

Requirements Documentation - Devices

Interactive House

Project Members

Reference	Name	Email
A	Samuel McMurray	Samuel_joseph.mcmurray0004@stud.hkr.se
B	Mustafa Ismail	mustafa.ismail0007@stud.hkr.se
C	Ibrahim Ahmed Ali	ibrahim.ahmed_ali0003@stud.hkr.se

Revision History

Date	Version	Description	Author
18/9/2021	1.0	Initial requirements	A, B, C

Requirements List

Requirement Name	Priority
R1. Start/Run device system	Essential
R2. Receive commands	Essential
R3. Turn lights ON/OFF	Essential
R4. Some lights on dimmers	Desirable
R5. Read the temperature	Essential
R6. Adjust the temperature	Essential
R7. Adjust curtains	Desirable
R8. Turn ON/OFF Fan	Essential

R9. Adjust Fan Speed	Desirable
R10. Set Fan Timer	Desirable
R11. Turn ON/OFF Fan Oscillation	Desirable
R12. Bluetooth Connection of Devices	Desirable

Requirements Descriptions

R1

The Arduino device should start and run without crashing or serious errors.

R2

The Arduino device shall receive commands from the server and issue the designated commands to be implemented locally with the connected devices.

R3

The Arduino device shall be able to turn on and off specific lights based off the commands received from the server.

R4

The Arduino device should have the ability to dim certain lights based off the percentage of dim that is received from the server.

R5

The Arduino device shall be able to get a temperature reading of the house with the connected thermometer and relay that temperature to the server.

R6

The Arduino device shall be able to adjust the thermostat in the house to reflect the desired temperature received from the server.

R7

The Arduino device should be able to adjust the curtains state of up or down based on the commands received from the server.

R8

The Arduino device shall be able to turn on and off specific fans based off the commands received from the server.

R9

The Arduino device should be able to adjust the specific fans speed based off the commands received from the server.

R10

The Arduino device should be able to set a timer on a specific fan based off the commands received from the server.

R11

The Arduino device should be able to turn on and off oscillation of a specific fan based off the commands received from the server.

R12

The Arduino device should be able to connect to and issue commands received from the server to the devices in the house using Bluetooth