

1. Functional Requirements

User Authentication

The system shall allow users to register and log in securely.

Device Management

The system shall enable users to add and manage smart devices.

Remote Control

The system shall allow users to remotely control lights, fans, AC, and other appliances.

Device Scheduling

The system shall support scheduling for devices to turn on/off automatically.

Real-time Status Updates

The system shall provide real-time status updates of connected devices.

Security Notifications

The system shall notify users of unusual activity such as motion detection.

Custom Automation

The system shall allow users to customize automation rules.

User Preferences

The system shall store user preferences and past activity history.

Voice Assistant Integration

The system shall integrate with voice assistants like Google Assistant or Alexa.

Account Management

The system shall support logout and account deletion features.

2. Non-Functional Requirements

System Responsiveness

The system shall respond to user actions within 2 seconds.

Availability

The system shall be available 99.5% of the time monthly.

Data Security

The system shall use encryption to secure user data in transit and at rest.

Scalability

The system shall support at least 100 concurrent users without performance degradation.

Cross-Platform Compatibility

The system shall be compatible with Android, iOS, and modern web browsers.

User Interface

The system shall provide an intuitive and accessible UI/UX for all users.

Device Integration

The system shall allow integration with at least 5 types of smart devices.

Firmware Support

The system shall support firmware updates for connected smart devices.