Supplementary Requirements Documentation

Interactive House Project (Device Subgroup)

Revision History

Date	Version	Description	Author
2026-02-06	1.0	Initial revision	Sergej Macut

Supplementary Requirements List

Supplementary Requirement Name	Priority
S1. Usability, Easy to use and learn	Desirable
S2. Reliability-Stable	Essential
S3. Performance-Responsiveness	Essential
S4. User interface	Desirable
S5. Hardware requirements	Essential
S6. Design language	Essential
S7. Programming language	Optional
S1. Scalability - UI Distribution	Essential
S2. Interoperability - Protocol Adherence	Essential
S3. Reliability - Simulation Stability	Essential
S4. Portability - Microcontroller Integration	Desirable
S5. Performance - Response Latency	Desirable

S6. Design Language - UML Documentation	Essential

Supplementary Requirements Descriptions

S1. Scalability - UI Distribution Every device must be capable of holding its own User Interface (UI) software component. Upon being "plugged into" the system, the device must successfully upload this UI to the Server for further distribution to communicating units.

S2. Interoperability - Protocol Adherence Devices must not communicate with units (phones/laptops) directly; they must interact solely through the dedicated House Server. Devices must adhere to the communication protocol or interface negotiated between the Devices group and the Server/Units groups to ensure successful integration.

S3. Reliability - Simulation Stability For simulated devices (e.g., coffee machine, temperature sensor, or media player), the application must run on a dedicated computer without crashing, accurately mimicking the state of a physical device for the server to observe.

S4. Portability - Microcontroller Integration Where physical components are used (such as light fixtures), the device logic should be implemented via a microcontroller that acts as the bridge to the server.

S5. Performance - Response Latency Devices should update their state in the server database and respond to incoming control commands (e.g., "Turn On") within a timeframe that supports real-time human-controlled activities.

S6. Design Language - UML Documentation The architecture of the device software must be documented using specific UML diagrams, including Class diagrams, Interaction Sequence diagrams, and State diagrams.