Spec Report

DOMUS

Home is at hand!

75 F

73 F

70 F

At a Biz trip?

Or a Holiday?

In the Office?

Inspired by DOMUS

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Purpose of the Project

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Specification

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Version 2.0

Purpose

According to the first telecommunications phase, we have provided DOMISEP a recommendation of the technologies and the equipments to roll-out in order to ensure the home automation connectivity.

Now the purpose of this project is to design and develop a web platform which will display the sensor data, meanwhile users can easily control over the objects (lights, automatic blinds, etc.) connected to the platform through their smart devices.

The website shall contain features including online registration, user profile management, exchanges between users and simple database manipulation. This report will introduce the specifications concerning diagrams of User Case, Activity and Database, as well as GUI mockups.

To get a better track of the project, we have designed a Gantt Chart to monitor the overall progress.

Requirement & Scope

Project Scope

DOMUS home automation system is a internet-based application that allows users to register and login the website, modify user profile, remotely control home sensors by room type, sensor type, and check data information at any time.
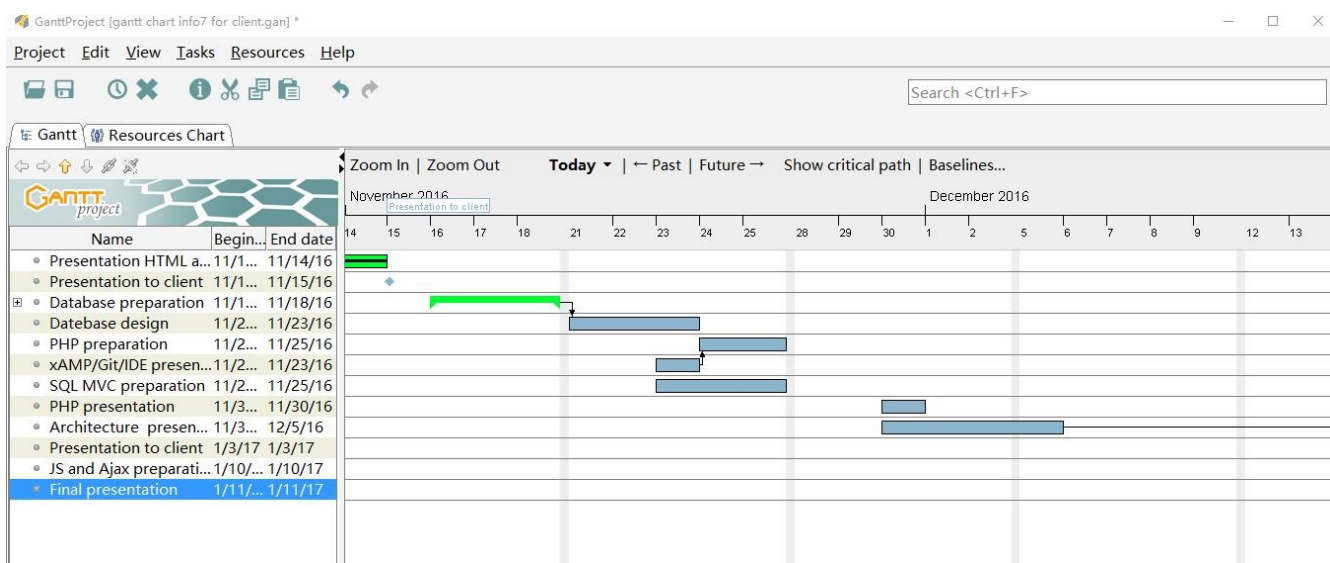
Project Requirements

Functional requirements

- login/signup response rate

- data processing/error handling

- GUI interface

Non Functional requirements

- physical environment (computer, internet connection etc)

- user & human factors

SPEC-User Case

Use Case Diagrams

A use case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved. A use case diagram can identify the different types of users of a system and the different use cases and will often be accompanied by other types of diagrams as well.

In this project, the users of the system can be categorized as follows:

- Unregistered User
- Registered User
- Admin

Each of the above users has their own functionalities and the Use Case diagram can be as follows
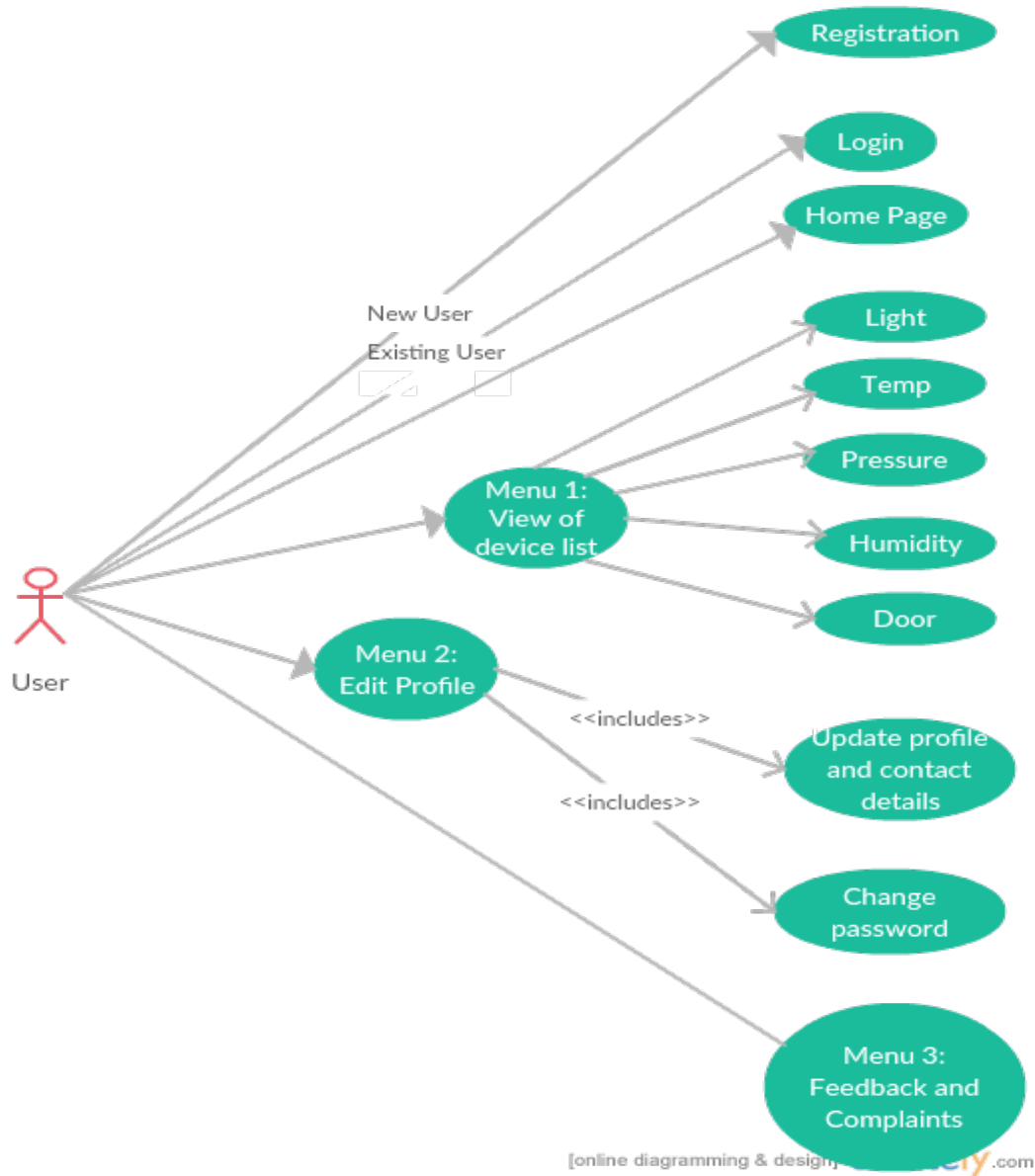
User Functionalities

Registered User:
- A Registered User can login to the website
- User can access device view list and edit profile
- Can send feedbacks about the website and register his/her complaints
- Check the details rendered by the sensors through the display menu

Unregistered User:
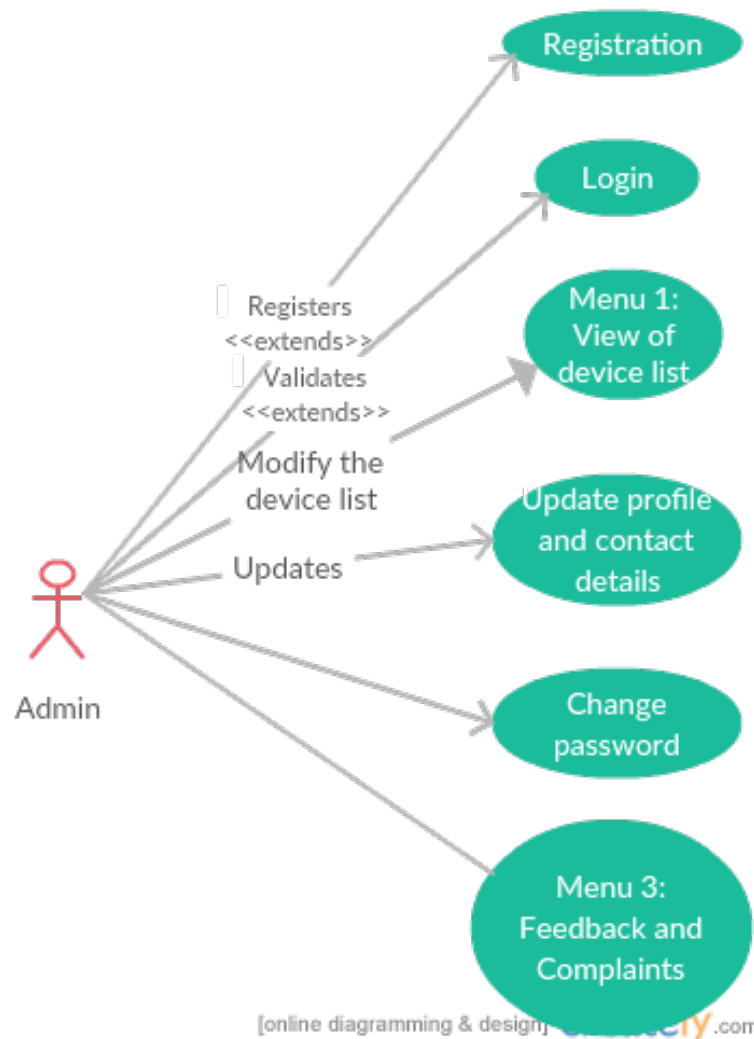- Can use the registration option and create a new account for accessing the account

SPEC-User Case

SPEC-User Case

Admin Functionalities

- An Administrator has basic control over all the actions done by the user
- Acts as a database and stores the user login details
- Adds the new user to the database
- Updates the sensors list if required

- Updates the user details incase of any update required

- Responds for the complaints registered by the users
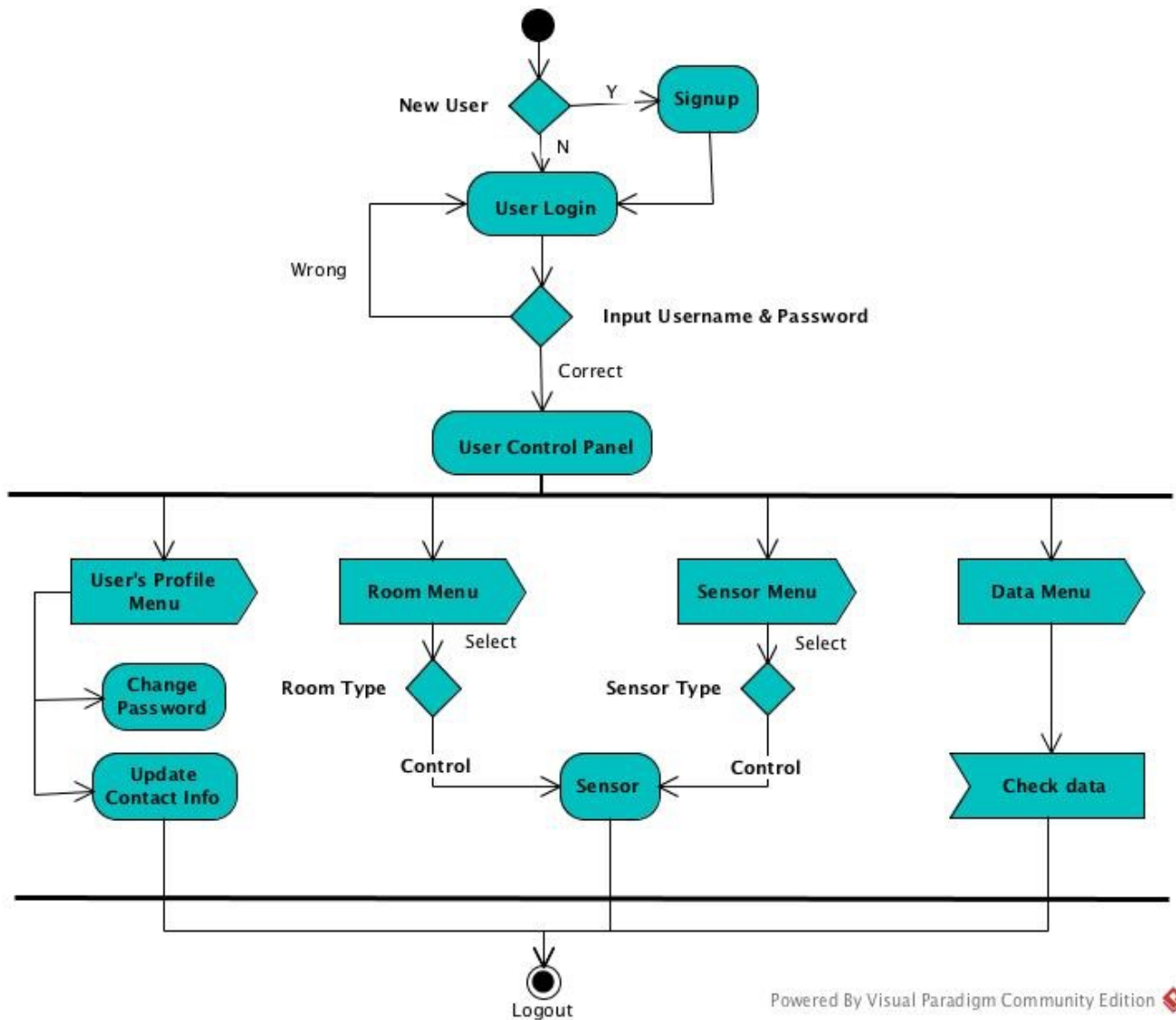
SPEC-Sequence Login

The following Sequence Diagram illustrates the user login process

- New user should start from the first 1 step for registration
- Existing user can directly login through the second 2 step

When login successfully, user can enter the control panel to manage the sensors
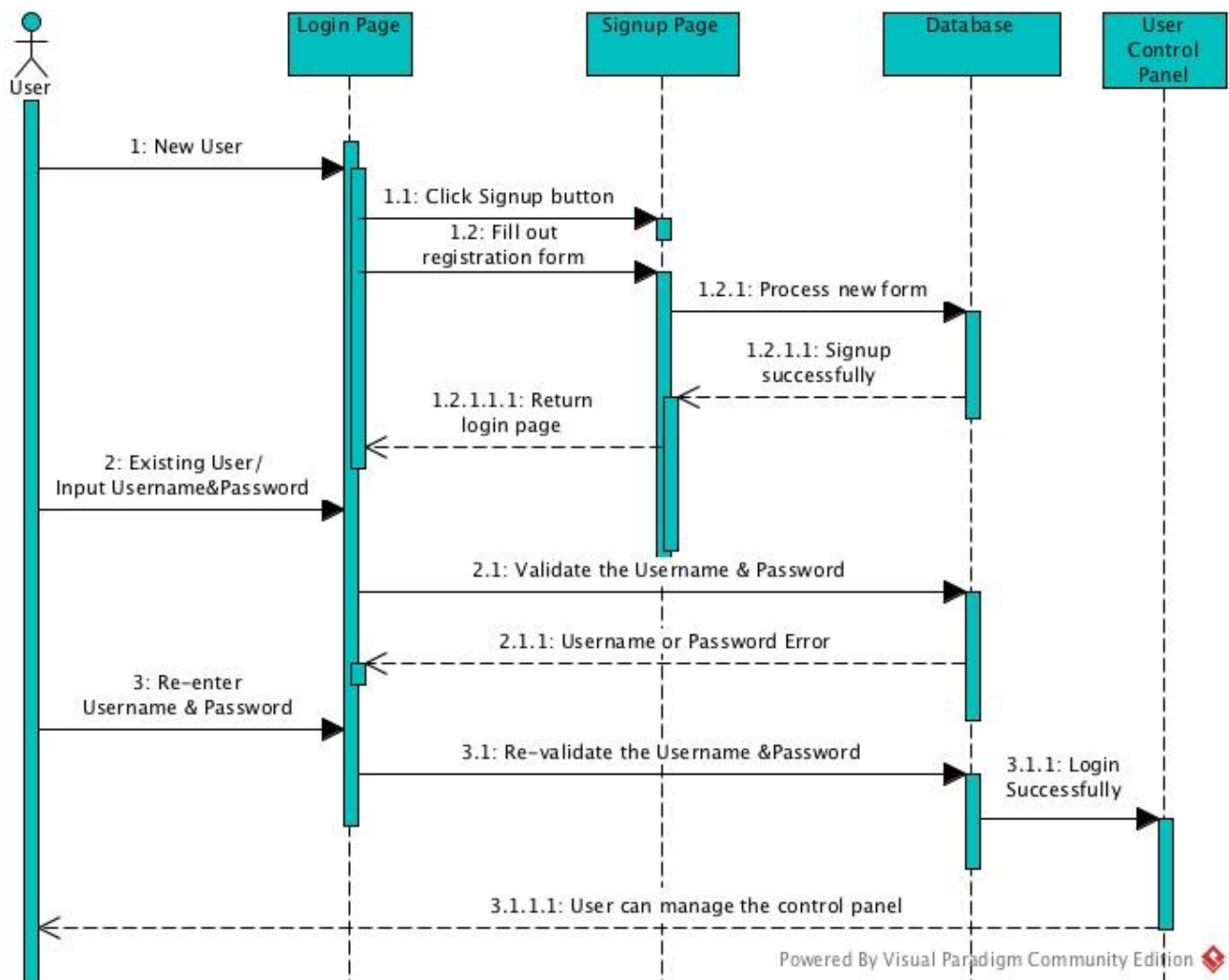
SPEC-Activity

SPEC-Database

Database UML Class diagram indicates

- Sensor data sheets - based on sensor types collecting multi-type of data
- Room data sheets - based on room types collecting sensors data in one particular room
- User-House relationship
- User-SmartDevices relationship considering security reasons
- CeMAC is treated as a movable robot embedded sensors
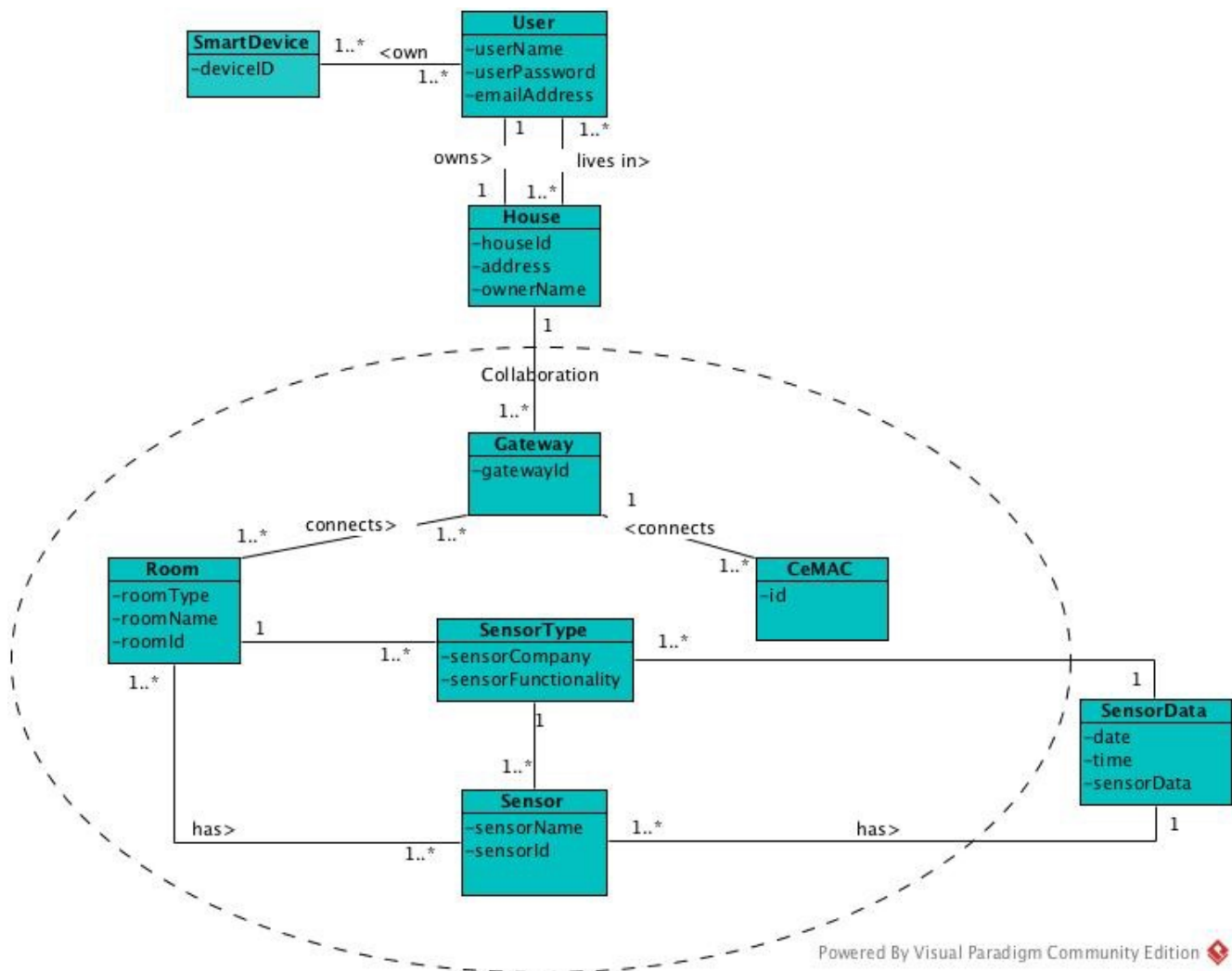
SPEC-Database

User data Form Template

User ID	
First Name	
Last Name	
Email	
Password	
Mobile	
Home Address	

Room data Form Template

Room ID	Room Name	Room Type
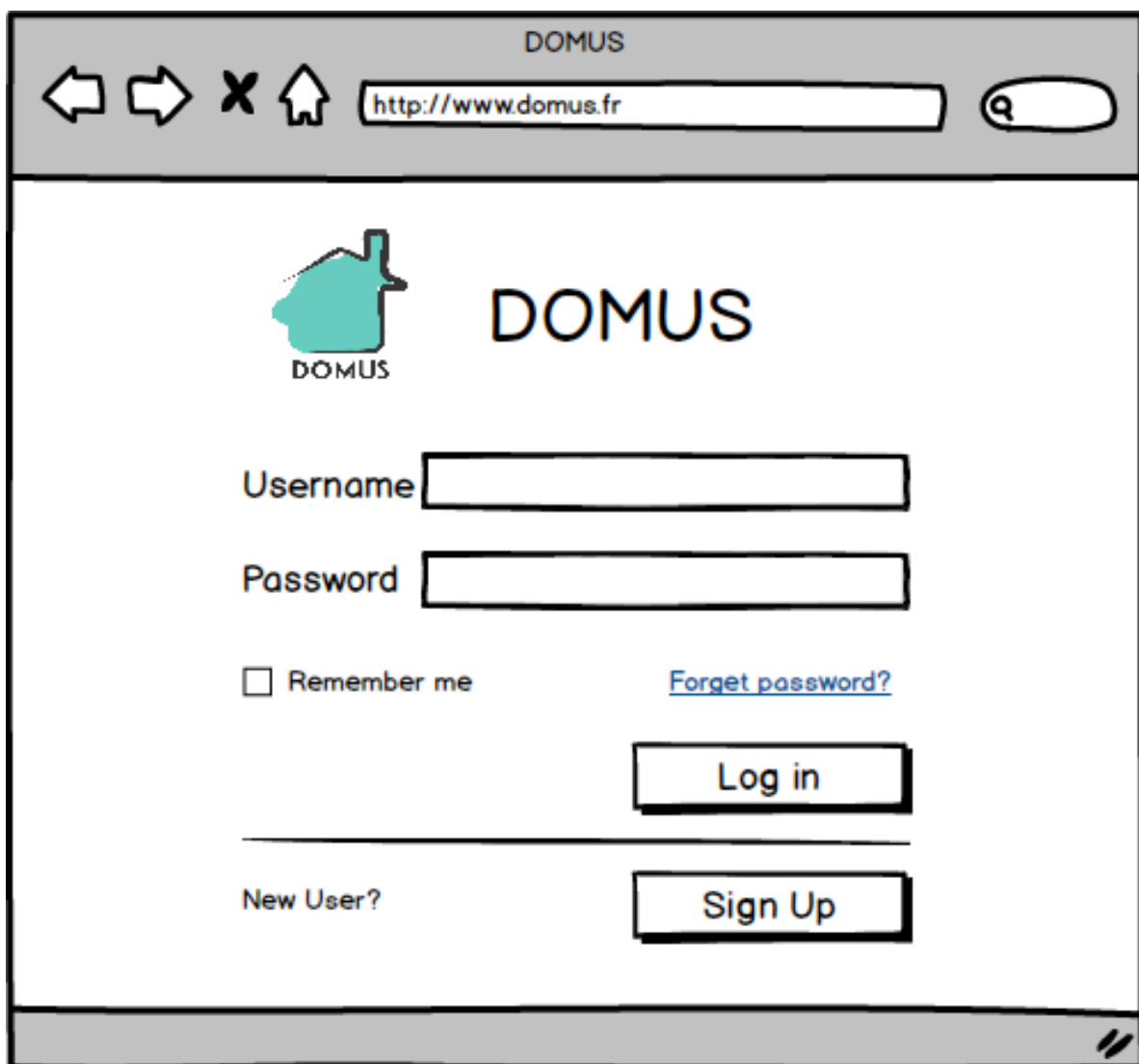
Sensor data Form Template

Sensor ID	Sensor Type	Sensor Name	Date/Time

SPEC-GUI

DOMUS login page

- **Existing User – click <u>Log in</u> button with Username and Password**
- **Fresh new User – click <u>Sign up</u> button for registration**

SPEC-GUI

DOMUS signup page

DOMUS

http://www.domus.fr

DOMUS

First Name

Last Name
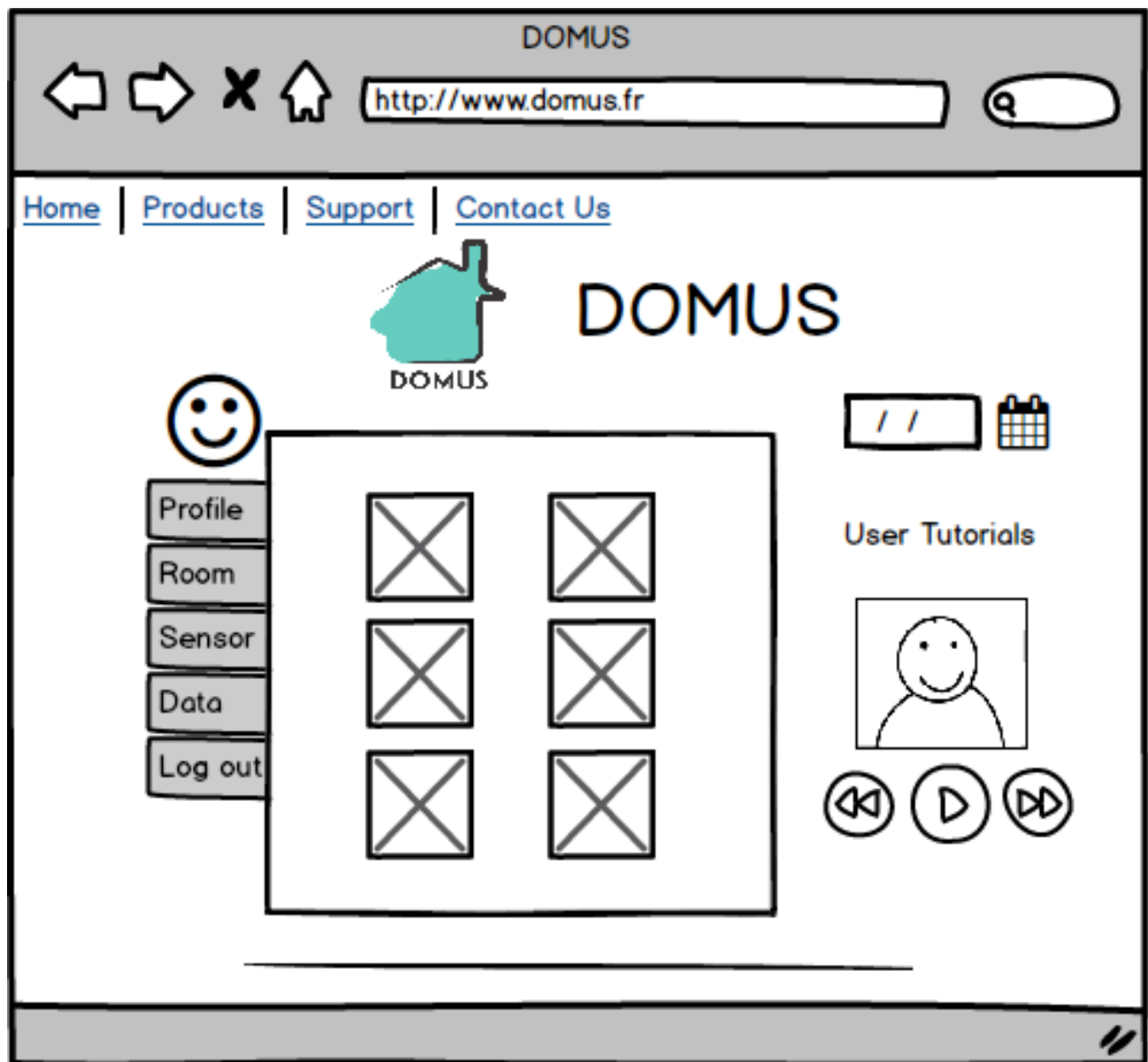
Email

Password

Mobile

Home Address

By signing up, you agree to DOMUS's Terms of Use and Privacy Policy
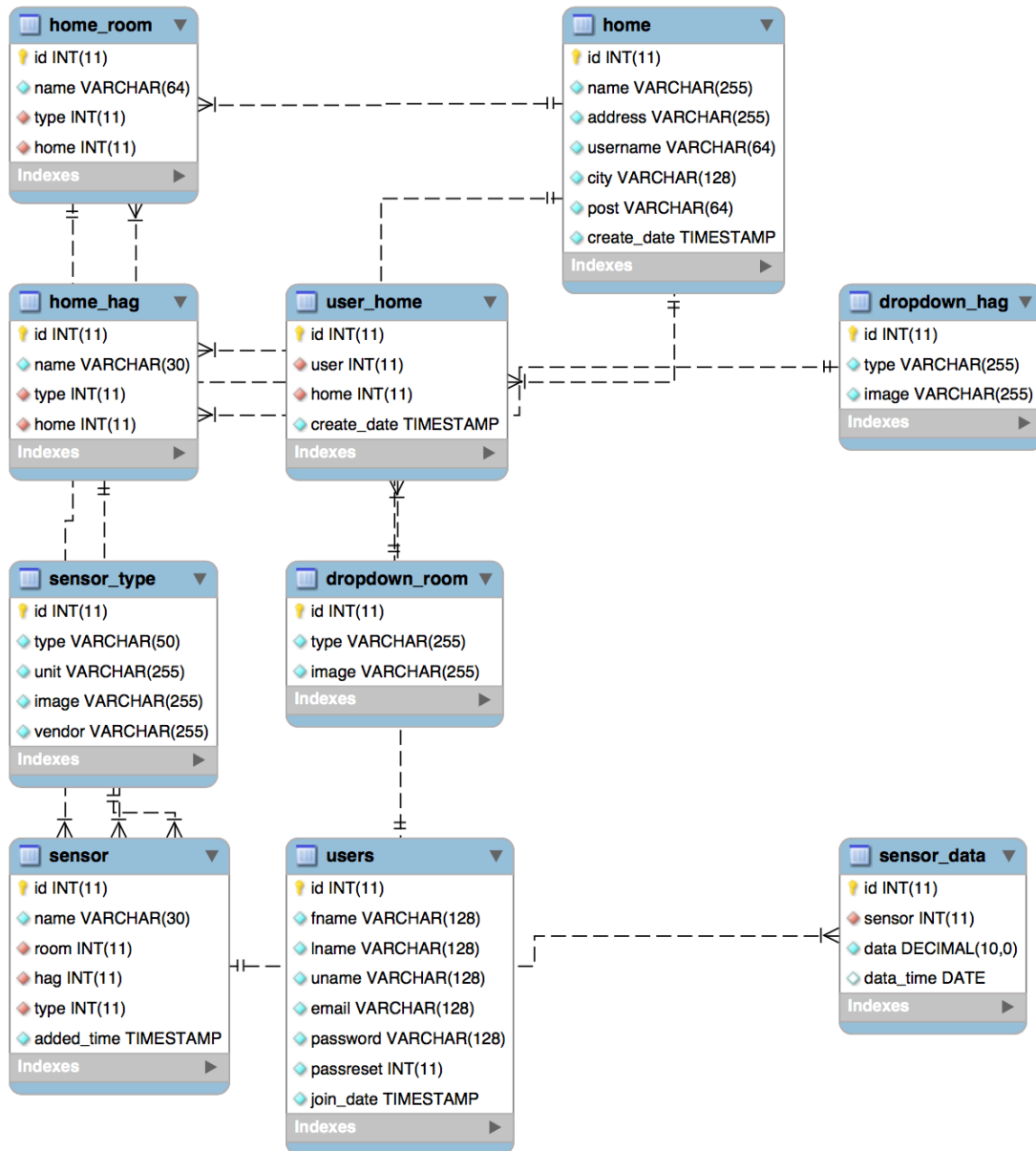
Sign Up

SPEC-GUI

When users login successfully, they can do the below activities
- Modify the profile or logout
- Control the sensors by Room
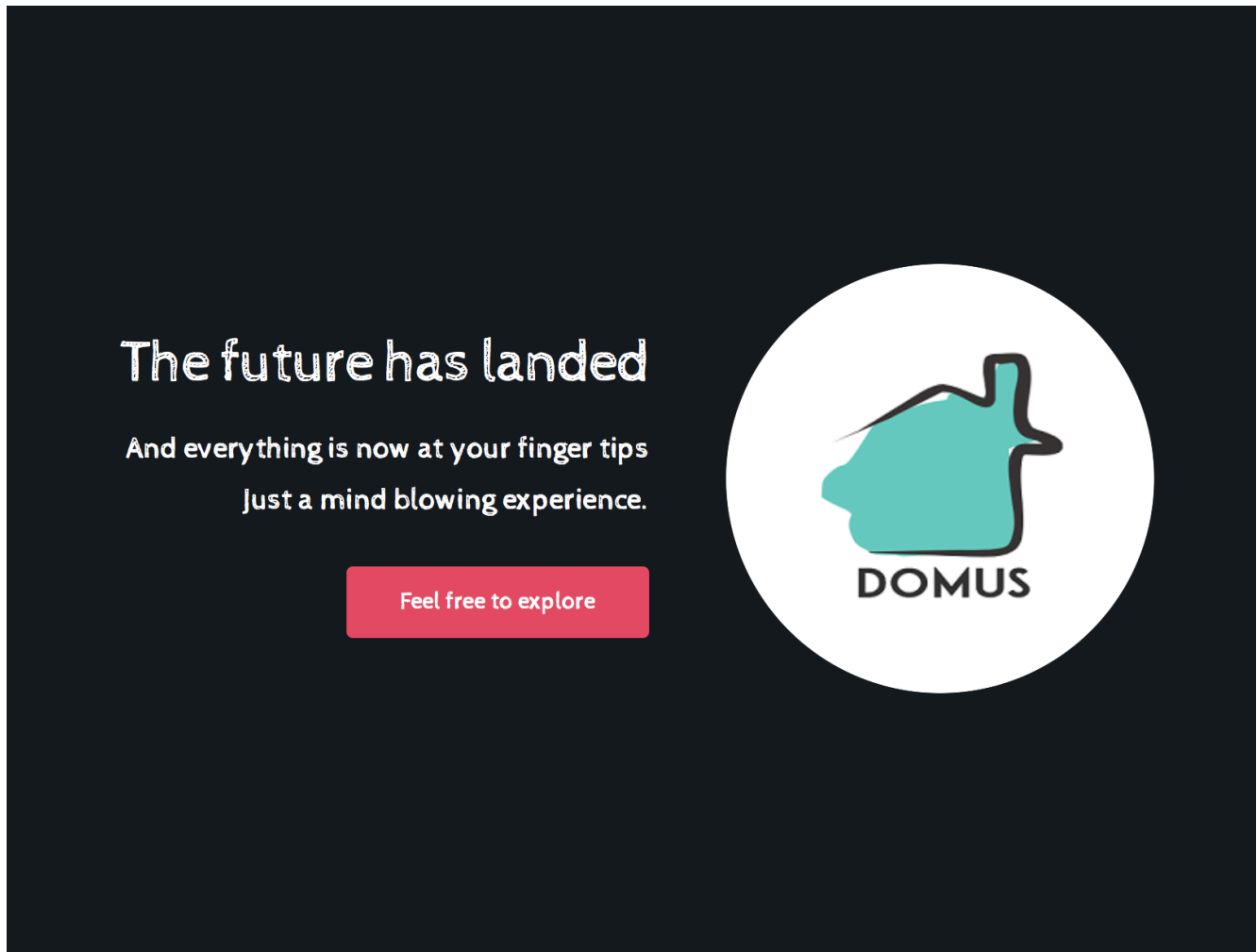- Control the sensors by Type
- Monitor the data

- updated database:

home_room
- 🔑 id INT(11)
- 🔹 name VARCHAR(64)
- 🔶 type INT(11)
- 🔶 home INT(11)
- Indexes ▶

home
- 🔑 id INT(11)
- 🔹 name VARCHAR(255)
- 🔹 address VARCHAR(255)
- 🔹 username VARCHAR(64)
- 🔹 city VARCHAR(128)
- 🔹 post VARCHAR(64)
- 🔹 create_date TIMESTAMP
- Indexes ▶

home_hag
- 🔑 id INT(11)
- 🔹 name VARCHAR(30)
- 🔶 type INT(11)
- 🔶 home INT(11)
- Indexes ▶

user_home
- 🔑 id INT(11)
- 🔶 user INT(11)
- 🔶 home INT(11)
- 🔹 create_date TIMESTAMP
- Indexes ▶

dropdown_hag
- 🔑 id INT(11)
- 🔹 type VARCHAR(255)
- 🔹 image VARCHAR(255)
- Indexes ▶

sensor_type
- 🔑 id INT(11)
- 🔹 type VARCHAR(50)
- 🔹 unit VARCHAR(255)
- 🔹 image VARCHAR(255)
- 🔹 vendor VARCHAR(255)
- Indexes ▶

dropdown_room
- 🔑 id INT(11)
- 🔹 type VARCHAR(255)
- 🔹 image VARCHAR(255)
- Indexes ▶

sensor
- 🔑 id INT(11)
- 🔹 name VARCHAR(30)
- 🔶 room INT(11)
- 🔶 hag INT(11)
- 🔶 type INT(11)
- 🔹 added_time TIMESTAMP
- Indexes ▶

users
- 🔑 id INT(11)
- 🔹 fname VARCHAR(128)
- 🔹 lname VARCHAR(128)
- 🔹 uname VARCHAR(128)
- 🔹 email VARCHAR(128)
- 🔹 password VARCHAR(128)
- 🔹 passreset INT(11)
- 🔹 join_date TIMESTAMP
- Indexes ▶

sensor_data
- 🔑 id INT(11)
- 🔶 sensor INT(11)
- 🔹 data DECIMAL(10,0)
- 🔹 data_time DATE
- Indexes ▶

- updated GUI

Intro Page

User Login Page

Log In

DOMUS

| Enter Username |
| Enter Password |

Forget your password?

login

User Signup Page

Register

DOMUS

Enter First Name	*
Enter Last Name	*
Enter Username	*
Enter Email	*
Confirm Email	*
Enter Password	*
Confirm Password	*

*required field

register

log in?

User Room Creation Page

DOMUS

Create Rooms

Bedroom	Bathroom	Dining Room	Living Room
Give it a Name	Give it a Name	Give it a Name	Give it a Name
Add	Add	Add	Add

My Room List

No.	Room Type	Room Name	Action

Previous   Next

Room Sensors Creation Page

DOMUS

Home ▾   Services   Support   About Us ▾

Add Sensors

Temperature	Light	Window	Humidity
Give a Name	Give a Name	Give a Name	Give a Name
Select Hag	Select Hag	Select Hag	Select Hag
Select Room	Select Room	Select Room	Select Room
Add	Add	Add	Add

My Sensor List

No.	Sensor Type	Sensor Name	HAG Name	Room Name	Action

Previous   Next

DOMUS

y Home ▾   Services   Support   About Us ▾

Manage Homes

Chanel CoCo
100 Champs de Mars

Manage

Armani Georgio
555 HASTES

Manage

Candy
39 Av.Kleber

Manage

test
tes

Manage

Back   Monitor Sensors

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