**Baby Monitoring App**

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**Overview**

The **Baby Monitoring App** is a mobile application developed in React Native that allows parents to monitor their baby remotely. The app connects to an HLS stream camera placed near the baby, detects when the baby cries using the camera’s microphone, and sends a notification to the mother. The app also offers a live video stream for real-time monitoring, providing peace of mind for parents.

**Features**

* **Live Video Streaming:** View a real-time HLS video feed from the camera near the baby.
* **Cry Detection:** The app detects when the baby cries and sends instant notifications to the user.
* **User Authentication:** Secure user registration and login system to ensure privacy.
* **Push Notifications:** Receive real-time alerts on your device when the baby cries.
* **Intuitive User Interface:** Simple and user-friendly design for easy navigation and use.

**Technologies Used**

* **React Native:** A JavaScript framework for building native mobile apps.
* **HLS Streaming:** For live video streaming from the baby’s room.
* **Camera Integration:** Utilizes an IP camera for video and audio capture.
* **Firebase:** Used for user authentication and push notifications.
* **Expo:** Managed workflow for building the app.

**Installation**

Follow these steps to set up and run the Baby Monitoring App on your local machine:

1. **Clone the repository:**

bash

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git clone https://github.com/your-username/baby-monitoring-app.git

1. **Navigate to the project directory:**

bash

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cd baby-monitoring-app

1. **Install the dependencies:**

bash

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npm install

1. **Set up FFmpeg:**  
   The app requires FFmpeg to handle HLS streaming. You need to install FFmpeg on your personal computer.
   * **Windows:**  
     Download FFmpeg from [FFmpeg.org](https://ffmpeg.org/download.html). Extract the downloaded files and add the bin directory to your system's PATH environment variable.
   * **macOS:**  
     You can install FFmpeg using Homebrew:

bash

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brew install ffmpeg

* + **Linux:**  
    Install FFmpeg using your distribution's package manager:

bash

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sudo apt-get install ffmpeg

1. **Start the Expo server:**

bash

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npm start

1. **Run the app on your device or emulator:**
   * For iOS: Press i in the terminal to run on an iOS simulator.
   * For Android: Press a in the terminal to run on an Android emulator or device.

**FFmpeg Setup**

FFmpeg is a powerful multimedia framework that is required for handling HLS streaming in the Baby Monitoring App. Ensure that FFmpeg is correctly installed and configured on your machine:

* **Check FFmpeg Installation:**  
  After installation, you can verify that FFmpeg is installed correctly by running:

bash

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ffmpeg -version

This should display the installed version of FFmpeg and confirm that it’s properly set up.

**Usage**

1. **Sign Up / Log In:**
   * Register for a new account or log in with your existing credentials.
2. **Connect to the Camera:**
   * Ensure your IP camera is set up and streaming. Connect the app to the camera by entering the camera's stream URL.
3. **Monitor the Baby:**
   * View the live video feed from the camera. The app will automatically detect if the baby is crying and send you a notification.
4. **Notifications:**
   * Keep the app running in the background to receive notifications when your baby cries.

**Contributing**

Contributions to the Baby Monitoring App are welcome! Here’s how you can help:

1. Fork the repository.
2. Create a new branch (git checkout -b feature/YourFeature).
3. Commit your changes (git commit -m 'Add some feature').
4. Push to the branch (git push origin feature/YourFeature).
5. Open a pull request to discuss and merge your changes.

Please make sure your code adheres to the project's coding standards and passes all tests before submitting a pull request.

**License**

This project is licensed under the MIT License. See the LICENSE file for details.