DOMISEP Smart Home

By,
Sujith Voleti
Sampath Kumar
Vignesh Prakash
Wang Qun
Wang Linfeng
Nagaraj Chowdary

Objective

The objective of the IT part is to design and develop the web platform that will display the data provided by sensors, and that will control objects connected to the platform. The developed website should possess the following features,

Process - 1

- Online registration for users

Process - 2

- Management by the users

Process - 3

- Transfer of data between the user and the backend

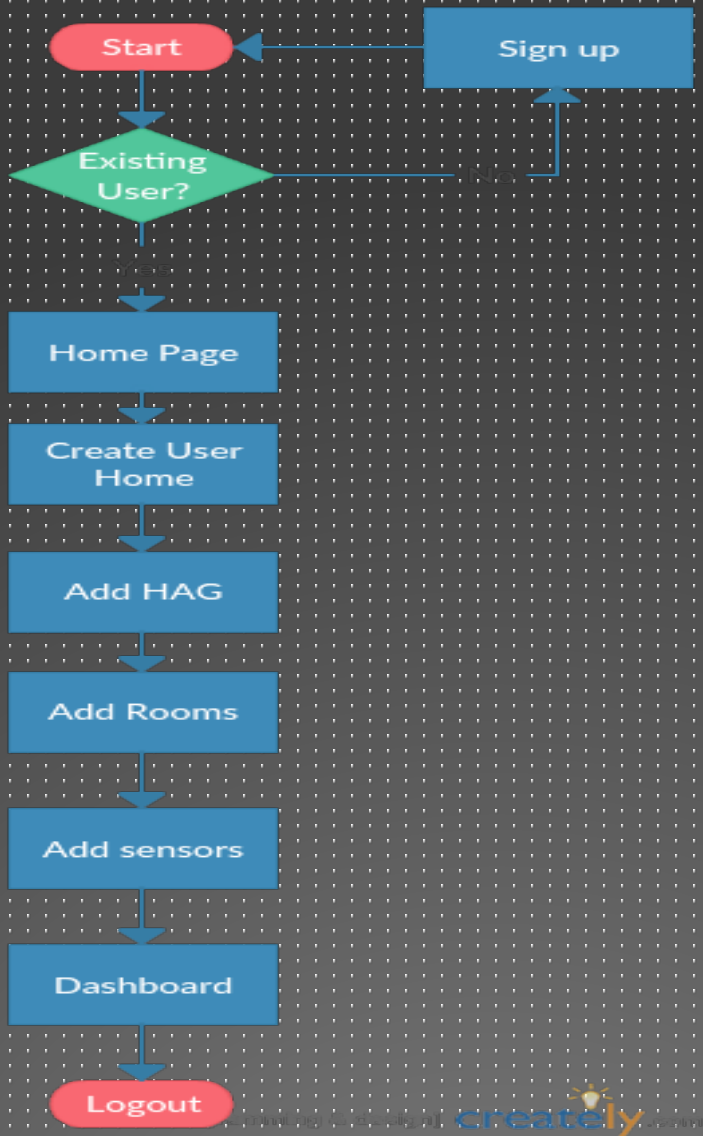
Process -1

Online registration for users

This process involves two actions by the user

- **Login**
  - Existing user logs in with the help of his credentials
  - If the existing user forgets his password, we have introduced a ‘Forgot Password’
  - This option helps to reset the password by email verification
- **Signup**
  - New user enters his details in the register form and enrolls himself into the DOMUS website

Flow Chart


Start
Sign up
Existing User?
Home Page
Create User Home
Add HAG
Add Rooms
Add sensors
Dashboard
Logout

Process - 2

Management by the users

This process involves three actions by the user

- Create Home
- Manage Home
- Monitor Home

Management by the Admin

- Update room type
- Update sensor type
- Deletion of users

Create Home

- The user does the following activities under create home option

Adding Home

- User can enter his address
- User can add his city name
- User can add his postal code

Adding HAG

- Add necessary HAG to the home(Number of HAG)
  - The requirement for adding HAG will be based on the size of his home

Adding Rooms

- User adds the required number of rooms based on the types of rooms available on the screen
  - The types includes
    1. Bedroom
    2. Bathroom
    3. Living room
    4. Kitchen
- Delete options is also provided to delete the added rooms instantly
- By clicking the ‘Next’ button on the bottom of the page the user can navigate to the Add Sensors page

Create Rooms

Bedroom

Give it a Name

Add

Bathroom

Give it a Name

Add

Dining Room

Give it a Name

Add

Living Room

Give it a Name

Add

My Room List

No.	Room Type	Room Name	Action
1	Bedroom	parents bedroom	Delete | Add Sensors
2	Bedroom	children bedroom	Delete | Add Sensors
3	Dining Room	Familly dining room	Delete | Add Sensors

Previous Next

Adding Sensors

- Add sensors to the rooms based on room types

Add Sensors

Temperature

Give a Name

Select Hag

middle

Select Room

parents bedroom

Add

Light

Give a Name

Select Hag

middle

Select Room

parents bedroom

Add

Window

Give a Name

Select Hag

middle

Select Room

parents bedroom

Add

Humidity

Give a Name

Select Hag

middle

Select Room

parents bedroom

Add

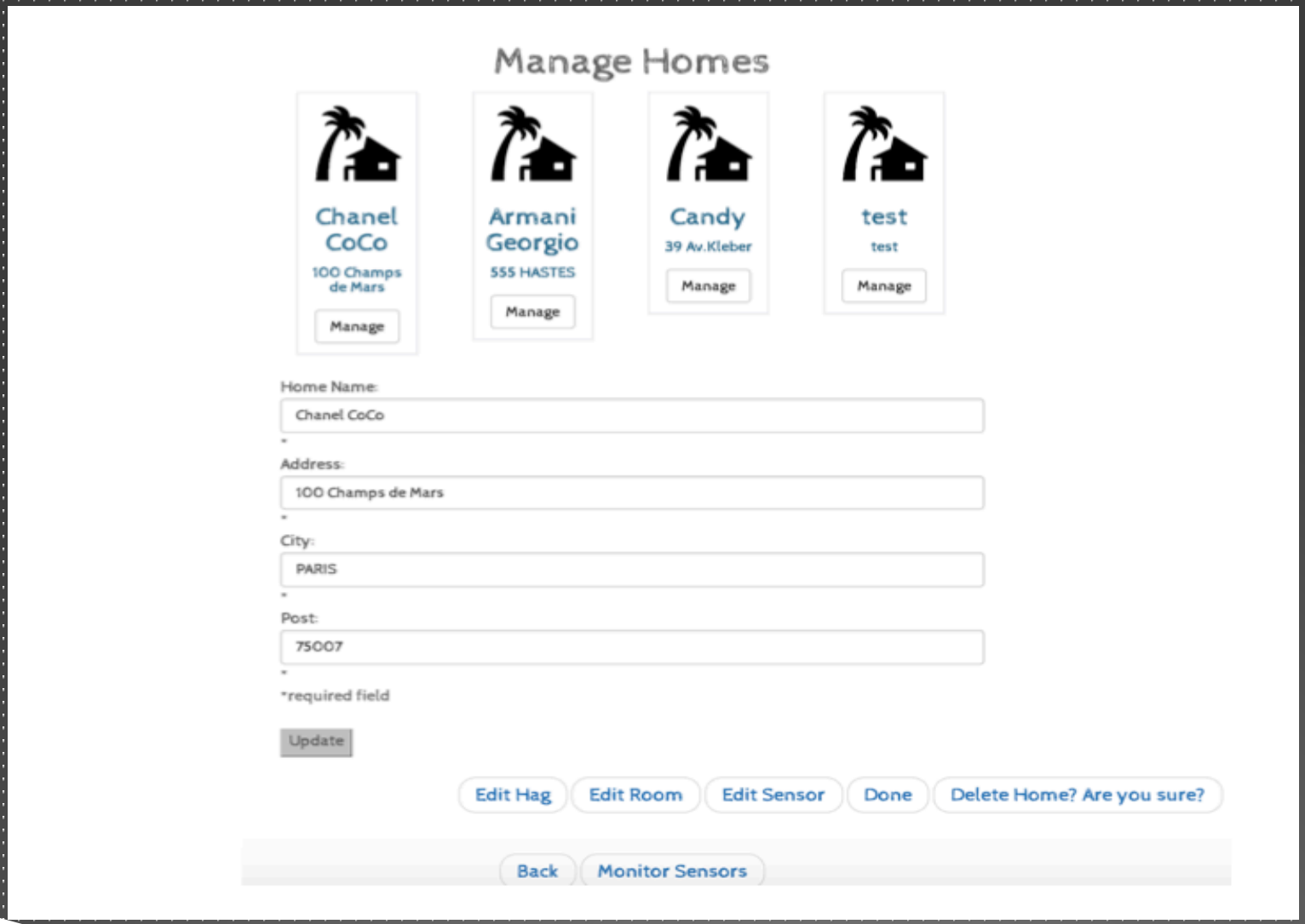
My Sensor List

No.	Sensor Type	Sensor Name	HAG Name	Room Name	Action
1	Temperature	tcenter	middle	parents bedroom	Delete
2	Humidity	Hcenter	middle	parents bedroom	Delete

Previous Next

Manage Home

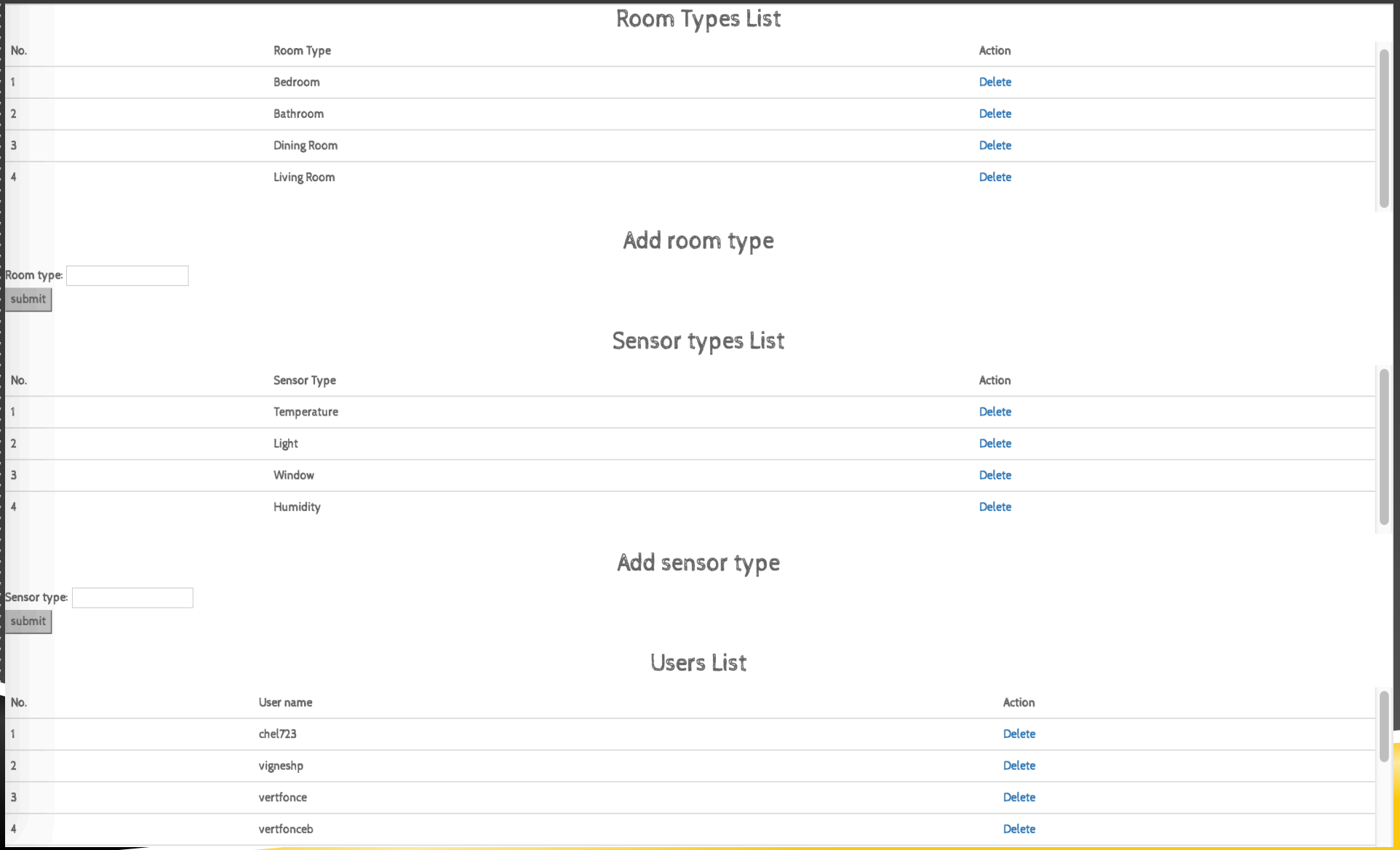
Updation and deletion of home, room and sensors are the activities.



Monitor Home

Management by the Admin

Update room type, Update sensor type and Deletion of users



Room Types List

No.	Room Type	Action
1	Bedroom	Delete
2	Bathroom	Delete
3	Dining Room	Delete
4	Living Room	Delete

Add room type

Room type:

submit

Sensor types List

No.	Sensor Type	Action
1	Temperature	Delete
2	Light	Delete
3	Window	Delete
4	Humidity	Delete

Add sensor type

Sensor type:

submit

Users List

No.	User name	Action
1	chel723	Delete
2	vigneshp	Delete
3	vertfonce	Delete
4	vertfonceb	Delete

Process -3

Transfer of data between the user and the backend

- This activity involves the usage of database to store and retrieve data
- Some scenarios to explain its working
  - User sign up form is stored in a separate table
  - Based on user's id its respective data are being retrieved from the database with the help of the queries

Tasks Completed

- Login with validation for users
- Separate tables for User and Admin

- Sign up with validation for users
- Along with forget password option and reset password using email verification

User Activities:

- Create home
- Manage home
- Monitor home
- User can send email from our website if he faces any issues

Admin Activities

- Update room type
- Update sensor type
- Deletion of existing users

Difficulties faced

- Understanding the architecture took more time than expected (For actual implementation)
- Attempt to use GITHUB costs us more time
- Finalizing the database structure consumed more time