

# Vision Documentation

## Homedork – Interactive house

### Revision History

Name	Associated Letter
Lukas Olsson	A
Wills Ekanem	B
Bujar Rabushaj	C
Besnik Rabushaj	D

Date	Version	Description	Author
6/10/2021	1.1	Initial vision layout	A, B, C, D
21/10/2021	1.2	-Added Requirements necessary to complete basic and additional features.	A
16/11/2021	1.3	-Added a more descriptive introduction -Updated the smart house technicalities to be accurate of the current design.	A
06/12/2021	1.4	-Added information about deleting in the introduction  -removed add and remove devices from DB from additional features and added it to the basic features as it now better describes it	A

# Product Overview

## 1. Smart House Concept: Server and API

### 1.1 Introduction

The server and API side of the Smart House Concept focuses on the communication between the Client side and the database in a secure and efficient way. The communication will be done through passing encrypted JSON objects from the DB to the Client using an API. The API has methods that will allow get, insert, update, and delete methods for users and devices. The queries will be built by the API and then sent to the DB server where it will be used on the database. In all scenarios a json object should be sent back to the API and then back to the client along with a response message on if it was successful (in the case of the delete query an empty json response is sent back). This assures all points along the path from client to server is updated in a secure way and that all parts of the pathway contain the same information.

## 2. Basic Technical Features

The smart house project will be filled with numerous features such as:

- R4 Send and receive data using an API
- R1/R2 Connect and Disconnect from DB seamlessly
- R5 Update info as required on the DB
- R6 Send a query to the DB server from the API
- R13/R11 Add and remove device from database via API calls.

## 3. Smart House Technicalities

The system consists of a server connected to a device called the hub which is connected to various devices such as fans and lights. The server will handle all communication to and from the devices/units. This will be done by sending and receiving JSON objects through the API. The API accepts a call when the url is accessed. From there a query is built and provided to the DB server where it applies the query and respond with a status code and a json object. Updating the info on the DB is also necessary to change the states of certain devices. These updates will be done through query messages.

## 4. Additional Features of The Smart House

In addition to the basic features of the Server and API group, there will also have functionalities that are not required for it to function, but for the useability and appeal to its user. Some of those features are:

- R8/R10 Encrypt the data so that it is safe