

Requirements Documentation

Interactive House

Revision History

Name	Associated Letter
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Date	Version	Description	Author
16/9/2021	0.0	Initial Requirement Assessment	A, B, C, D
6/10/2021	0.1	-Updated R6 and R7 to be clearer on its meaning	A, B, C, D
21/10/2021	0.2	-Descriptions for all requirements were made more clear and more descriptive - R13 changed to automatically adding a new device -Minor reordering of the requirement list	A

Requirements List

Requirement Name	Priority
R1. Start/run Server	Essential
R2. Connecting to database	Essential
R3. Disconnecting from DB	Essential
R4. Receive API request from Client	Essential
R5. Update Database	Essential
R6. Send Query to DB server from API	Essential

R7. Receive JSON and control message from DB server	Essential
R8. Encrypt and Decrypt communication between API and DB server	Essential
R9. Listen to Devices	Essential
R10. Password Encryption	Essential
R11. Remove Devices	Desirable
R12. Data Encryption	Desirable
R13. Automatically add new device	Optional

Requirements Descriptions

R1

Launch the server and have it accept API requests.

R2

Allow Clients to connect to send and receive information by connecting through the API that communicates with the server.

R3

Allow clients to disconnect from the server without exceptions on the server end.

R4

Server will be able to receive streamed requests from the Client.

R5

Update the states of devices or update user information by making the appropriate calls from the Client side.

R6

The API will build the query in the QueryBuilder class that is sent and used by the server to request the appropriate information from the DB. The server should then send back a response as well as an object depending on what information was sent.

R7

After an API request a response is sent back as well as an Object depending on the request made.

R8

Whenever sending data between API and DB server it must be encrypted and then decrypted on both sides. This includes both the response as well as object from the server as well as message sent from the API to the Server.

R9

When a device changes state the DB should be updated automatically and stay up to date.

R10

The database must have password encryption for the users.

R11

A device can be unpaired and removed from the database when removed on the client side.

R12

The database should only have access to encrypted data and the server should only be sending encrypted data that can only be read by the devices.

R13

Adding a new happens automatically. When plugging in a new device.