Requirements Documentation – Server/database group

Homedork – Interactive Smart House

Revision History

Name	Associated Letter
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Date	Version	Description	Author
16/9/2021	1.0	Initial Requirement Assessment	A, B, C, D
6/10/2021	1.1	-Updated R6 and R7 to be clearer on its meaning	A, B, C, D
21/10/2021	1.2	-Descriptions for all requirements were made more clear and more descriptive -Minor reordering of the requirement list	A
12/11/2021	1.3	-Added completion factor to the requirements -R13 changed from automatically adding a device to requesting pin	C, D, A
06/12/2021	1.4	-Added delete user as an optional requirement -Updated completion percentage of several requirments	A

Requirements List

Requirement Name	Priority	Completion (%)
R1. Start/run Server	Essential	100
R2. Connecting to database	Essential	100
R3. Disconnecting from DB	Essential	100
R4. Receive API request from Client	Essential	100
R5. Update Database	Essential	100
R6. Send Query to DB server from API	Essential	100
R7. Receive JSON and control message from DB server	Essential	100
R8. Encrypt and Decrypt communication between API and DB server	Essential	100
R9. Listen to Devices	Essential	100
R10. Password Encryption	Essential	100
R11. Remove Devices	Desirable	100
R12. Data Encryption	Desirable	100
R13. Add New Device	Optional	100
R.14 Delete User	Optional	50

Requirements Descriptions

R1
Launch the server and have it requests from the API.

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 its 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 device is done by calling the API to provide a new pin from the DB server. The server determines which pin the device should be added to next. Logic is done one the server side.