

# User Manual for Guardian

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## Introduction

Welcome to the Guardian user manual! This guide is designed to help you understand and make the most out of the Guardian app - an iOS mobile app created to enhance personal safety and assist in finding missing persons. Guardian was developed in response to the growing concerns about personal safety and the limitations of existing safety apps.

Guardian offers a comprehensive set of features to address key safety concerns and provide an accessible, user-friendly experience. With this app, you can register and manage your account, add emergency contacts, access location-based safety information, send emergency help requests, record audio evidence, report unsafe locations, and contribute to finding missing persons. What sets Guardian apart from other safety apps is its focus on addressing the critical weaknesses found in similar products, such as the lack of missing person functions, registration limitations, subscription dependencies, and inconvenient SOS access.

This user manual will provide you with a detailed walkthrough of the Guardian app's features and functionalities, as well as answers to frequently asked questions. Whether you are a solo traveller, someone who walks alone at night, or an individual who values their privacy and safety, Guardian is designed to cater to your unique needs.

In the following sections, you'll find step-by-step instructions on how to set up and use the Guardian app, along with helpful tips and insights to ensure a seamless user experience. Let's get started on your journey to enhanced safety and peace of mind with Guardian!

## System Requirements and Installation

Guardian is designed to be compatible with iOS devices and requires a minimum of iOS 15.0. However, for optimal performance, I recommend using iOS 16.0 or higher. Notably, there are differences in app performance between iOS 15.5 and iOS 16.4, such as the inaccessibility of the Contact Picker screen on iOS 15.5, and variations in the width of the top navigation bar, which require manual restoration to the normal size.

To install Guardian on your iOS device, follow the steps below:

1. Ensure that you have the latest version of Xcode installed on your Mac. If not, download and install it from the Mac App Store.
2. Open the Guardian Xcode project file *Guardian.xcodeproj*.
3. Connect your iOS device to your Mac using a Lightning to USB-C cable.

4. In Xcode, select your connected device from the list of available devices.
5. In the "General" tab of project settings, under the "Signing & Capabilities" section, select your development team from the "Team" dropdown menu. If you don't have a development team, you may need to create an Apple Developer account and join a team or create a new one.
6. Click the "Product" menu, then select "Clean Build Folder" to ensure a clean build.
7. Press the "Build and Run" button (or press Cmd+R) to build and install the app on your connected iOS device. The app will be available for 7 days of access.

Please note that while you can build the Guardian app on a simulator, the 'Send Help' function is only supported on real devices and not on simulators. For the best user experience and access to all features, I recommend installing and using the app on a real iOS device.

For reference, the development process used XCode 14.3. Simulator: iPhone XR (iOS 15.5) and iPhone 14 (iOS 16.4). Real device: iPhone XR (iOS 15.5 and 16.4).

## Getting Started

When you launch the Guardian app, a launch screen will appear briefly before the main user interface loads. If you're opening the app for the first time or after logging out, a welcome screen will be displayed. This screen has two buttons for logging in or creating a new account, with guiding text above the buttons (Figure 40,41).

Figure 1: Launch Screen



Figure 2: Welcome Screen

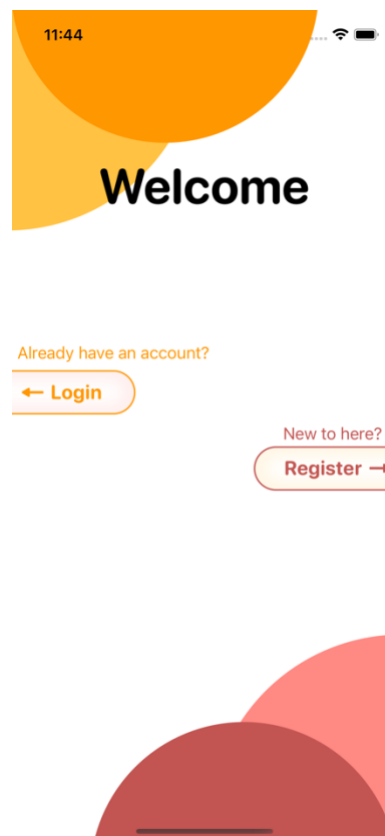
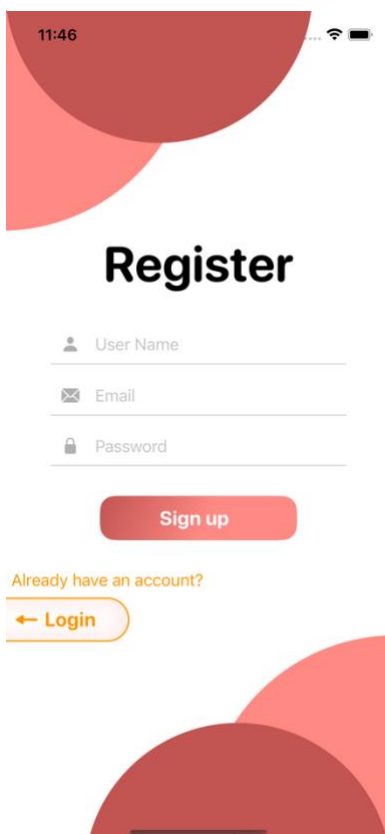


Figure 3: Register Screen

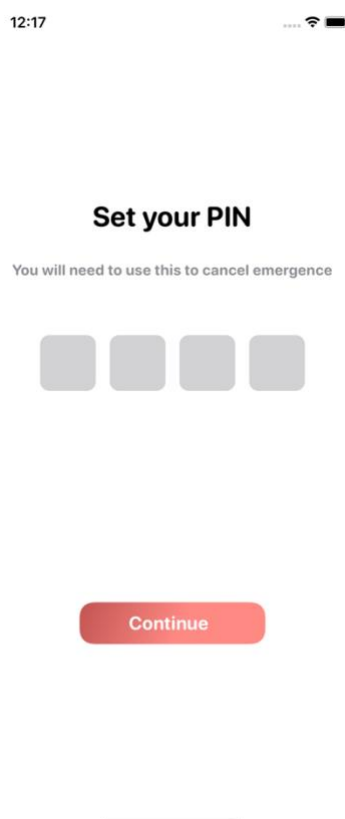


To create a new account (Figure 42):

1. Tap the 'Register' button on the welcome screen.
2. Enter your preferred username, email, and password.
3. Tap 'Sign up.'

If your registration is successful, you'll be directed to the Create PIN view to set a 4-digit PIN for cancelling emergency alerts within the app.

Figure 4: Set PIN Screen

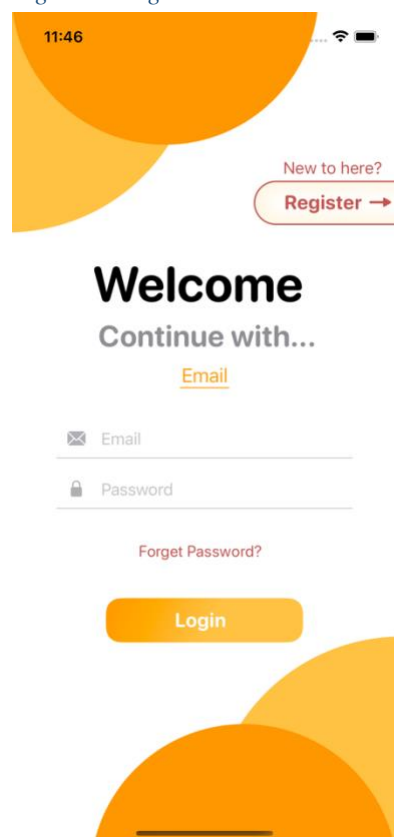


After successfully registering your account, follow these steps to set a 4-digit PIN (Figure 43):

1. In the Create PIN view, you'll see a prompt to enter a 4-digit PIN.
2. Use the on-screen keypad to enter your desired 4-digit PIN.
3. Confirm your PIN by re-entering it when prompted.
4. Tap 'Submit' or 'Continue' (depending on the app prompt) to save your PIN.

Your 4-digit PIN is now set and will be used for cancelling emergency alerts within the app. Remember to keep your PIN secure and easy for you to recall.

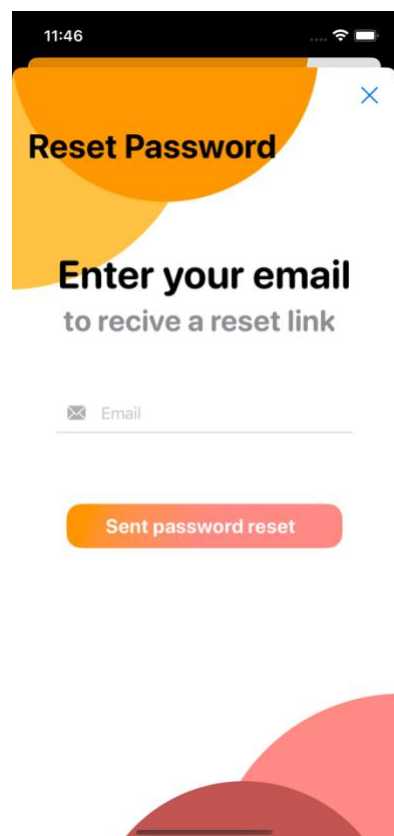
Figure 5: Login Screen



To log in to an existing account (Figure 44):

1. Tap the 'Login' button on the register or login screen.
2. Enter your email and password.
3. Tap 'Login.'

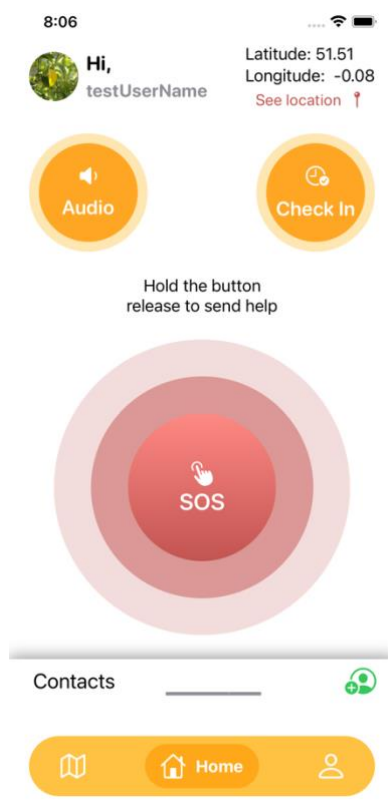
If your login is successful, you'll have access to the app's home screen and features.

*Figure 6: Reset Password Screen*

If you need to reset your password (Figure 45):

1. On the Login screen, tap the 'Reset Password' button.
2. Enter your email address.
3. Tap 'Send Reset Link.'

An email with a password reset link will be sent to your email address. Follow the instructions in the email to create a new password for your account.

*Figure 7: Guardian Home Screen*

## Guardian Home

After a successful registration or login you will be redirected to the Guardian homepage (Figure 46). Here you will be able to access all the features of the app by selecting the different buttons on the screen.

## Adding Contacts

Guardian allows you to easily manage and add contacts to your list within the app. Follow these steps to add contacts:

1. Navigate to the Home screen.
2. Access the Contacts screen by using a drag gesture from bottom to top. You will see a list of your current contacts (Figure 47).
3. To add a new contact, tap the green '+' button located on the right side of the navigation bar.
4. This will take you to the Contact Picker screen, where you can browse and select contacts from your phone's contact book (Figure 48).
5. Tap on the desired contact(s) to add them to your Guardian app contact list. Selected contacts will be highlighted or marked with a checkmark.
6. After selecting all desired contacts, tap 'Done' to confirm your selection.

The selected contacts are now added to your Guardian app contact list and will be displayed in the Contacts view. The app ensures a seamless experience by preventing duplicate contacts and keeping your contact list up to date. If you try to add a duplicate contact, an error message will appear, and the contact will not be added.

Figure 8: Contacts Screen

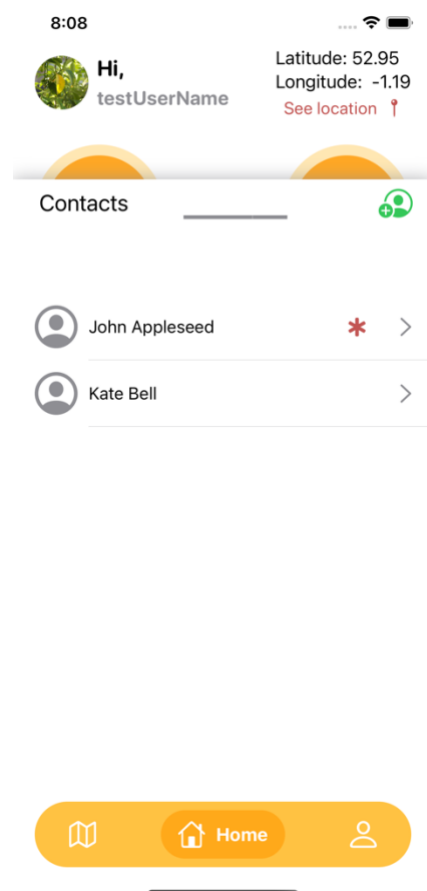
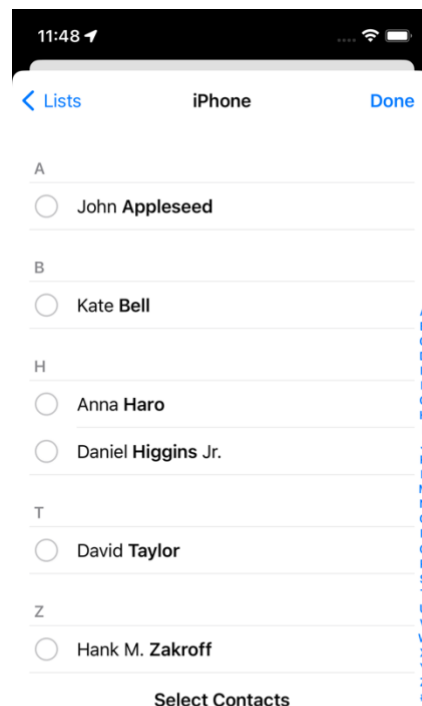


Figure 9: Contact Picker Screen

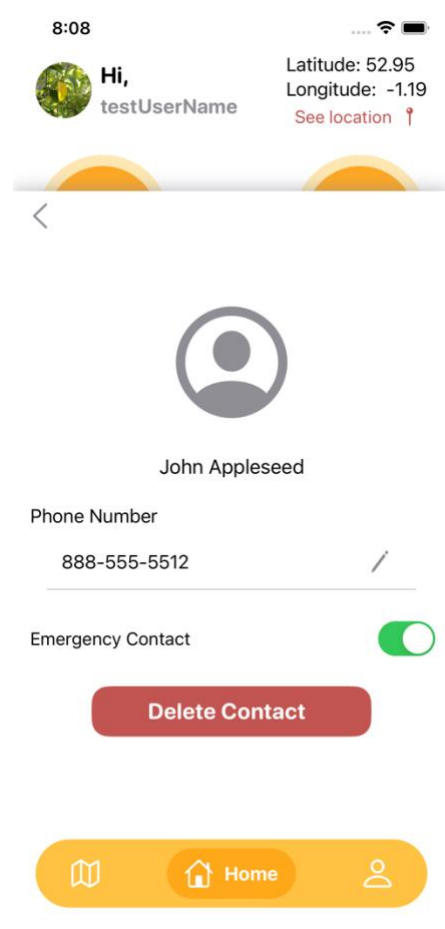


## Checking Contact Details, Setting Emergency, and Deleting Contacts

In the Guardian, you can easily view and edit contact details, set emergency contacts, and delete contacts by following these steps:

1. Navigate to the Contacts view by using a drag gesture from bottom to top.
2. Tap on the desired contact in the list to open the Contact Details.
3. In the Contact Details, you can perform the following actions:
  - a) Modify the contact's phone number by tapping on the 'pencil' icon first, then entering a new one.
  - b) Set a contact as an emergency contact by toggling the 'Emergency Contact' switch on or off.
  - c) Delete a contact by tapping the 'Delete Contact' button at the bottom of the screen.
4. After making any changes, tap 'Back' to back your contacts list, and all modifications will be saved automatically.



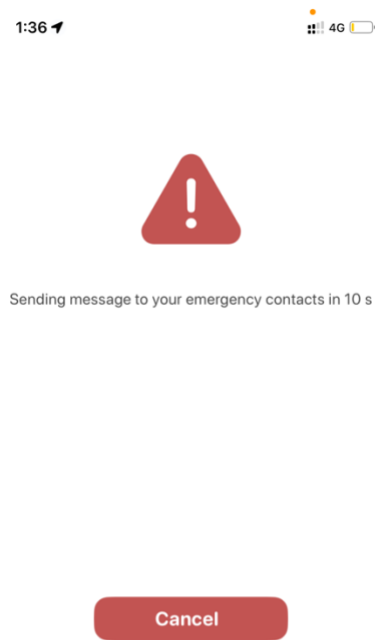
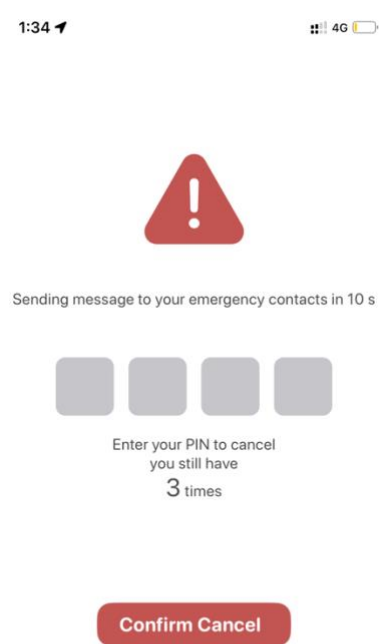
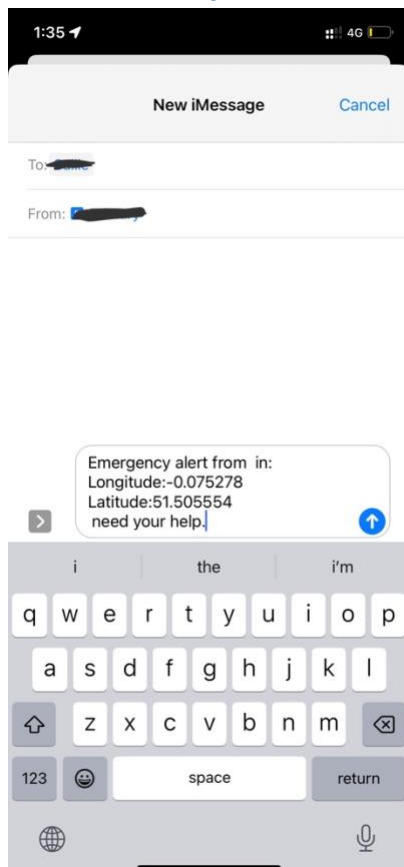
*Figure 10: Contact Detail Screen*

## Getting Help with Main Button

Guardian features a main SOS button on the home screen, designed to provide you with a quick and accessible way to send an SOS help message when in danger. Here's how to use the SOS button and its related features:

1. Press and hold the red SOS button (Figure 46) on the Home screen for at least 2 seconds. This duration ensures that the SOS help message is only sent when you intentionally hold the button.
2. Upon releasing the button, the Alert Countdown screen (Figure 50) will appear. The screen displays a countdown timer, indicating the remaining time before the message is sent. If you wish to cancel the emergency message, tap the 'Cancel' button.
3. Tapping 'Cancel' will take you to the Enter PIN screen (Figure 51). Here, enter the 4-digit PIN code you created during registration to cancel the emergency message. Be aware of the countdown timer at the top of the view, which shows the remaining time to send the emergency message.

4. If you fail to enter the correct PIN three times or the countdown timer runs out, the app will proceed to send the emergency message through the native Apple messaging framework. The emergency message and recipient list (your emergency contacts) will be prepopulated, but you must manually tap the send button to send the message (Figure 16).

*Figure 11: Alert Countdown Screen**Figure 12: Enter PIN Screen**Figure 13: Send Message Screen*

## Getting Help with Check-In

The Check-In feature in the Guardian provides an alternative way to send an SOS help message by setting a countdown timer. This includes a check-in button on the home screen and a separate screen for setting and managing the timer. Here's how to use the Check-In feature:

1. On the Home screen, locate the top right orange check-in button (Figure 46).
2. Tap the check-in button to open the 'Set Check-in Timer' screen (Figure 53). Here, you can input the desired timer value using the text field or select one of the preset timer values for quick selection. Once you have chosen a timer value, tap the 'Start Timer' button to begin the countdown.
3. When the timer is running, you can monitor the remaining time on both the check-in button on the home screen and the stopwatch on the 'Cancel Timer' screen. To cancel the timer, tap the check-in button again to open the 'Cancel Timer' screen (Figure 54). Here, tap the 'Stop Timer' button to halt the countdown.
4. If the timer runs out and hasn't been cancelled, the app will initiate the emergency message-sending process. The Alert Countdown screen (Figure 50) will appear, displaying the remaining time before the emergency message is sent. To cancel the message, tap the 'Cancel' button, which will take you to the Enter PIN screen (Figure 51).
5. On the Enter PIN screen, input the 4-digit PIN code you created during registration to cancel the emergency message. Keep an eye on the countdown timer at the top of the view, as it displays the remaining time to send the emergency message.
6. If you fail to enter the correct PIN three times or the countdown timer runs out, the app will proceed to send the emergency message. The message will be sent using the native Apple messaging framework, as shown in Figure 52. The emergency message and recipient list (your emergency contacts) will be prepopulated, but you must manually tap the send button to send the message.

Figure 14: Set Check-In Screen

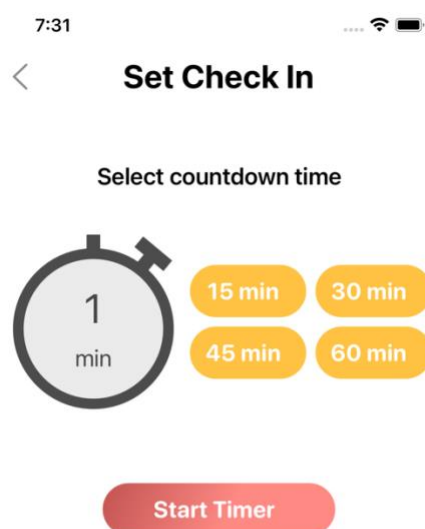
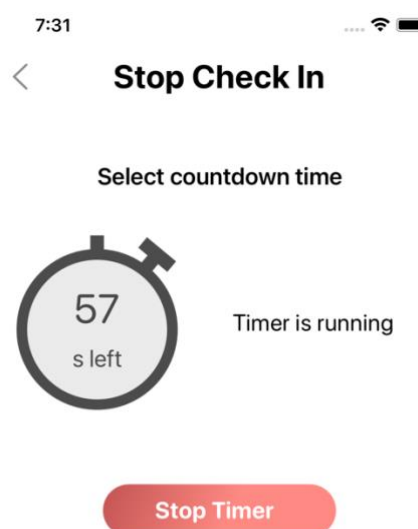


Figure 15: Stop Check-In Screen



## Audio Recording and Management

Guardian offers audio recording feature that helps you capture sound during emergencies. This added layer of information can prove invaluable to your emergency contacts and first responders, enhancing your safety and well-being. This simple guide will help you understand and use the feature with ease.

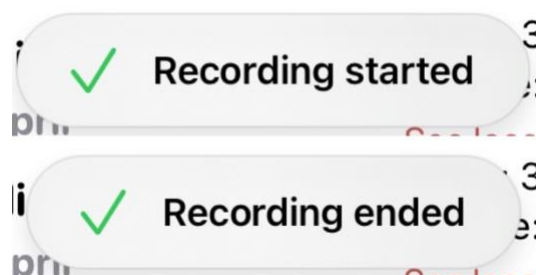
1. On the home screen, find the top left orange Audio button (Figure 46). The button's appearance changes based on its active state. By default, the audio recording function is turned on.
2. Tap the Audio button to switch the recording function on or off as needed (Figure 55).
3. When the recording function is active, press and hold the Main button or start a check-in timer. The app will begin recording audio automatically.
4. When the Main button is released or the check-in timer reaches zero or is cancelled, the app will stop recording and save the audio.

5. Activity indicators (Figure 56) will keep you informed about the recording process.

*Figure 16: Audio Recording Button  
Turn-On(L) and Turn-Off(R)*



*Figure 17: Activity indicators*



Managing your audio recordings is easy and convenient. This feature helps you keep track of your recordings, play them back as needed, and delete them when they are no longer required. Following simple instructions will help you manage your audio recordings.

1. Tap on the Account icon from the bottom tab bar to open the Account menu.
2. In the Account menu, scroll down and select the 'Audio Manage' option (Figure 57) to view and manage your audio recordings.
3. The Audio Manage screen (Figure 58) displays a list of your audio recordings. Each recording is presented in an Audio Cell view, which shows the recording's name, playback progress, and duration.
4. Tap the play button next to a recording to start playback. To stop playback, tap the stop button.
5. To remove a recording, tap the delete button next to the audio file.

Figure 18: Account Screen with Audio Manage Option

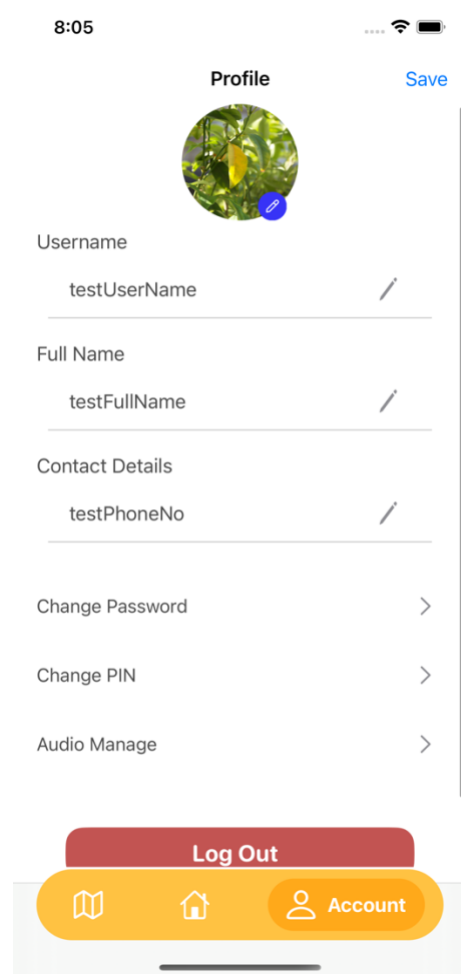
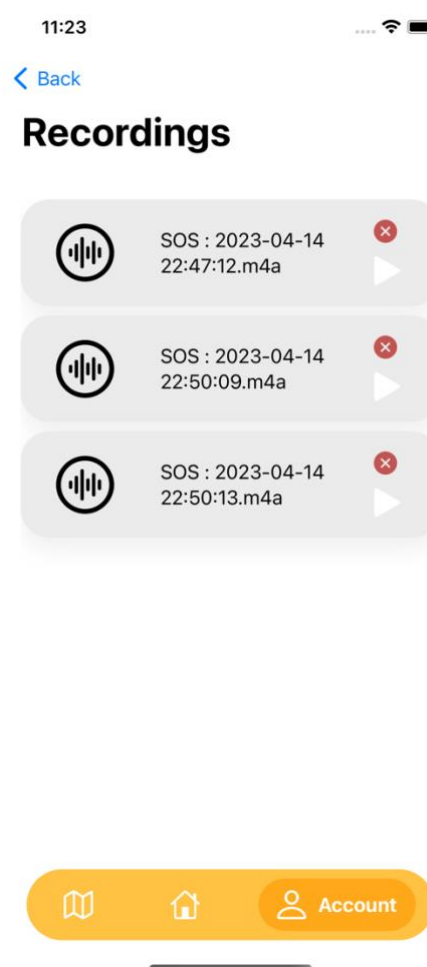


Figure 19: Recordings



## Change Profile Information

Updating your profile information in the Guardian app is straightforward. By following these simple steps, you can easily manage your profile information, update your password, and change your PIN in the Guardian app.

1. Tap the Account icon from the bottom tab bar to access the menu (Figure 57).
2. Edit profile information:
  - a) Tap on your profile to view and edit your username, full name, phone number, and profile image.
  - b) To change your profile image, tap the bottom right 'pencil' image and select a new picture from your phone's Photo app (Figure 59).
  - c) Tap 'Save' to update your profile information (Figure 60).
3. Change your password or PIN:
  - a) In the Account menu, tap 'Change Password' or 'Change PIN' to access the respective views.

- b) Enter your current password or PIN in the designated field (Figure 61, 62).
- c) Provide your new password or PIN in the next field and re-enter it for confirmation.
- d) Make sure the new password or PIN matches the confirmation field before proceeding.
- e) Tap 'Confirm' to update your password or PIN securely.

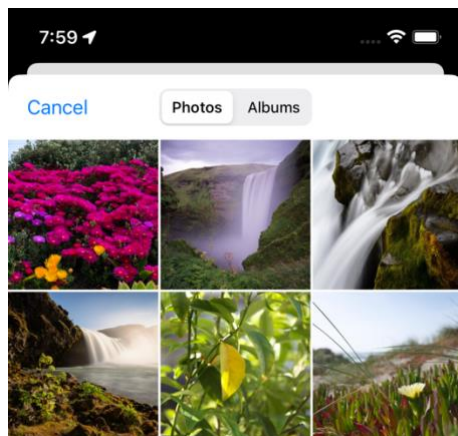
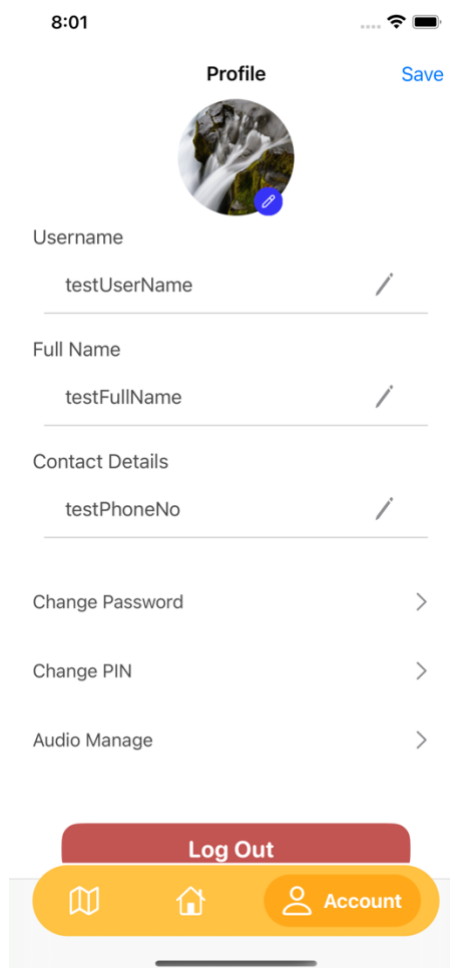
*Figure 20: Choose Image from Photos**Figure 21: Updated Profile Information*



Figure 22: Change PIN Screen

11:16

< **Change PIN**

Old PIN

Enter old PIN

New PIN

Enter new PIN

Confirm PIN

Confirm PIN

Confirm

Figure 23: Change Password Screen

11:19

< **Change Password**

Old Password

Old Password

New Password

New Password

Confirm Password

Confirm password

Confirm

## Delete Account

Removing your account is simple but irreversible. Please note that deleting your account is a permanent action, and all your data will be lost, including audio recordings and emergency contacts. Be sure to consider your decision carefully before proceeding with the account deletion process. Follow these instructions to delete your account permanently.

1. Tap the Account icon from the bottom tab bar to access the menu.
2. Scroll down to the bottom of the Account menu and tap 'Delete account.' (Figure 63)
3. A warning message will appear (Figure 64) and wait for you to confirm.
4. If you are sure you want to delete your account, tap 'Yes' to proceed. If you change your mind, tap 'No' to return to the Account menu.
5. After you tap 'Yes', your account will be permanently deleted, and you will be logged out of the app.
6. To use the Guardian app again, you will need to create a new account.

Figure 24: Account Menu with Delete Option

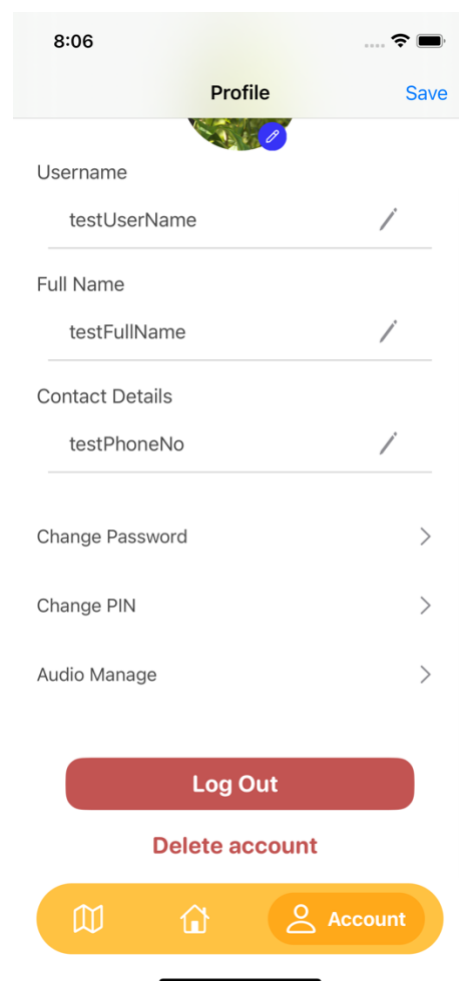
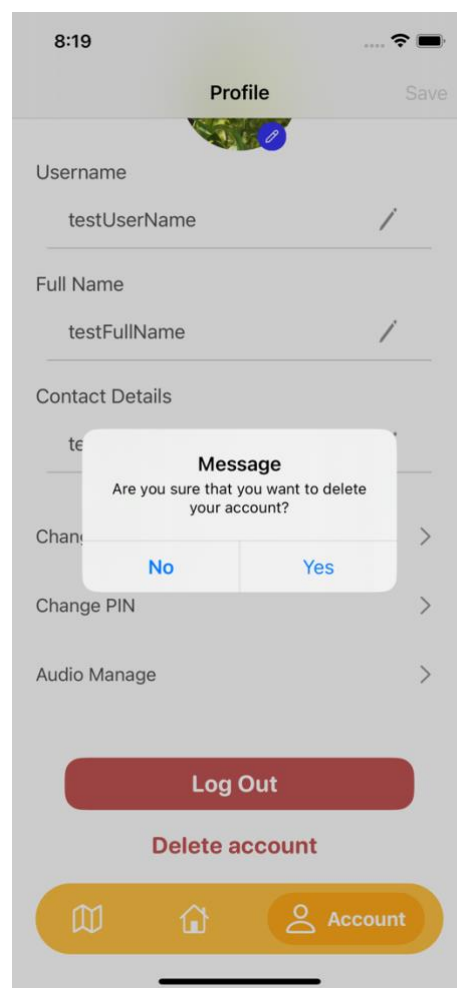


Figure 25: Message to Confirm Delete



## Found Your Location on Map

The app displays your current location and provides options to view and track your position. Follow these instructions to find your location on the map.

1. Tap the Map icon in the app from the bottom tab bar to open the map view.
2. Your current location is marked with the identifier on the map (Figure 65).
3. If you have navigated away from your position on the map, tap the orange 'destination' image button in the top right corner to recenter the map on your current location.
4. On the Home screen, your latitude and longitude coordinates are displayed in the top right corner (Figure 46).
5. Tap the 'See Location' button on the Home Screen to directly open the Map menu and view your position on the map.

Figure 26: Map Screen

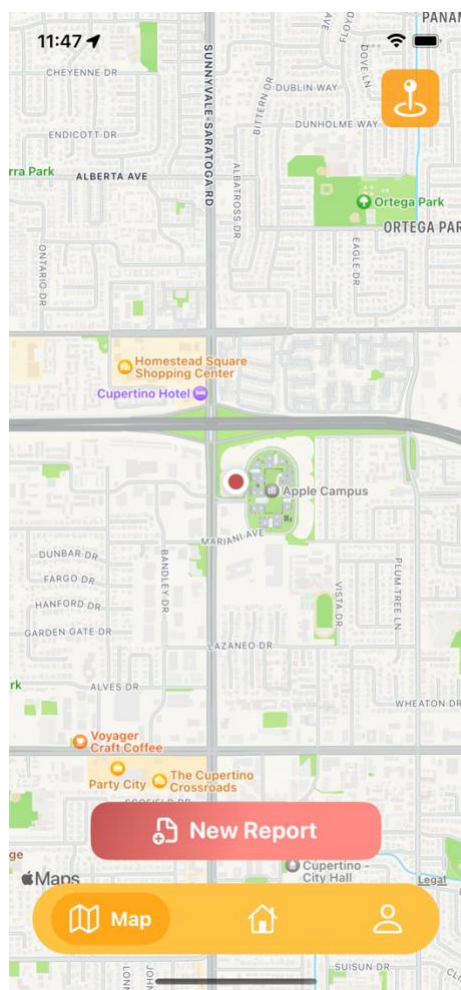
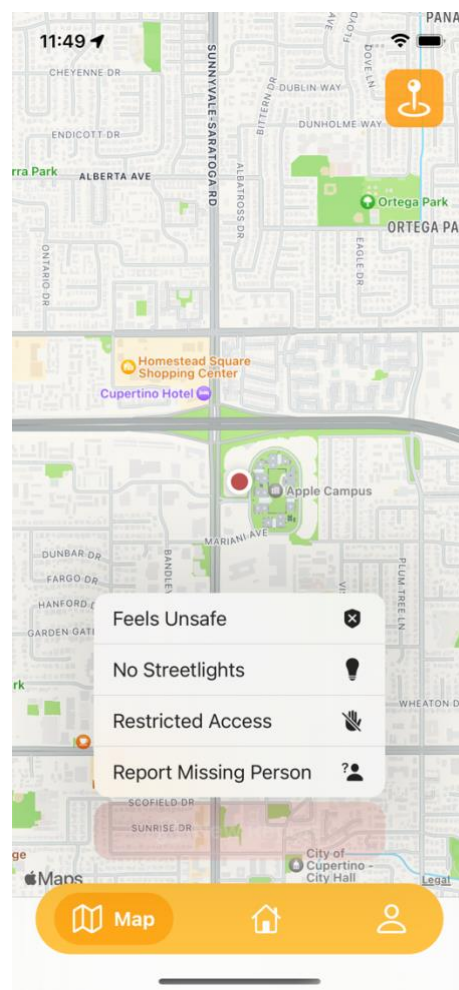


Figure 27: Choose Report Type



## Add New Report

You can generate unsafe reports and missing person reports in just a few simple steps. By following these instructions, you can create reports efficiently and contribute to keeping your community safe using Guardian.

To create an Unsafe Report:

1. Navigate to the Map menu.
2. Tap the 'New Report' button to see the menu and select the desired report type (Figure 66).
3. You can either choose your current location or pick a location on the map using the Select Location on the map screen (Figure 67). Swipe and pan the map to find the desired location and tap 'Done' to confirm your selection (Figure 68).
4. Tap 'Add Report' to create a new report, a new pin that represents your report will be displayed on the Map screen.

Figure 28: Choose Report Location

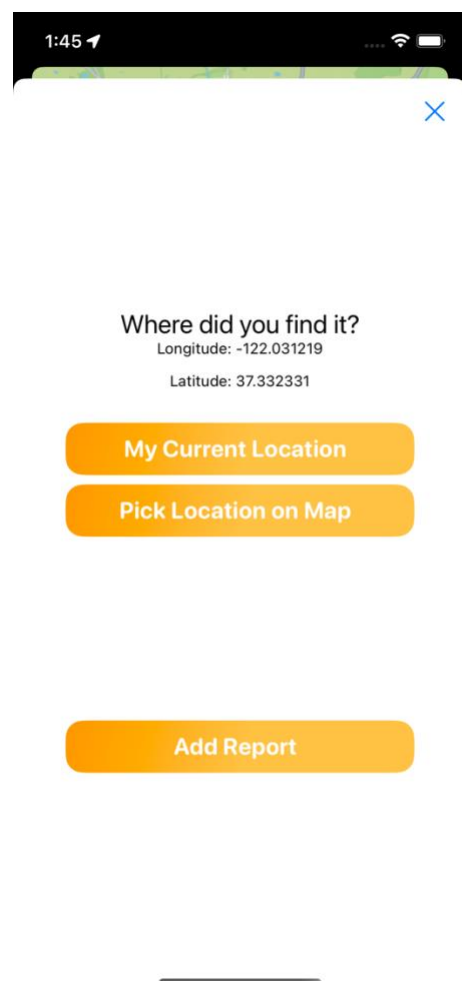
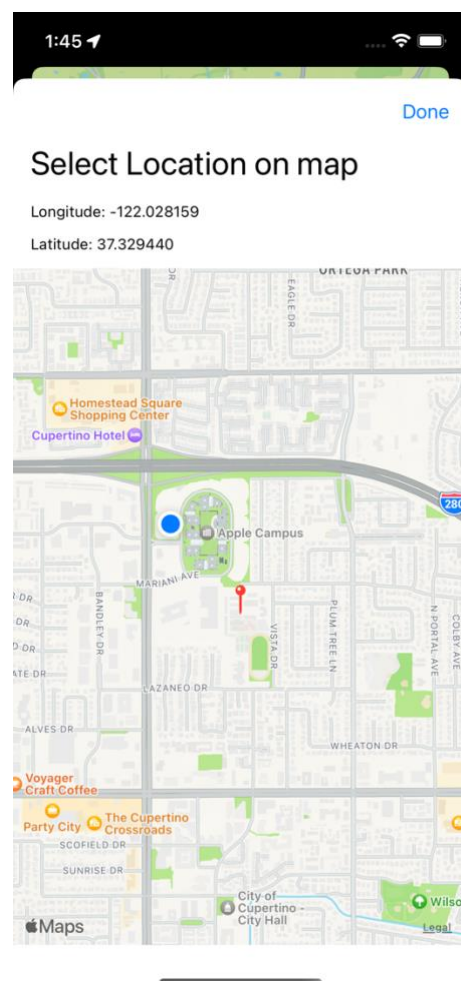


Figure 29: Select Location on Map



To create a Missing Person Report:

1. Navigate to the Map menu.
2. Follow the same steps as for creating an unsafe report to select a location.
3. Enter the necessary information in the Missing Report screen (Figure 69, 70), including the person's name, age, gender, last known clothing, and an optional image.
4. Tap 'Report missing person' to confirm and create a new report, a new pin that represents your report will be displayed on the Map screen

Figure 30: Report Missing Person

1:45

< **Report a Missing Person**

Where were they last seen?

Longitude: -122.031219  
Latitude: 37.332331

**My Current Location**

**Pick Location on Map**

Tell us a little about them

**Female** **Male**

What's their name?

How old?

Describe what they were wearing

Upload Photo from Library

Figure 31: Report Missing Person-Continue

1:45

< **Report a Missing Person**

**Pick Location on Map**

Tell us a little about them

**Female** **Male**

What's their name?

How old?

Describe what they were wearing

Upload Photo from Library

**Report missing Person**

## Check Report Details

Different types of unsafe reports and missing person reports are displayed using different pins. To check report details:

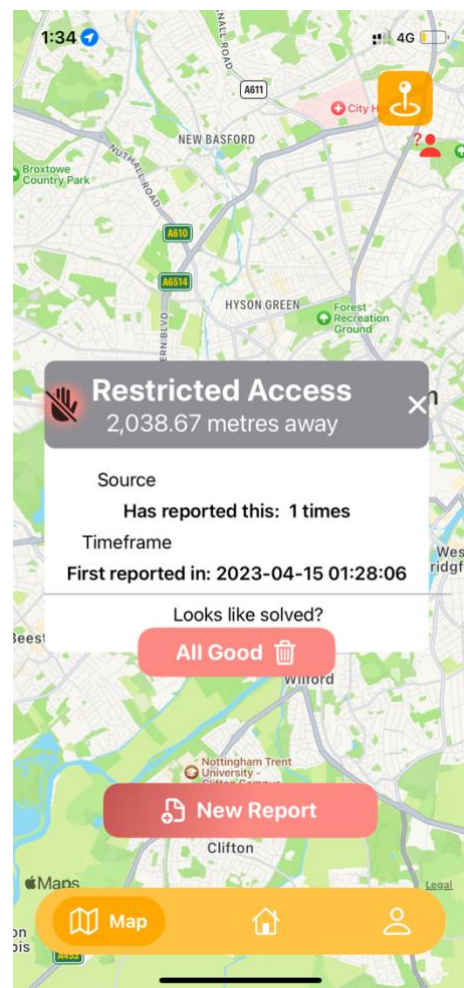
1. Navigate to the Map menu.
2. You will see different markers on the map representing the visual appearance of report pins (Figure 71).
3. To view the details of a report, tap on a report pin. Based on the different report types, the report's details are changed accordingly (Figure 72, 73).
4. After reviewing the report details, either tap the 'x' on the top right of the report to return to the map or tap the outside of the report detail to return to the map view quickly.



*Figure 32: Different Pins on Map*



Figure 33: Example Restricted Access Report Detail



## Delete Report

Deleting reports in Guardian is secure and reliable. Only the user who created the report (the source user) can directly delete the report. Other users require two confirmations before the report can be deleted. This feature ensures that the source user retains control over their reports and prevents accidental or malicious removal of genuine reports by other users. Follow these steps to delete a report:

1. Navigate to the Map menu.
2. Tap on a report pin to open its details.
3. Tap the 'All Good' button:
  - a) If you are the source user, the report will be deleted directly.
  - b) If you are not the source user, a pop-up message will appear (Figure 74). Only when another un-source user also requests to delete this report, then will it be deleted.

Figure 34: Example Missing Person Report Detail

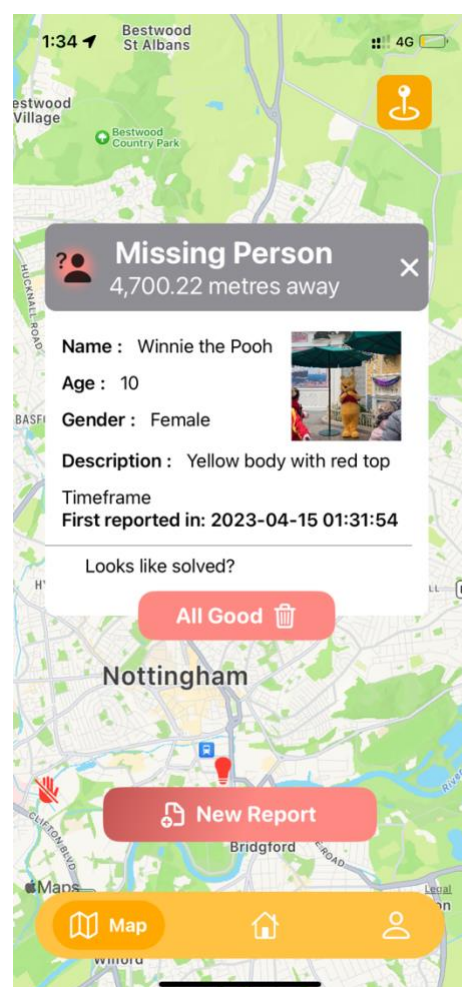
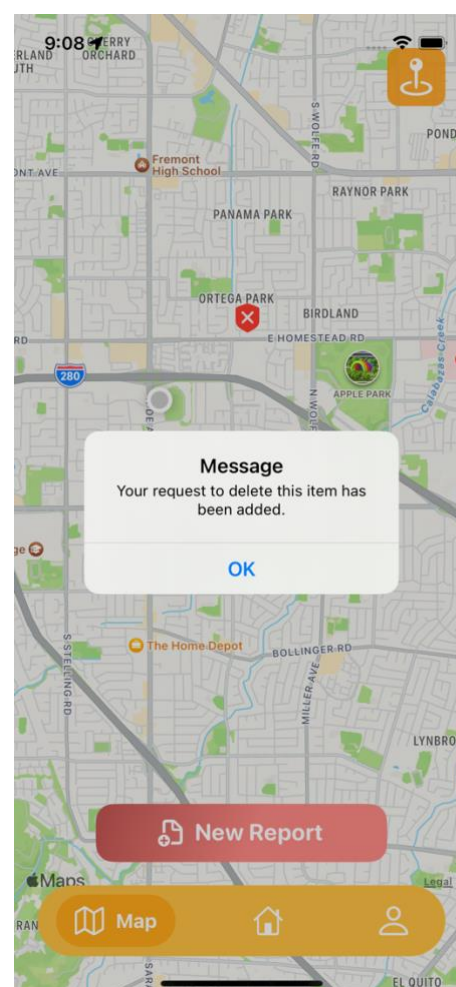


Figure 35: Delete Request Message



## Frequently Asked Questions (FAQs)

### **Q: What measures are in place to protect my privacy and security in Guardian?**

A: Guardian uses data encryption, secure login processes, and strict data retention policies to protect your privacy and security. Your location data is only used for in-app location-based services, and your personal information is not shared with third parties without your consent.

### **Q: I am unable to log in, what should I do?**

A: Make sure you have entered the correct email and password. Check your internet connection to ensure it is stable and working properly. If you've forgotten your password, use the 'Forgot Password' option on the login screen to reset it.

### **Q: Why I can't use the Map features?**

A: Ensure your device's location services are enabled. If not, go to Settings > Guardian > Location to open the location services. Check your internet connection to verify it is stable and working properly.

**Q: Why I can't record audio?**

A: Ensure you give permission to access your device's microphone. If not, go to Settings > Privacy > Microphone to enable the app. Close any other apps that may be using your device's microphone.

**Q: Why I can't delete the report?**

A: Check your internet connection to verify it is stable and working properly. Verify that you are the source user or have the necessary permissions to delete the report. If you are not the source user, note that the app needs two delete requests from different users before attempting to delete a report.

**Q: I tapped the add contacts button but didn't see the contacts picker screen, while my friend's app can see them. What should I do?**

A: The contacts picker screen is not accessible occasionally on certain older iOS versions, specifically on iOS 15.5. To resolve this issue, update your device's operating system to a more recent version, such as iOS 16.0 or higher. To update your iOS, go to Settings > General > Software Update and follow the on-screen instructions. Once your device is updated, the contacts picker screen should become accessible.

**Q: I tried to send help, but the message recipient list is empty. What should I do?**

A: Make sure you have at least one contact been set as emergency contact. Guardian will only send message to your emergency contacts, otherwise, the recipient list is empty.