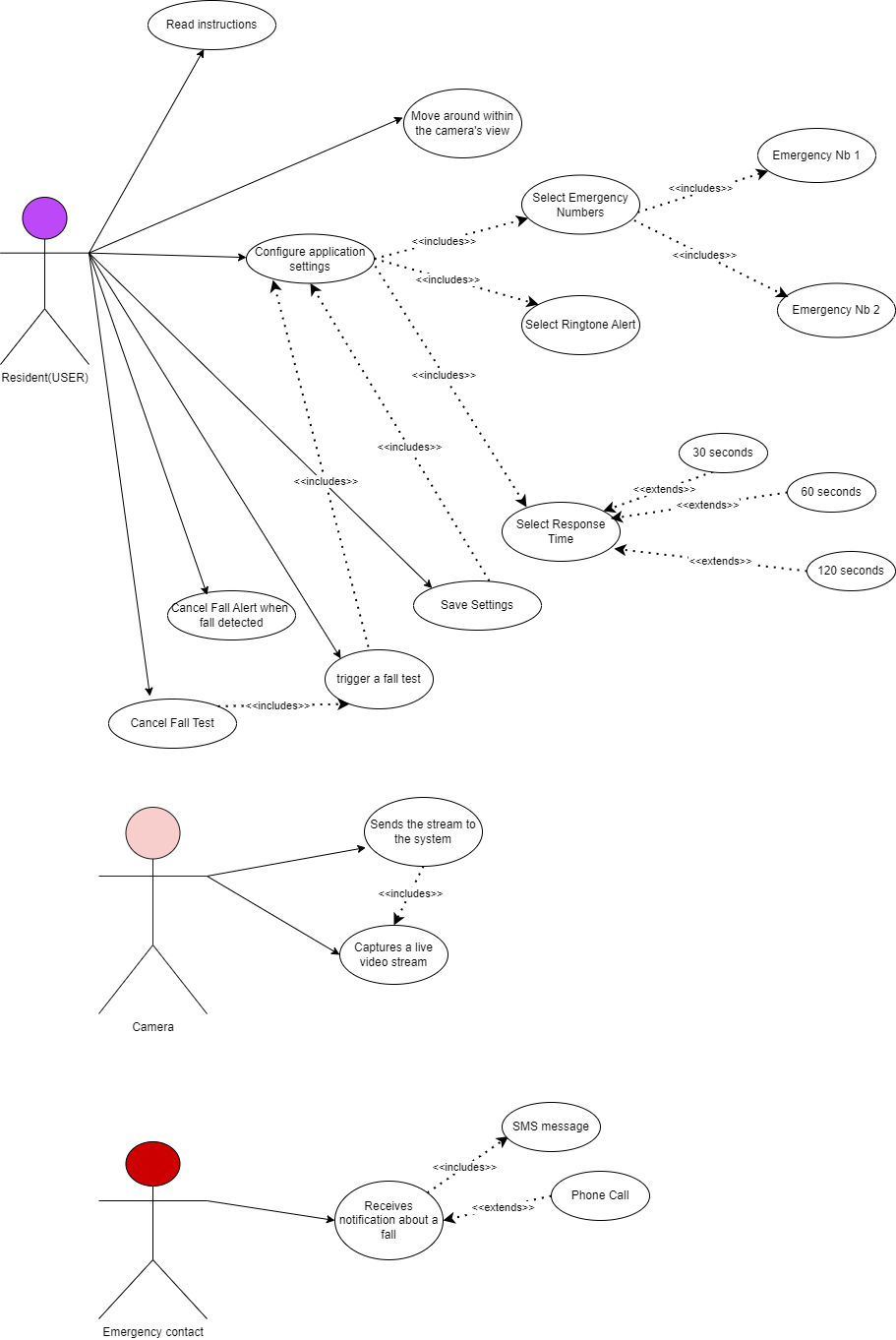
Fall Detection Project USECASE



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**Functional Requirements:**

* -Select Emergency Contact: This use case focuses on initiating emergency contact after a fall is detected. The system would automatically dial the local emergency number (based on the user's location) to connect with emergency services and dispatch help as quickly as possible.
* -Trigger a Fall Test: The purpose of this use case is to allow for testing the system's fall detection capabilities. The user would initiate a fall test through a designated method (e.g., button press, voice command) simulating a fall within the camera's view. The system's response would be to process the simulated fall and confirm if it can accurately detect the test scenario. This functionality helps ensure the system is working properly and provides peace of mind to the user.
* -Select a Response Time: This functionality allows the user to select the time before calling the emergency contact.
* -Select Ringtone: This functionality allows the user to change the alert ringtone.
* -Sends camera stream to the system.
* -Receive notification about the fall.
* -Resident: Cancel calling the emergency number.

**Nonfunctional Requirements:**

* -Fall Detection Accuracy: The system should accurately detect falls with a very low false positive rate (minimizing alerts for non-fall events).
* -Data Security: The system should securely store and transmit data, ensuring privacy for the user.
* -Response Time: The system should send emergency notifications with minimal delay after a fall is detected.
* -Scalability: The system should be scalable to accommodate additional users and cameras without compromising performance.
* Ease of Use: The system should be easy to install, configure, and operate for users with varying technical skills.
* -Privacy: The system should have clear privacy settings allowing users to control data collection and storage.

**Use-Case Narrative**

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| **Use-Case Name:** | Configure application settings | |
| **Use-Case ID:** | AT-001 | |
| **Priority:** | High | |
| **Primary Actor:** | Resident | |
| **Description:** | This use case describes the scenario where a resident configures the mobile application settings for fall detection. This includes emergency contact information, notification preferences, and response time. | |
| **Precondition:** | The resident has downloaded and installed the fall detection mobile application on their smartphone.  The resident has launched the application and accepted the permissions | |
| **Typical Course of Events:** | **Actor Action** | **System Response** |
| 1. The resident launches the application for the first time.   **If storage permissions are already granted**  The resident taps on the "Settings" menu option within the application.   1. The resident chooses one of the following:   **Allow:** The resident grants storage permission to the application.  **Deny**: The resident denies storage permission to the application.   1. The resident taps on the "Settings" menu option within the application. 2. The resident taps on the "Emergency Contacts" section. 3. The resident Add a new emergency contact by selecting him from contacts list opened. 4. The resident taps on the "Notification Preferences" section. 5. The resident selects their preferred notification settings. 6. The resident taps on the "Fall Response Time" section. 7. The resident chooses their desired fall response time from the available options (e.g., 10 seconds, 30 seconds, etc.). 8. The resident taps on the "Save" button to confirm all configuration changes. | 1. The application checks for necessary storage permissions (contacts and ringtones).   **If storage permissions are already granted**  The application displays the settings screen with various configuration options (Step #2 from original use case).  **If storage permissions are not granted:**   * The application displays a notification requesting permission to access storage for storing emergency contacts and ringtones. * The notification provides options for "Allow" and "Deny".  1. If Allowed: The application hides the permission notification and proceeds to display the settings screen   If Denied: The application deny the resident to enter settings page and configure settings   1. The application displays the settings screen with various configuration options. 2. The application displays a list of existing contacts saved on phone or a blank form to add new contacts. 3. The application saves the contacts accordingly. 4. The application displays options for customizing notifications upon fall detection, such as enabling/disabling ringtones, vibration alerts, and on-screen messages. 5. The application reflects the selected notification preferences. 6. The application displays options to set a delay before initiating a call to emergency contacts after a fall is detected. This allows the resident time to cancel the alert if it's a false positive. 7. The application saves the selected fall response time. 8. The application confirms the settings have been saved successfully. |
| **Postconditions:** | * If the resident grants storage permission, their emergency contact information, notification preferences, and fall response time are configured according to their choices within the application. * If the resident denies storage permission, the application might have limited functionality or return to the main screen. | |