Analysis of Potential Users

I. List of Potential Users

User Category	Demand Analysis	Usage Scenario Analysis	Expectations for the System
Office Workers	Status display, personalization, convenient operation	Arriving at / leaving the office, starting / ending a meeting, etc.	Stable operation, timely and accurate update; rich template styles; simple operation interface
Internet of Things (IoT) Enthusiasts	Device integration, innovative applications, technical exploration	Controlling multiple devices at home / in the laboratory	Strong device integration, compatible with mainstream; open interfaces and documents; continuous update and upgrade
Enterprise Management Personnel	Team management, decision support, permission management	Assigning tasks, holding meetings, evaluating performance, etc.	Accurate and real-time employee status; powerful statistical analysis; perfect permission management mechanism
Smart Home Users	Convenient control, scene linkage, intelligent reminder	Getting up, going to bed, watching TV, etc. in daily life	Convenient operation interface; rich scene linkage functions; intelligent reminder function
Medical Institution Staff	Work status display, patient information association, emergency call	Going to work, getting off work, making rounds, etc.	Stable operation, timely and accurate update; associated with patient information system; emergency call function

II. User Analysis

(A) Office Workers

1. Demand Analysis

- **Demand for Status Display**: Office workers hope to accurately display their current status on the sign outside the office, such as whether they are in the office, busy, or in a meeting, etc. This helps colleagues and visitors quickly understand their availability and improves work communication efficiency.

- **Personalization Requirement**: They may want the sign to reflect personal characteristics or departmental features, such as using specific colors, icons, or text styles.
- **Requirement for Convenient Operation**: Due to their busy work, they need a simple and convenient system that can quickly update the sign status without spending too much time and energy on system operations.

2. Usage Scenario Analysis
   - In daily work, office workers need to update the sign status in different scenarios such as arriving at the office, leaving the office, starting a meeting, and ending a meeting. For example, after arriving at the office in the morning, the sign is updated to "In the office, available for contact"; after entering a meeting, it is updated to "In a meeting, do not disturb".
3. Expectations for the System
   - They expect the system to run stably and the sign status to be updated in a timely and accurate manner.
   - They hope the system provides rich template and style options to meet personalization requirements.
   - They require the system operation interface to be simple and clear and easy to use.

(B) Internet of Things (IoT) Enthusiasts

1. Demand Analysis
   - **Demand for Device Integration**: IoT enthusiasts usually have multiple IoT devices and hope to integrate these devices into a unified system to achieve centralized management and control of the devices.
   - **Demand for Innovative Applications**: They are enthusiastic about new technologies and applications and expect the system to provide some innovative functions and application scenarios, such as intelligent status prediction based on machine learning and linkage control between devices.
   - **Demand for Technical Exploration**: These users like to deeply understand the technical principles and implementation methods of the system and may have higher requirements for the openness and extensibility of the system so that they can conduct secondary development and customization.
2. Usage Scenario Analysis

- In a home or laboratory environment, IoT enthusiasts will use the system to manage and control various IoT devices such as smart lights, smart door locks, and smart sensors. They may set complex rules and logic according to different environmental conditions and personal needs to achieve automated control of the devices. For example, when the light is dim and human activity is detected, the smart light is automatically turned on; when the door is illegally opened, an alarm message is sent to the mobile phone.

3. Expectations for the System

- They expect the system to have strong device integration capabilities and be compatible with various mainstream IoT devices and protocols.
- They hope the system provides open interfaces and rich development documents for convenient secondary development and customization.
- They require the system to be continuously updated and upgraded to provide more innovative functions and application scenarios.

(C) Enterprise Management Personnel

1. Demand Analysis

- **Demand for Team Management**: Enterprise management personnel need to understand the work status of team members in order to allocate resources and assign tasks reasonably. Through the employee status signs displayed by the system, they can quickly obtain relevant information.
- **Demand for Decision Support**: They hope the system can provide some statistical analysis functions, such as statistics on the busy degree of employees and comparison of the work efficiency of different departments, to provide support for decision-making.
- **Demand for Permission Management**: Enterprise management personnel need to strictly manage the usage permissions of the system to ensure that only authorized personnel can access and operate relevant data.

2. Usage Scenario Analysis

- In daily work, enterprise management personnel will use the system in scenarios such as assigning tasks, holding meetings, and evaluating performance. For example, when assigning tasks, according to the current status signs of employees, tasks are assigned to appropriate personnel; when holding a meeting, it is known which employees can attend the meeting and which employees need to ask for leave.

3. Expectations for the System

- They expect the system to provide accurate and real-time employee status information.
- They hope the system has powerful statistical analysis functions to meet decision-making requirements.
- They require the system to have a perfect permission management mechanism to ensure data security.

(D) Smart Home Users

1. Demand Analysis
   - **Demand for Convenient Control**: Smart home users hope to more conveniently control various smart home devices at home, such as smart lights, smart TVs, and smart curtains, through a unified system.
   - **Demand for Scene Linkage**: They expect the system to achieve scene linkage between different devices. For example, at night, when someone is detected entering the bedroom, the bedroom light is automatically turned on, while the living room light is turned off and the bedroom curtain is drawn.
   - **Demand for Intelligent Reminder**: Smart home users may hope the system can provide some intelligent reminder functions, such as sending a reminder message to the mobile phone when the washing machine has finished washing clothes; when the air quality at home is poor, prompting to turn on the air purifier.
2. Usage Scenario Analysis
   - In daily life, smart home users will use the system in scenarios such as getting up, going to bed, watching TV, and doing housework. For example, in the morning when getting up, the bedroom light, curtain are opened and music is played through the system; before going to bed at night, all electrical appliances at home are turned off and the alarm is set.
3. Expectations for the System
   - They expect the system to provide a convenient control interface that is easy to operate.
   - They hope the system can achieve rich scene linkage functions.
   - They require the system to have an intelligent reminder function to improve the convenience of life.

(E) Medical Institution Staff

1. Demand Analysis

   - **Demand for Work Status Display**: Medical institution staff need to display their work status in the work area, such as whether a doctor is in the outpatient department, a nurse is in the ward, an administrative staff is in the office, etc., so that colleagues and patients can quickly understand their availability.

   - **Demand for Patient Information Association**: Doctors and nurses may hope the system can be associated with the patient information system and display relevant patient information on the sign, such as patient name, illness, etc., to better serve patients.

   - **Demand for Emergency Call**: In an emergency situation, medical institution staff need to be able to quickly send an emergency call signal through the system to notify other staff to come for support.

2. Usage Scenario Analysis

   - In daily work, medical institution staff will use the system in scenarios such as going to work, getting off work, making rounds, seeing patients in the outpatient department, and handling administrative affairs. For example, after a doctor goes to work, the sign is updated to "In the outpatient department, available for registration"; when a nurse makes rounds, the sign is updated to "In the ward, making rounds".

3. Expectations for the System

   - They expect the system to run stably and the sign status to be updated in a timely and accurate manner.

   - They hope the system can be associated with the patient information system and provide relevant patient information.

   - They require the system to have an emergency call function to improve the emergency response ability.