User Guide

Memory Enhancement Application
Milestone 4 –Team Amazing
Software Engineering Project
SWEN 670
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Version 1.0

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Revision History

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1. Introduction

This user guide document describes the functions and operation procedures of the Memory Enhancer mobile application developed by the Amazing Team. Its goal is to facilitate the usage of the application, and as such, its target audience is the end-user of the application.

2. Overview

In the United States of America, there is a small, but growing population of individuals experiencing short-term memory loss. This short-term memory loss may occur due to advancing age, a symptom of larger issues such as dementia. Life expectancy has increased significantly in the last 50 years. As such, people are living longer and require a longer, greater quality of life. Team Amazing's solution to this global issue, is the Memory Enhancer phone application, which acts like a cross between Apple's Siri and a friendly update reminder to serve the user as a personal assistant. The voice recognition technology utilized with this phone application will aid people with disabilities that impair their short-term memory. Once activated, the Memory Enhancer application will be listening to the user's conversations, and based on the mentioning of preset trigger words, the application will record user's spoken words as notes. When recalled by preset trigger words, the notes will be played back to the user via their Bluetooth headsets. The application will enable the user to customize their trigger words to record and playback notes; users will also be able to manage their notes, adding, editing, and deleting them as well as setting the lifespan of the notes.

3. Abbreviations/Acronyms/Definitions

AES	Advanced Encryption Standard
App	Application
OS	Operating system
Transcription	The process of voice recognition and transcription to readable text
Triggers	Words that help the application listen to, record, and playback notes.

4. Hardware Specifications

The Memory Enhancer mobile application is designed to run on smartphones only. The application is not compatible with tablets, smartwatches, television and CarPlay devices. The application can be installed only on smartphones running Android and iOS platform.

5. Software Specifications

Running the application on Android devices requires a minimum Android OS version 9.0 (Android release **Pie**); ideally, version 10.0 (release **Q**) and version 11.0 (release **R**) are preferable.

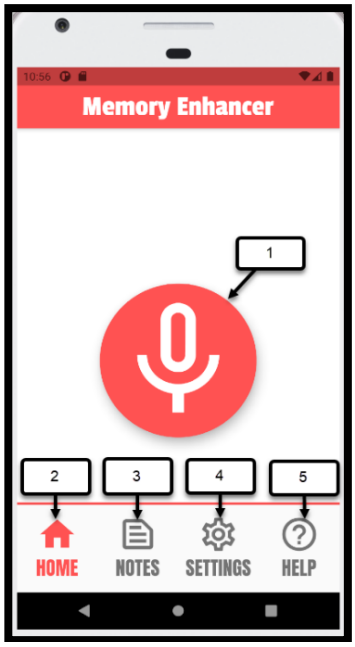
Running the application on iOS devices requires a minimum version **iOS 13**.

6. Pages

The Memory Enhancer App has five main pages and four sub-pages that the user can navigate through. The Home page, Notes page, Settings page, and the Help screen are the five main pages. The four sub-pages are the General Settings, Trigger Words, Contact Us, and How-To Videos. Below, each page is shown along with the identification of different parts of the page.

6.1. Home Page/Navigation

On the Home page, the listening mode can be started and stopped. On this page, and every other page, to navigate through the application icons are displayed at the bottom of the page.



1. Start/Stop Listening Button

2. Home Screen Navigation Button

3. Notes Screen Navigation Button

4. Settings Screen Navigation Button

5. Help Screen Navigation Button

6.2. Notes Page

On the *Notes* page, notes are paired under different subjects, including Personal, Dinner, Lunch, Family & Friends, Medical, and Other. The Notes page also allows you to view notes, delete notes, edit notes, write new notes, and record notes.

6. Note Subject

7. Collapse/Expand Arrow for subject

8. Delete A Note

9. Note with Timestamp (long press to view whole note).

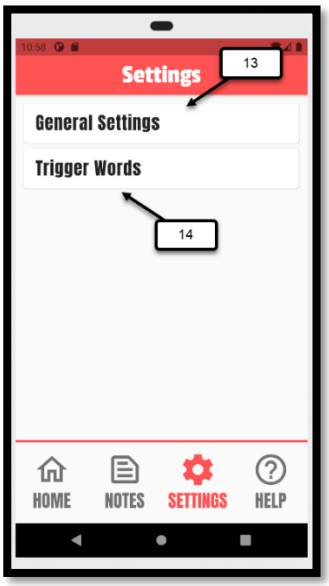
10. Edit Note

11. Write Note

12. Record Note

6.3. Settings Page

The *Settings* page lets you change General Settings, as well as manage trigger words.

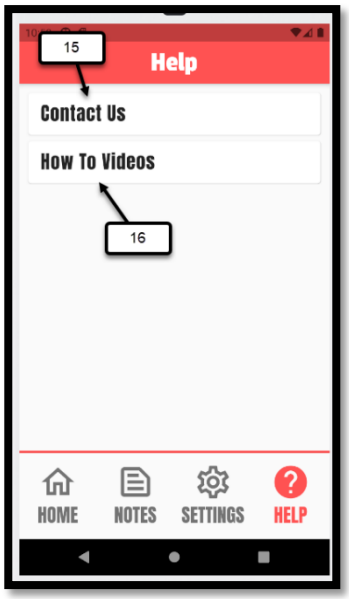


13. General Settings (change font size, etc.)

14. Trigger Words (edit, add, and delete trigger words)

6.4. Help Page

On the *Help* page, there is information about contacting Team Amazing and how-to videos to help in the operation of the application

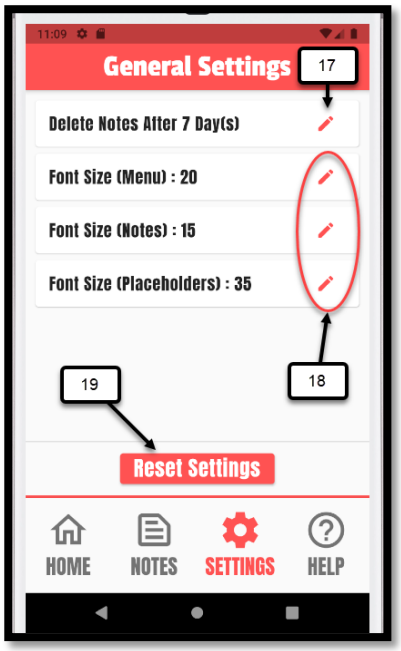


15. Contact Us (more info on how to contact Memory Enhancer App team.

16. How-To Videos (tutorial videos on how to use the application)

6.5. General Settings Page

On the *General Settings* page, the font sizes for different features can be increased/decreased, as well as changing the number of days to keep a note before automatic deletion.



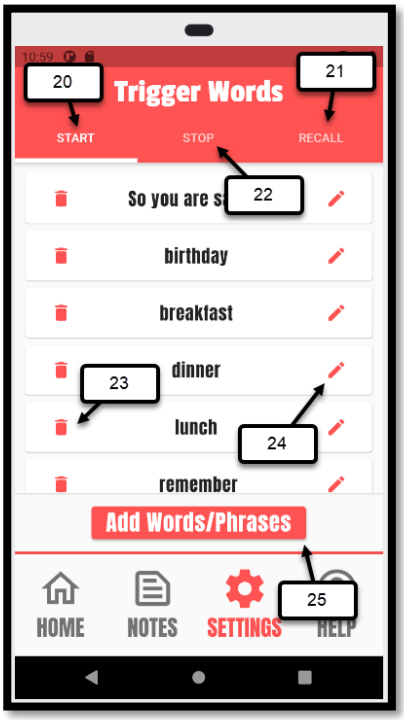
17. Change amount of time before notes delete

18. Change the font sizes for notes, menus, etc.

19. Reset Settings (convert changes back to original settings)

6.6. Trigger Words Page

On the *Trigger Words* page, trigger words can be viewed, added, deleted, and edited.



20. Start Tab with Triggers Words that will start recording

21. Recall Tab with Trigger Words that will playback the notes

22. Stop Tab with Trigger Words that will stop recording

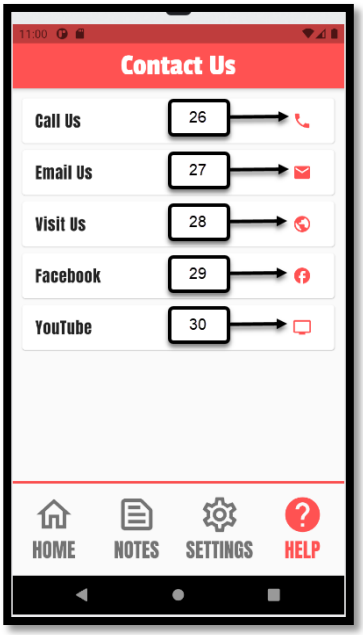
23. Delete Trigger Word

24. Edit Trigger Word

25. Add Trigger Word/Phrases

6.7. Contact Us Page

The *Contact Us* page contains the different ways to get connected to Team Amazing.



26. Call Memory Enhancer App team

27. Email Memory Enhancer App team

28. Visit Memory Enhancer Team website

29. Visit Memory Enhancer Team Facebook page

30. Visit Memory Enhancer Team YouTube page

7. Launching the application

The application can be launched by selecting the application icon (see image below):

Microphone permission

The first time the application is launched, the microphone permission will be requested to the user. Please authorize the microphone use for the Memory Enhancer application to function properly.

***Note**: iOS version may not ask for the microphone permission explicitly.*

8. Step-by-Step Guides

Simple and brief step-by-step guides are given below for each major task in using the application.

8.1. Starting and Stopping Listening Mode

The listening mode on the Memory Enhancer mobile can be started and stopped in two ways: by pressing on the microphone button on the home page or by voice.

Starting and stopping the listening mode in the application.	
 	1 By pressing the microphone button The application listening mode is activated when touching the inactive microphone button. When the listening mode is active, the microphone button will have a full microphone icon, and the button will be beaming. To stop the listening mode, simply touch the microphone button again.
	2 By voice The application listening mode can also be activated by voice by saying **"HEY AMAZING"**, and it can be stopped by saying **"THANK YOU AMAZING"**.

8.2. Write a New Note

Figures 1-3 shows the process to add a new note to the application by typing in the note.

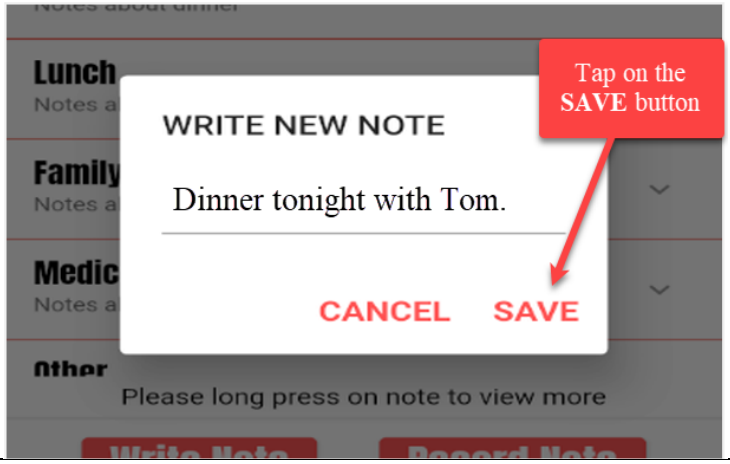
Creating a new note by typing it in.

Figure 1: *Tap the WRITE NOTE button to create new note.*

1

Tap the **WRITE NOTE** button on the *Notes* page, see Section 6.2, to write a new note.

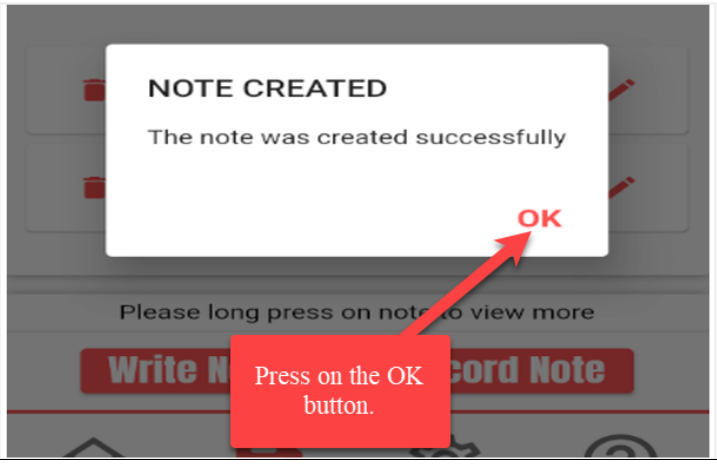
Figure 2: *Type new note and press SAVE button.*



2

Type in the new note. Press the **SAVE** button to save the edits.

Figure 3*: Press the OK button to finish creating the note.*

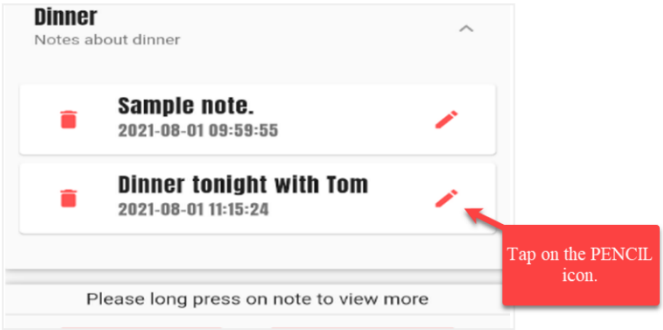
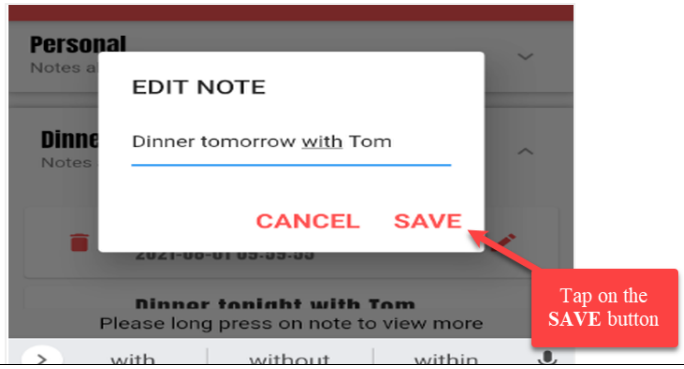
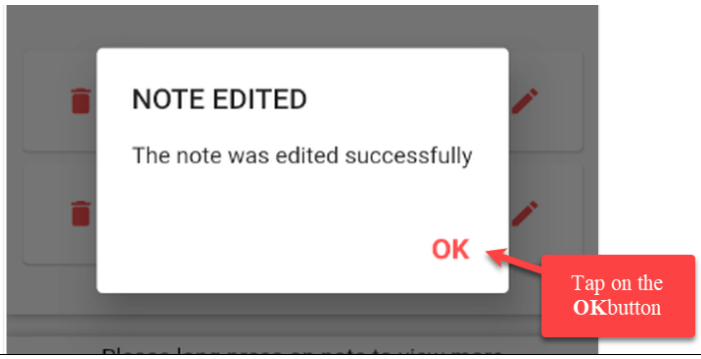


3

Press the **OK** button on the note creation confirmation box.

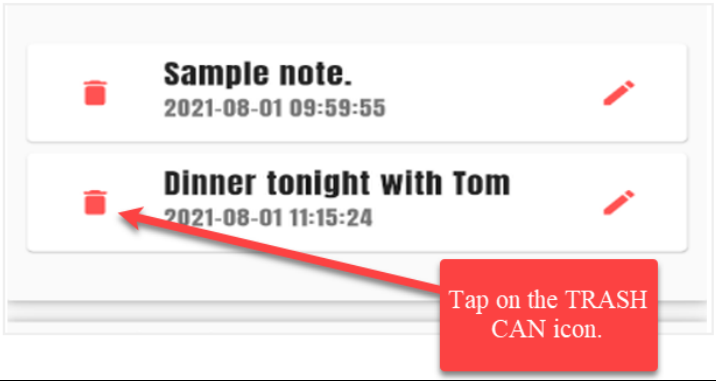
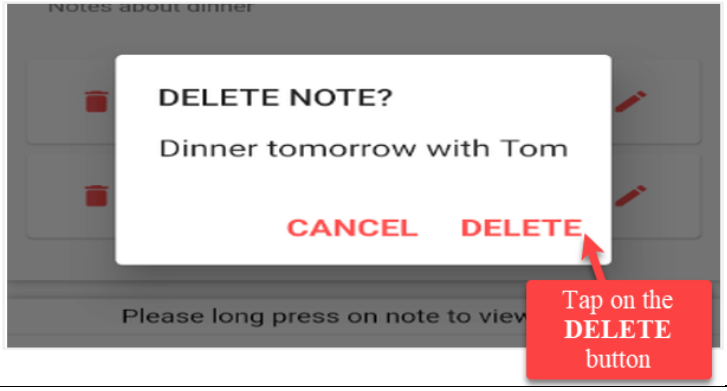
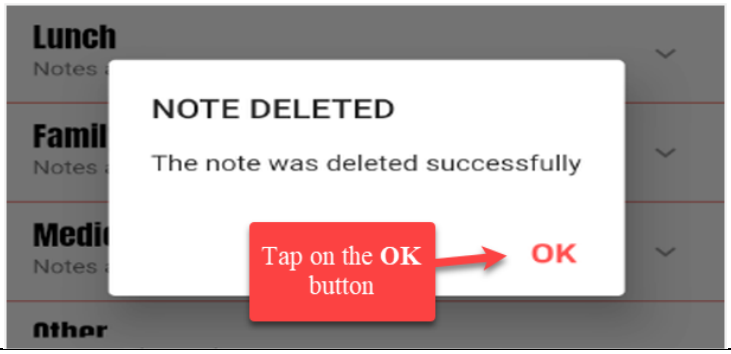
8.3. Edit a Note

In Figures 4-6, the steps on how to edit an existing note are shown.

Editing an existing note.	
Figure 4: *Click on PENCIL icon* 	1 Tap the **PENCIL** icon to edit the note.
Figure 5*: Make edits and press SAVE button.* 	2 Make edits to the note. Press the **SAVE** button to save the edits.
Figure 6*: Press OK button on confirmation box.* 	3 Press the **OK** button on the edit confirmation box.

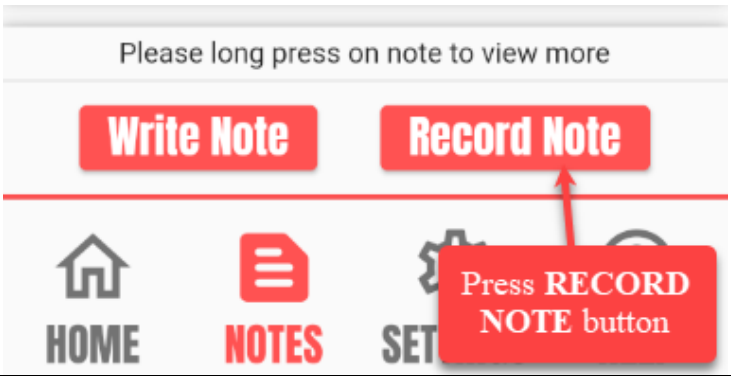
8.4. Delete a Note

The process of deleting an existing note is shown below in Figures 7-9.

Deleting an existing note.	
Figure 7: *Tap on the TRASH CAN icon.* 	1 Tap the **TRASH CAN** icon to start the process to delete the note.
Figure 8: *Press DELETE button.* 	2 Press the **DELETE** button to delete the note.
Figure 9: *Press OK button on confirmation box.* 	3 Press the **OK** button on the deletion confirmation box.

8.5. Record a Note

Recording a note can be accomplished by following the steps laid out below, see Figures 10-12.

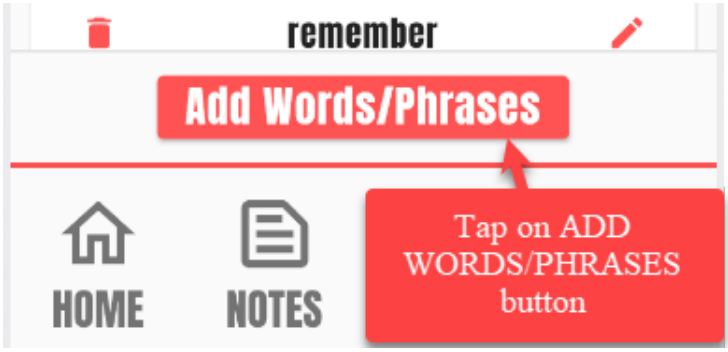
Recording a new note	
Figure 10: *Tap the RECORD NOTE button to record new note.* 	1 Tap the **RECORD NOTE** button on the *Notes* page, see Section 6.2, to record a new note.
Figure 11: *Speak new note while application is listening.* 	2 Speak the desired new note while application is listening.
Figure 12*: Press the STOP RECORD button to finish recording the note.* 	3 Press **STOP RECORD** button when finished.

8.6. Add a Trigger Word

There are three easy steps to add a trigger word to one of the trigger words lists. The steps are shown below in Figures 13-15.

Adding a trigger word to the list.

Figure 13: *Tap on the ADD WORDS/PHRASES button.*



1

Tap on **ADD WORDS/PHRASES** button on the *Trigger Words* page, see Section 6.6, to add a trigger word to a list.

Figure 14: *Type new word and press the ADD button.*

2

Type in new trigger word. Press the **ADD** button to add the new word.

Figure 15*: Press OK button on confirmation box.*

3

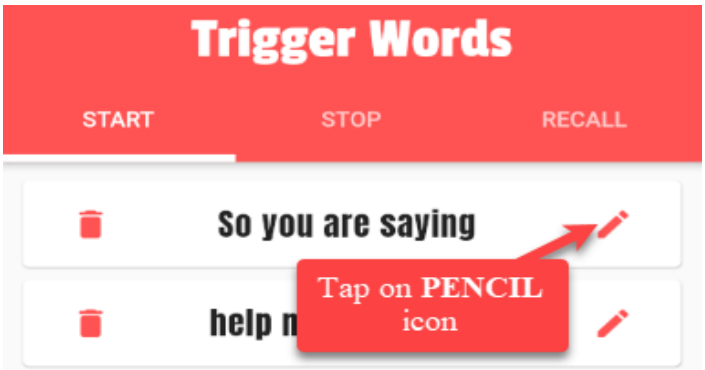
Press the **OK** button on the trigger word added confirmation box.

8.7. Edit a Trigger Word

To edit an existing trigger word, Figures 16-18 show the necessary steps.

Editing a trigger word/phrase.

Figure 16: *Tap on PENCIL icon.*



1

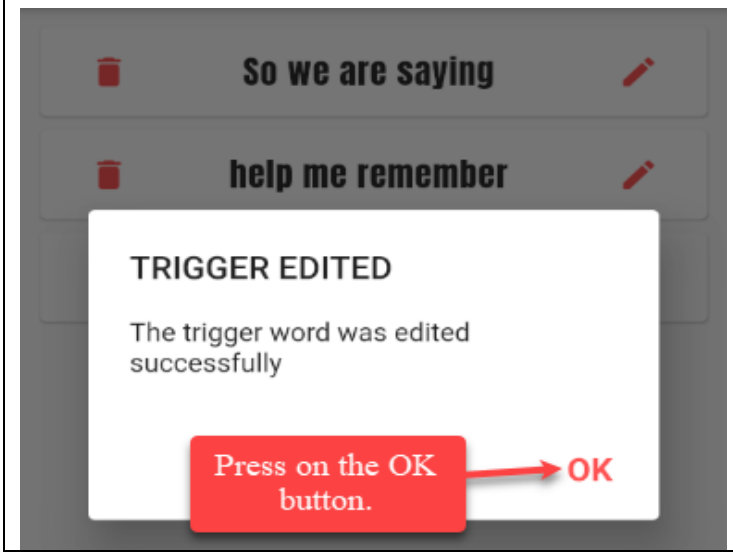
Tap on **PENCIL** icon on the *Trigger Words* page, see Section 6.6, to edit a trigger word from the list.

Figure 17: *Type edits of trigger word, and press the EDIT button*

2

Type edits for trigger word/phrase. Press the **EDIT** button to edit the trigger word/phrase.

Figure 18: *Press OK button on confirmation box.*



3

Press the **OK** button on the trigger edited confirmation box.

8.8. Delete a Trigger Word

Figures 19-21 illustrates how to delete a trigger word from the application.

Deleting a trigger word from the list.

Figure 19: *Tap on TRASH CAN icon.*

1

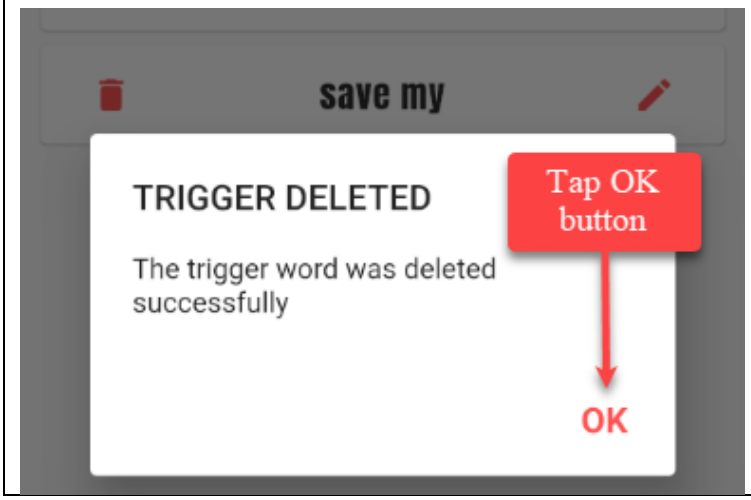
Tap on **TRASH CAN** icon on the *Trigger Words* page, see Section 6.6, to delete a trigger word.

Figure 20: *Press the DELETE button*

2

Press the **DELETE** button to delete the trigger word.

Figure 21: *Press OK button on confirmation box.*

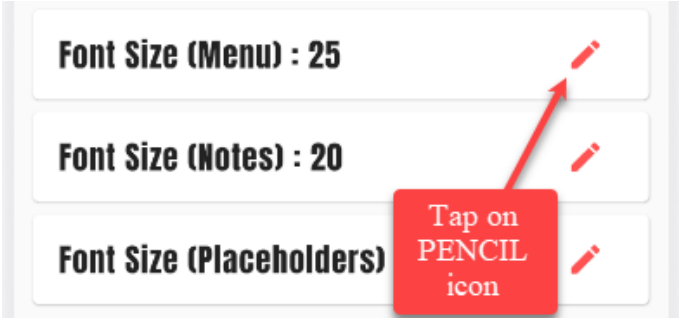
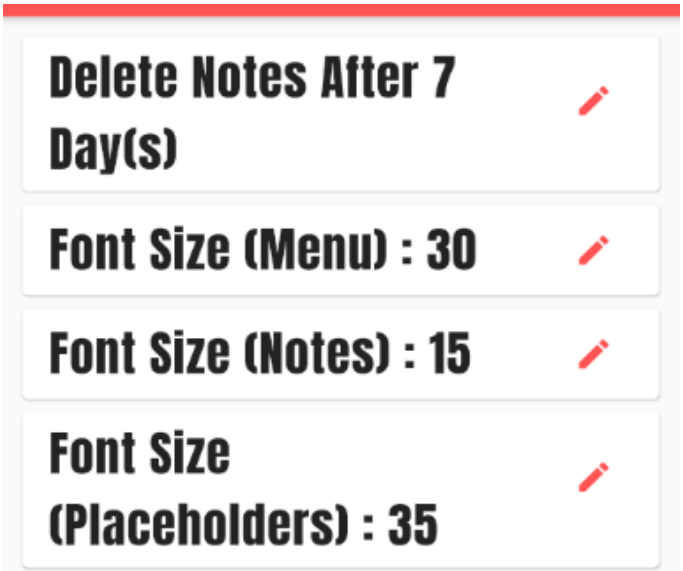


3

Press the **OK** button on the trigger deleted confirmation box.

8.9. Change Font Sizes

In Figures 22-24, the steps for how to increase and decrease the font size within the application are shown.

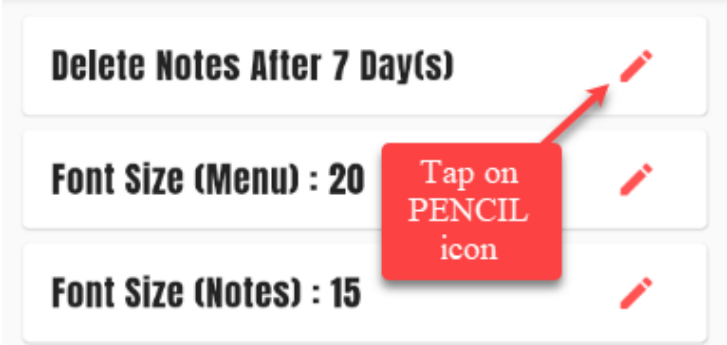
Change the font size throughout the application.	
Figure 22: *Tap on PENCIL icon.* 	1 Tap on **PENCIL** icon on the *General Settings* page, see Section 6.5, to change the font size for menus, notes, or placeholders.
Figure 23*: Type desired font size and press the UPDATE button* 	2 Type in desired font size. Press the **UPDATE** button to change the font size.
Figure 24: *Font size is changed on the desired feature.* 	3 Font size has been changed within the application.

8.10. Change How Many Days to Keep a Note

To change the number of days to keep a note in the application, follow the steps shown below in Figures 25-27.

Changing the number of days to keep a note in the application before automatic deletion.

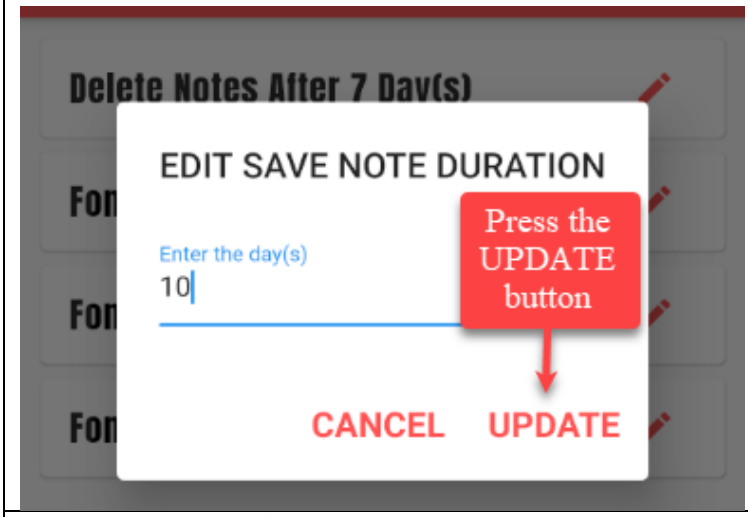
Figure 25: *Tap on PENCIL icon to change number of days.*



1

Tap on **PENCIL** icon on the *General Settings* page, see Section 6.5, to change the number of days to keep a note (default is 7 days).

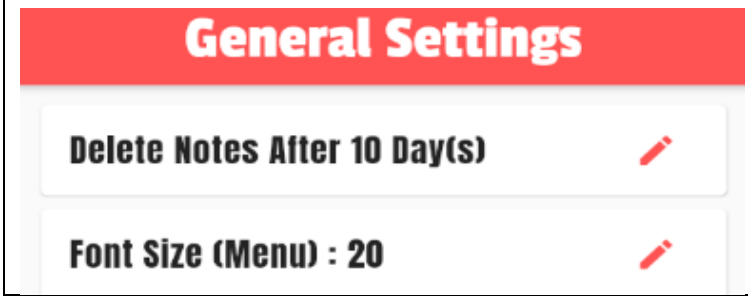
Figure 26*: Type in desired day(s) and press the UPDATE button.*



2

Type in number of desired day(s). Press the **UPDATE** button to change the number of days.

Figure 27: *The number of days to keep a note is changed.*



3

The number of days to keep a note is changed from to the desired number of days.

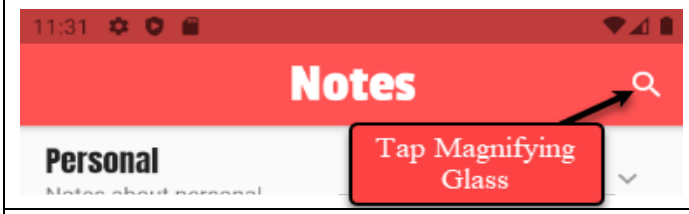
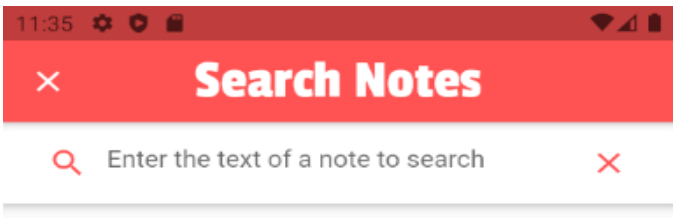
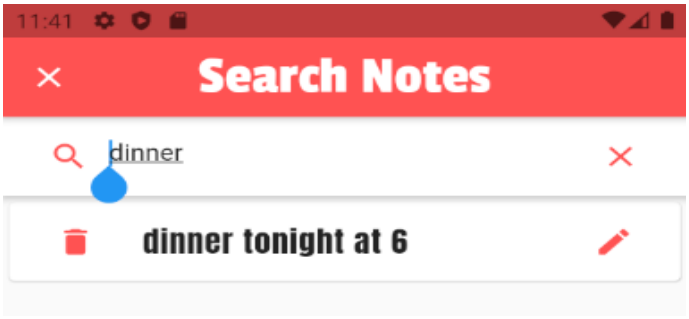
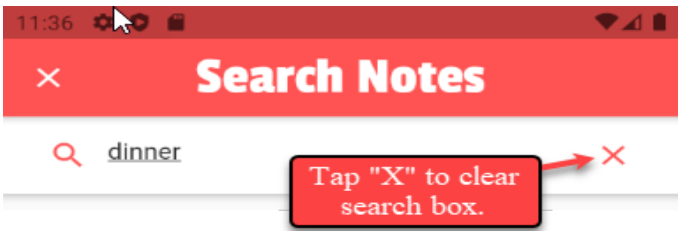
8.11. Search Note Using Voice

To search notes using voice, the following steps shown below can be followed, see Figures 28-30.

Searching notes using voice commands.	
Figure 28: Press microphone icon or say, "HEY AMAZING". 	1 Press microphone button on *Home* page, see Section 6.1 or say "**HEY AMAZING**"
Figure 29*: Say a recall trigger word and what you want to remember.* 	2 Say one of the recall trigger words, such as "**HELP ME REMEMBER**" plus the desired content you want to remember. For example, "**HELP ME REMEMBER MY SOCIAL SECURITY NUMBER**"
Figure 30: *The application will playback desired note.* 	3 The application will search the notes and playback the note with your social security number.

8.12. Search Note Using Search Box

Figures 31-35 show the steps necessary to search for notes using the application's search box.

Searching notes using the application's search box.	
Figure 31: *Tap on MAGNIFYING GLASS icon to search notes.* 	1 Tap on the **MAGNIFYING GLASS** icon on the *Notes* page, see Section 6.2, to search the existing notes.
Figure 32*: The application's search box.* 	2 A search box will be displayed.
Figure 33: *Enter keyword to search and press SEARCH icon.* 	3 Enter the keyword to search for in the search box. Press the SEARCH icon to search.
Figure 34: *Search results from keyword search.* 	4 The notes matching your search is displayed.
Figure 35: *Clearing text from search box by pressing "X".* 	5 If you press the "X" icon, then the search box will be cleared, and no search will be conducted.

9. Troubleshooting

This section of the user guide is to help with common issues that may occur when using the application.

1. **Application unexpectedly crashes**.
   On Android, open **Settings** on the device. Under **Settings**, there should be an App Library where all the apps that are installed on the device are listed. Select *Memory Enhancer App* from the list. On the *App info* page for *Memory Enhancer App*, click **Force stop**. This will stop the application. Navigate back to the device's home page and start the *Memory Enhancer App* again.

2. **Cannot find a created note**.
   When created, the notes are paired according to subject. Check under the subject that the note would be under. For example, a note about a doctor's appointment would be categorized under *Medical*. If you still cannot find it, look under the *Other* category or use the search functions described in Section 7.11 or Section 7.12.

3. **Application is not recording my speech**.
   The device microphone may not have the correct permissions to record audio. On an Android, open the Chrome application and press on the microphone button. When prompted *"Allow Chrome to record your audio,"* select *"While using this app."* Next, Google will prompt: *"Allow Google to record your audio,"* select *"All the time."* Then, try to run the application again. If the application prompts you to give permission to record audio, select *"While using this app."*

4. **Font size is too small**
   Navigate to the Settings page in the application. Select General Settings. On this page follow the instructions in Section 7.9.

5. **Microphone Permission issue on iOS devices**
   Go to *Settings* > *Privacy* > *Microphone* and enable the Memory Enhancer application.
   Go to *Settings* > *Privacy* > *Speech Recognition* and enable the Memory Enhancer application.

6. **Any other issues that are not listed**
   Please contact our team at me.teamamazing@gmail.com or visit our YouTube page for some how-to videos on how to use the application.