on or off. This gives users control over how they are notified about new messages, events, and other updates.

Additionally, the notification button provides users with feedback on their choices. When a user turns notifications on, they will see a notification icon appear in the status bar. This icon reminds users that they have enabled notifications, and it also allows them to easily turn notifications off again.

2.5.4. FAQ/Helps

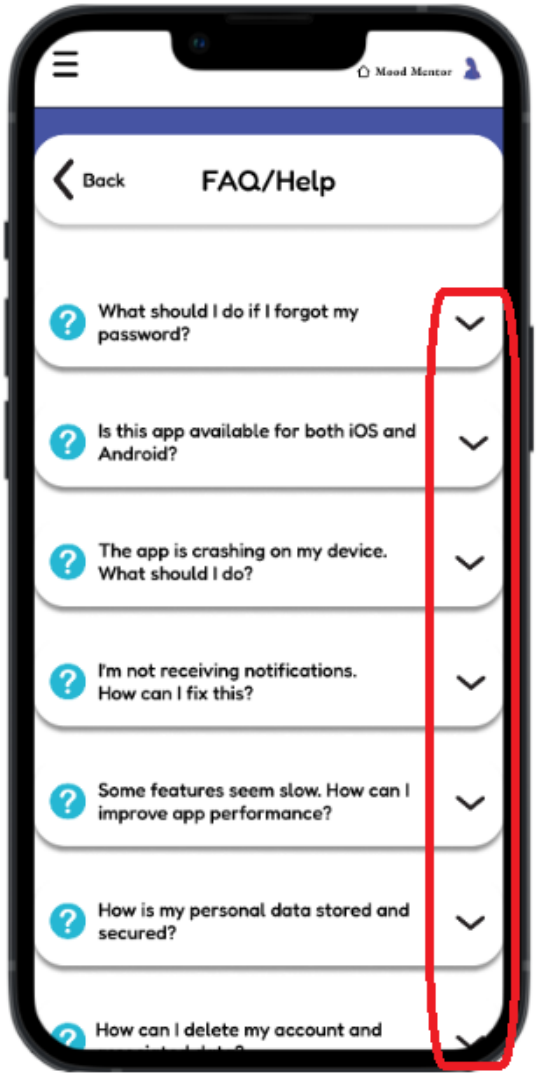

Figure 2.5.4

The dropdown button in the image is a good example of how the Offer Informative Feedback rule from Shneiderman's Eight Golden Rules can be applied. When the user clicks on the button, a list of FAQs appears. This feedback lets the user know that they have successfully clicked on the button and that they can now select a FAQ to read.

2.6. Depression Diagnosis Page

Figure 2.6.1

Implementing the **law of proximity**, the history sector with a list of depression results which have been arranged close together by date. This will instantly recap users to recognize the page consist of depression diagnosis history to view. The design should help novice users to use the "Mood Mentor" depression diagnosis function more easily provided with a timestamp under.

Figure 2.6.2

When the users had done the diagnosis test from facial expression capturing and answering diagnosis questions, an error message will appear on top, to inform the users the diagnosis has been done successfully. The error display message is designed according to the **Schenidermn's Eight Golden Rules** that offer **simple error handling**. The error message can alert the user that the activities have been completed. So that the users know the tasks are completed and do not have to repeat as desired.

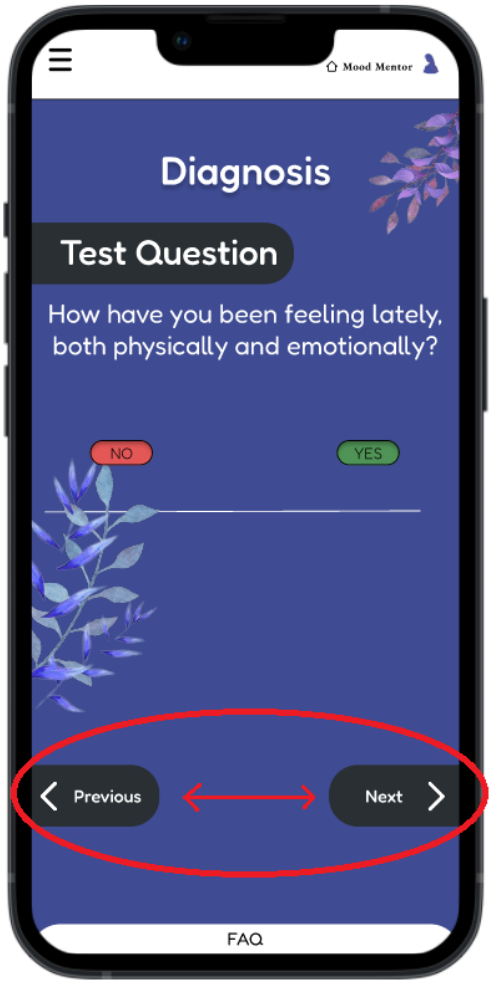

Figure 2.6.3

The “Previous” and “Next” buttons are designed with consistent and fitted spaces between each other. Therefore users may **avoid slip errors**, if the users might accidentally click on one of the buttons due to inappropriate spacing and misleading to the next page unwillingly or unintentionally. The gap between both buttons improve the satisfaction of the application and avoid annoyance by reducing misclicks, which often redirect to any of the depression questions page.

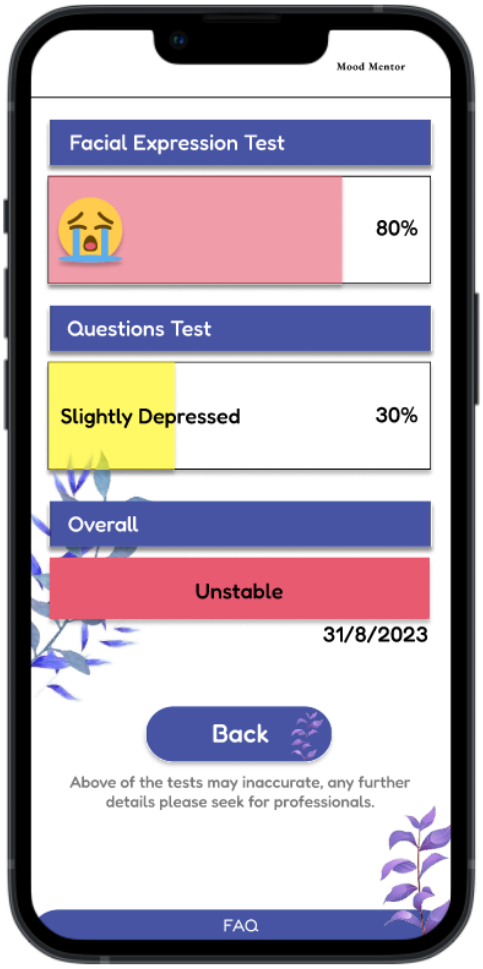

Figure 2.6.4

When the users click one of the depression diagnosis results from ***Figure 2.6.1*** , from the history list, the users then redirect to the page in ***Figure 2.6.4.*** In this figure, there are a few colors applied to sectors including “Facial Expression Test”. “Question Test” and “Overall” results and parallely represented the percentage. Each color is able to **grab the user's attention**. For example, if the users acquired a sad emotion in the “Facial Expression Test” function, the color then indicates light red but not sharp red to remind the sadness status and simultaneously not trigger the user's emotion. Meanwhile, a yellow color is implemented to grab users' attention such that the test results are slightly depressed. At last, an average temperature red color is to grab the user's attention to remind.

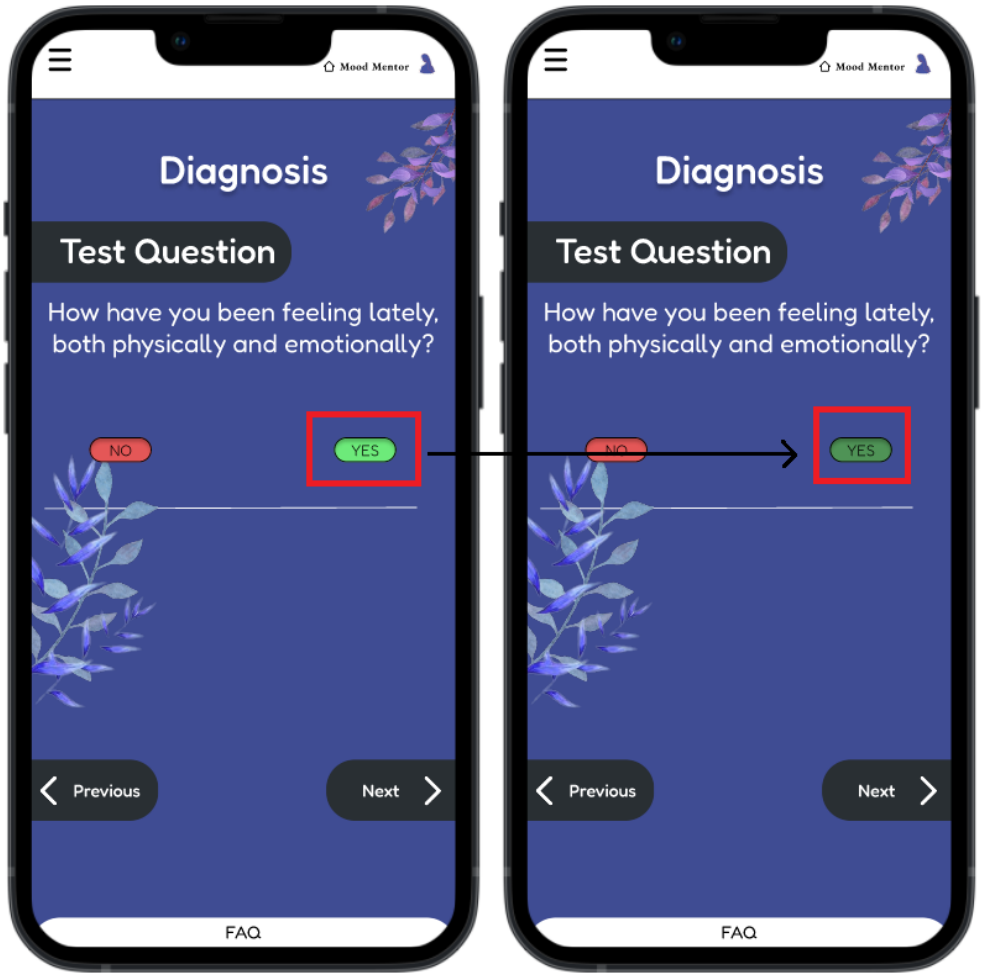

Figure 2.6.5

The "YES" button color changes from light green to dark green, which indicates that the users has made changes or clicked. This action has implemented the principle of **Shneiderman's Eight Golden Rules** that **offer informative feedback** which tell users have done click the button or finish the answer. The purpose of changing the button background color to dark as the user's mental model, green color represents pass, success, and assurance. Hence, the "YES" button firstly indicates the answer selection as agree and yes, then the dark green changes let the users easily know they have successfully clicked or answered the questions. If not, the users would be confused the question have been answered or create anxiety if the rules are not implemented.

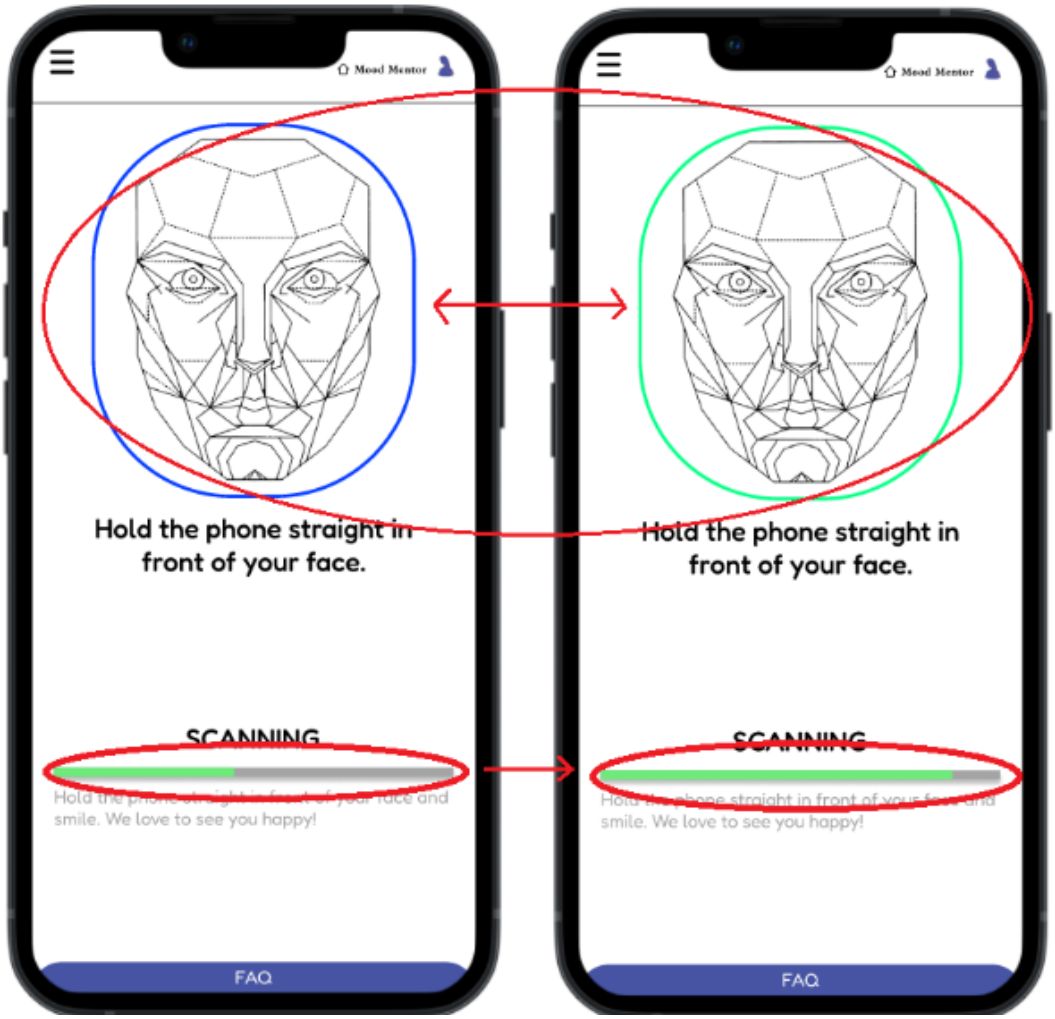

Figure 2.6.6

From both figures indicates the depression diagnosis facial expression is in progress. To archive the rules of Shneiderman's Eight Golden Rules that offer informative feedback. First of all, the process provides feedback to the users that they have been successfully follow the instructions and continuing the success process. Hence, the color changes are necessary. From the user's mental model, green color always means success and pass, therefore, users are recommended to follow instructions as told to perform diagnosis expression test, then in right side of ***Figure 2.6.6*** shows high contrast green to remind the users the process is successful being processing, this can reduce their anxiety and bear their mind the process still under control. Besides, the scanning process bar during the scanning phases also represents the scanning completeness in green also so that the users get to know the scanning process from zero to progression.

2.7. Mood Diary Page

Figure 2.7.1

Based on ***Figure 2.7***, the application will provide informative feedback where there will be instructions in the text field when users haven't started writing and a list of emoji to let users choose. When users have chosen their emoji, other emoji will automatically disappear. On the other hand, when users start to write in the text field, the grey colour instructions will also disappear. The system will provide users with a sense of satisfaction after each operator activity because they will be able to tell if they have successfully selected the emoji or filled in the field. Otherwise, users may be concerned since they do not know whether the field has been updated especially for novice users.

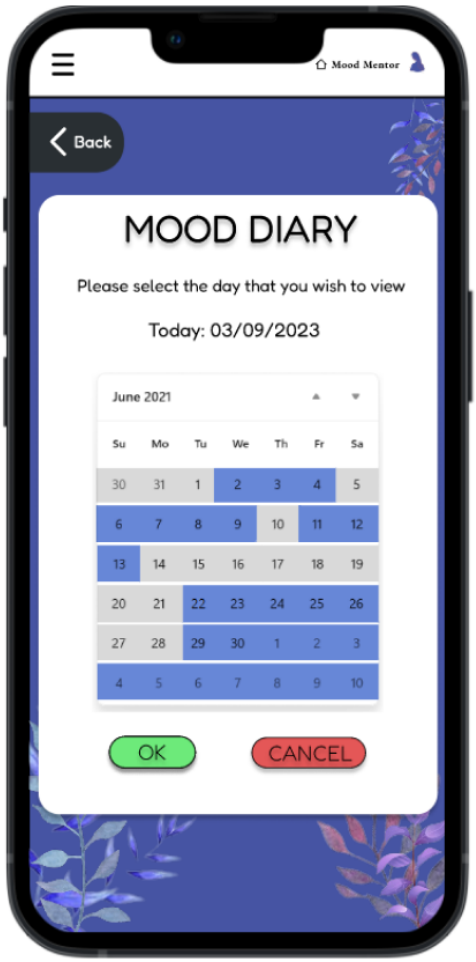

Figure 2.7.2

Based on ***Figure 2.7.2,*** the application provides colour indication in the virtual calendar. When users choose to view their mood diary, the application will display a virtual calendar to let users choose which date that they wish to view the diary. However, there are two colours in the virtual calendar which are grey and dark blue. Users are not allowed to click on dates with grey colour as those are the dates with no records of diaries. Therefore users are only allowed to select dates with dark blue colour as those are the date with records of diaries and users are welcome to view it. These colours are utilised to catch the user's attention so that they can make the correct option while selecting the date. As a result, it can improve user's potential to view their mood diary.

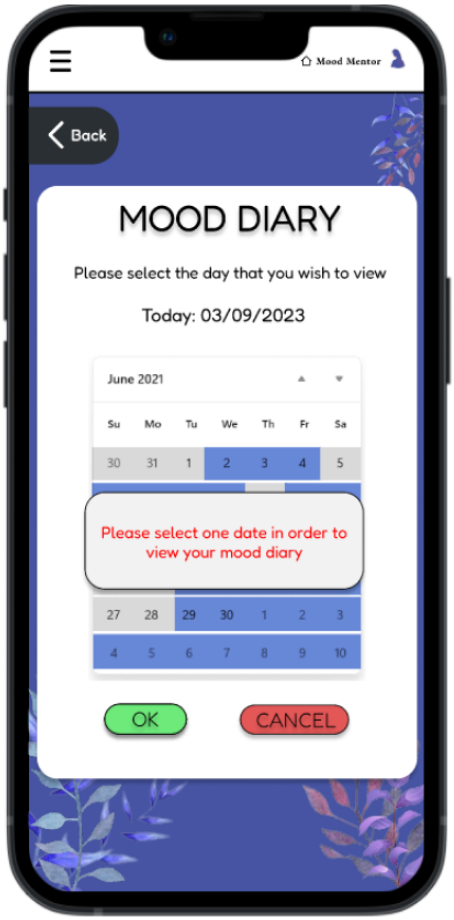

Figure 2.7.3

Based on ***Figure 2.7.3***, the application offers simple error handling. When users are about to view their mood diary, they will first need to select a date to decide which day that they would wish to view. However, based on ***Figure 2.7.3***, if users do not select any date and click on the "Ok" button, an error message will appear to inform users that in order to view their mood diary, they would need to select a date. Therefore, users will know what mistakes they have made immediately without the need to guess it. This will increase the user satisfaction and usability as they can clearly understand the simple error message prompted.

2.8. Recommender Page

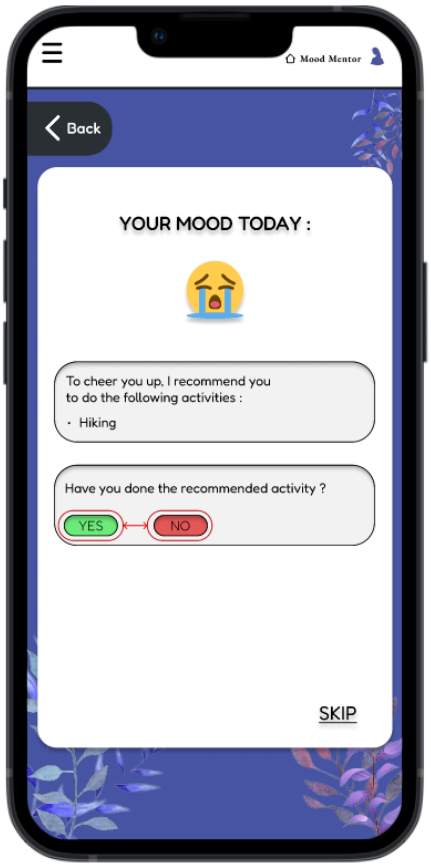

Figure 2.8.1

Based on ***Figure 2.8.1***, the application prevents slip errors when clicking a button. When developing the button, sufficient space is left between the 'YES' and 'NO' buttons to prevent slip errors. Even when users are aware of the objectives they are trying to achieve, slip errors might happen when they accidently hit a different button than the one they intended to. For instance, users may intend to click the "YES" button to indicate that they enjoyed the recommended activity, but they may mistakenly press the "NO" button, which indicates that they did not enjoy what was recommended and this prevents the system from suggesting a similar activity in the future. Therefore, users may reduce the possibility of making mistakes and enhance their level of satisfaction if there is enough space between the buttons to prevent this kind of error.

Figure 2.8.2

Based on ***Figure 2.8.2***, the application enables the button as feedback. To let users know when the "YES" button has been clicked, the background colour of the button has been changed from light green to dark green. Besides that, if users had clicked the "YES" button instead of the "NO" button, the "NO" button would disappear. Therefore, users can clearly know what they have clicked. The Shneiderman's Eight Golden Rules concept has been achieved through this activity where the system provides clear feedback to the users on what they have clicked.

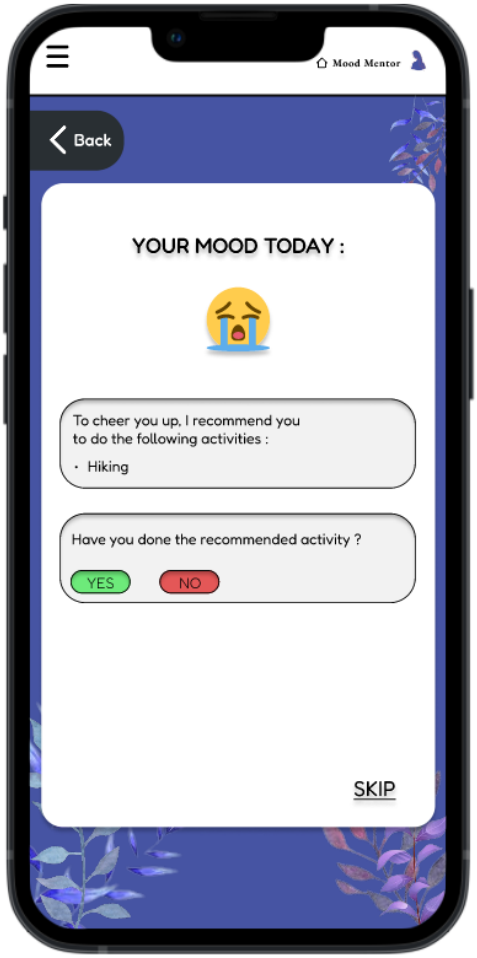

Figure 2.8.3

Based on ***Figure 2.8.3***, the law of similarity is applied. The green "YES" button and the red "NO" button stand out sharply from one another visually. Users would probably interpret these buttons as different and representing different actions based on the Law of Similarity, with the green button indicating a positive or affirmative action while the red button indicating a negative or negative action. Therefore, the usage of colour significantly contributes to users understanding the intended meaning. Based on their prior experiences and cultural associations, people are said to instantly link the color green with positive activities and the colour red with negative behaviours, according to the Law of Similarity. Hence, this improves the user experience by reducing mental burden and enabling users to respond more quickly according to their intentions.

2.9. Chatbot Page

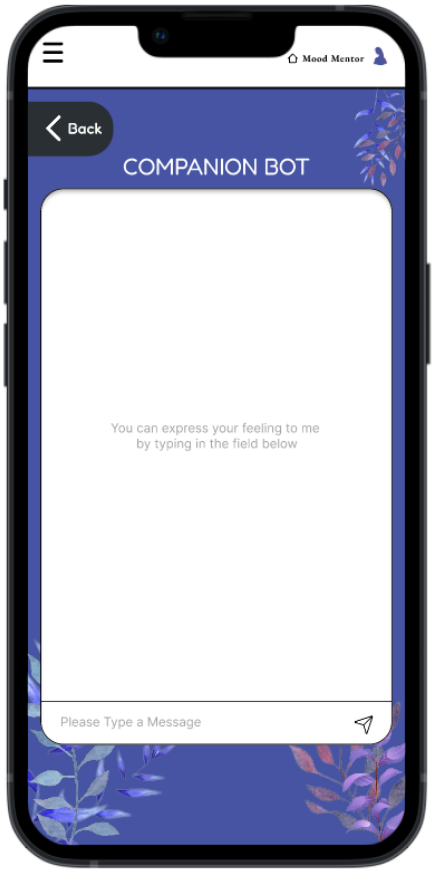

Figure 2.9.1

Based on ***Figure 2.9.1***, the application offers informative feedback as the text in the middle of the page, “You can express your feeling to me by typing in the field below” in an instructions to users what they need to do. The Shneiderman's Eight Golden Rules concept has been achieved through this activity where the "Offer Informative Feedback" rule lays a high priority on the value of giving users immediate and useful information regarding the results of their activities. In this instance, I help users in understanding what is required of them and directing their interactions with the interface by providing clear instructions on what to do. By making sure users are guided and informed throughout their interactions with the system, this rule helps to provide a great user experience

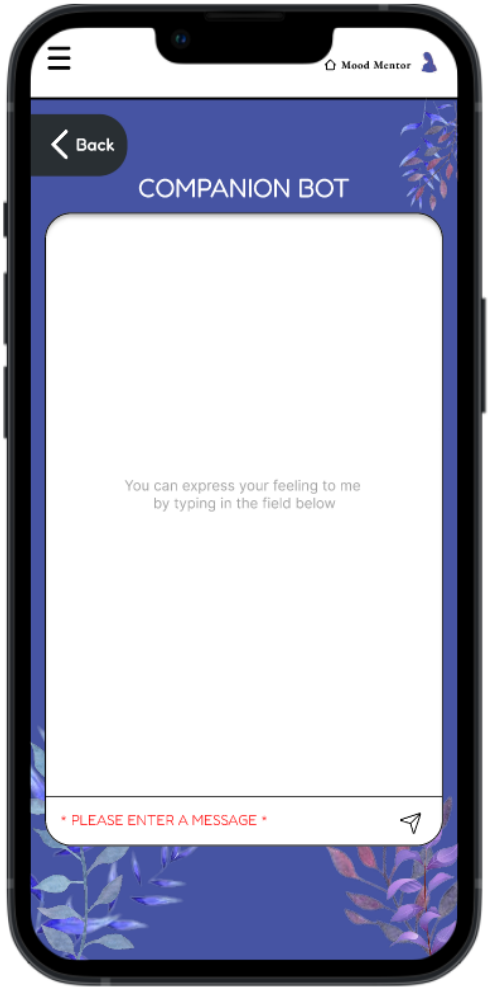

Figure 2.9.2

Based on ***Figure 2.9.2***, the application offers simple error handling. When a user enters an invalid value while according to Shneiderman's Eight Golden Rules, Offer Simple Error Handling, an error message will be displayed. Instead of making the users guess, this rule's implementation aims to make it obvious to them what errors they have made. In this case, if users, have leave the text field empty, an error message will be displayed such as "*PLEASE ENTER A MESSAGE !" to let them know that they are not allowed to leave the text field empty and click the send button. Implementing this rule can increase the user satisfaction as they can clearly understand the simple error message prompted.

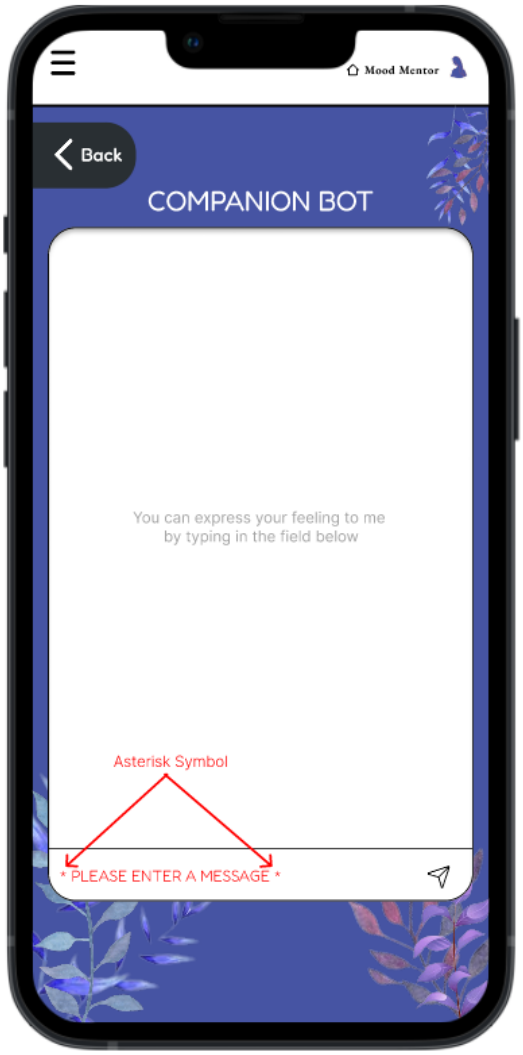

Figure 2.9.3

Based on ***Figure 2.9.3***, the application used colour and special symbols to grab attention. A red colour asterisk symbol (*) has been displayed between the error message which has achieved the Core Cognitive Aspect - Attention. The user's mental model assumes that the colour red always indicates importance. Therefore, a red asterisk symbol has been used to let the users know the field is necessary to be filled in. By providing a special symbol to grab the attention of the users on what they should fill in can increase the satisfaction of using the proposed system and it also increases the efficiency of using the system as the users can quickly know that the field is required.