Test cases for the Emergency Button Recording Audio and Video functionality in the SafeHubs app:

\*\*Test Cases:\*\*

1. \*\*Verify Emergency Button Activation:\*\*

- \*\*Description:\*\* Ensure that pressing the emergency button activates the recording of audio and video.

- \*\*Steps:\*\*

1. Launch the SafeHubs app.

2. Navigate to the home screen.

3. Press the emergency button.

- \*\*Expected Result:\*\* The app should immediately start recording audio and video.

2. \*\*Check Audio and Video Recording:\*\*

- \*\*Description:\*\* Confirm that both audio and video are being recorded during an emergency.

- \*\*Steps:\*\*

1. Activate the emergency button.

2. Verify that audio is being recorded by speaking into the microphone.

3. Observe the device's screen to confirm that video is being captured.

- \*\*Expected Result:\*\* Both audio and video recordings should be captured simultaneously.

3. \*\*Test Recording Quality:\*\*

- \*\*Description:\*\* Assess the quality of the recorded audio and video.

- \*\*Steps:\*\*

1. Trigger the emergency button.

2. Speak loudly and clearly into the microphone.

3. Move the device around to capture different angles.

- \*\*Expected Result:\*\* The recorded audio should be clear and audible, and the video should be of sufficient quality to identify objects and individuals.

4. \*\*Verify Storage Allocation:\*\*

- \*\*Description:\*\* Ensure that sufficient storage space is allocated for emergency recordings.

- \*\*Steps:\*\*

1. Activate the emergency button.

2. Record audio and video for an extended period.

3. Monitor the device's storage usage during recording.

- \*\*Expected Result:\*\* The app should allocate storage space appropriately and prevent recording interruptions due to insufficient storage.

5. \*\*Test Emergency Recording Interruption:\*\*

- \*\*Description:\*\* Check if the recording stops when the app is moved to the background.

- \*\*Steps:\*\*

1. Trigger the emergency button.

2. Minimize the app by pressing the home button or switching to another app.

3. Return to the SafeHubs app after a few minutes.

- \*\*Expected Result:\*\* The recording should continue uninterrupted even when the app is in the background.

6. \*\*Validate Interruption by Incoming Call (Android):\*\*

- \*\*Description:\*\* Determine if an incoming call interrupts the emergency recording process on Android devices.

- \*\*Steps:\*\*

1. Trigger the emergency button.

2. Initiate an incoming call from another device.

- \*\*Expected Result:\*\* The recording should pause temporarily during the call but resume automatically once the call ends.

7. \*\*Check Interruption by Incoming Call (iOS):\*\*

- \*\*Description:\*\* Determine if an incoming call interrupts the emergency recording process on iOS devices.

- \*\*Steps:\*\*

1. Trigger the emergency button.

2. Initiate an incoming call from another device.

- \*\*Expected Result:\*\* The recording should continue uninterrupted during the call on iOS devices.

9. \*\*Verify Recording Saving Locally:\*\*

- \*\*Description:\*\* Ensure that emergency recordings are saved locally on the device.

- \*\*Steps:\*\*

1. Trigger the emergency button.

2. End the recording after a few minutes.

3. Check the device's storage to locate the saved recording file.

- \*\*Expected Result:\*\* The recorded audio and video should be saved locally and accessible from the device's storage directory.

10. \*\*Successful Emergency Button Activation:\*\*

- \*\*Scenario:\*\* User presses the emergency button on the SafeHubs app interface.

- \*\*Expected Outcome:\*\* The app responds promptly, activating the device's web camera and initiating the recording process without errors.

11. \*\*Seamless Recording Initiation:\*\*

- \*\*Scenario:\*\* Upon emergency button activation, the app immediately starts recording using the activated web camera.

- \*\*Expected Outcome:\*\* Recording begins smoothly, capturing audio and video data in real-time without interruptions until the emergency situation is resolved.

12. \*\*Functional Web Camera Check:\*\*

- \*\*Scenario:\*\* User triggers the emergency signal, and the app checks the device's web camera functionality.

- \*\*Expected Outcome:\*\* The app verifies the availability of the web camera hardware and confirms its accessibility, proceeding to initiate the recording process without issues.

13. \*\*Continuous Recording During Emergency:\*\*

- \*\*Scenario:\*\* Emergency button is activated, and the app maintains continuous recording functionality.

- \*\*Expected Outcome:\*\* Recording persists without interruptions until the user manually stops the emergency signal or assistance arrives, ensuring thorough documentation of the emergency situation.

14. \*\*Storage Capacity Check During Recording:\*\*

- \*\*Scenario:\*\* App monitors available storage space during emergency recording.

- \*\*Expected Outcome:\*\* If storage space is adequate, recording proceeds smoothly; if insufficient, the app notifies the user and provides instructions to free up space or use alternative storage options.

\*\*Negative Scenarios:\*\*

1. \*\*Web Camera Activation Failure:\*\*

- \*\*Scenario:\*\* User presses the emergency button, but the app fails to activate the device's web camera.

- \*\*Expected Outcome:\*\* Recording does not start, and the app displays an error message indicating the inability to access the web camera hardware.

2. \*\*Recording Initiation Delay:\*\*

- \*\*Scenario:\*\* Upon emergency button activation, there is a delay in starting the recording process.

- \*\*Expected Outcome:\*\* Recording begins after a significant delay, compromising the real-time documentation of the emergency situation.

3. \*\*Storage Space Insufficiency:\*\*

- \*\*Scenario:\*\* During emergency recording, the device runs out of storage space.

- \*\*Expected Outcome:\*\* The app halts the recording process and displays an error message informing the user about insufficient storage capacity, potentially leading to data loss.

4. \*\*Recording Interruption Due to App Crash:\*\*

- \*\*Scenario:\*\* Recording is abruptly interrupted due to a crash or malfunction of the SafeHubs app.

- \*\*Expected Outcome:\*\* The app unexpectedly closes or freezes, causing the recording to stop abruptly, resulting in incomplete documentation of the emergency event.

5. \*\*Failure to Integrate with Emergency Services:\*\*

- \*\*Scenario:\*\* Despite successful recording initiation, the app fails to integrate with designated emergency services or contacts.

- \*\*Expected Outcome:\*\* Emergency contacts are not notified about the situation, potentially delaying response times and assistance for the user in distress.