

IES GROUP PROJECT

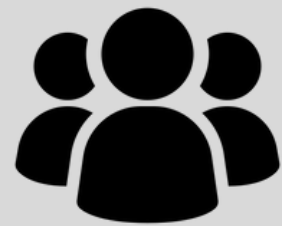
P2 - LEI

68264: Bruno Lopes
108712: Diogo Falcão
108011: Fábio Matias
107927: Rúben Garrido

Introduction

- The SmartHomes application is designed to address the problem of efficient and sustainable home resources management.
- Therefore, it provides a solution for homeowners to monitor and control their electricity and water.
- This solution is made for it to work in all and any devices plugged into the house (unlike HomeKit), as it is not dependent on the devices but on the physical interfaces they are plugged into.

Team Roles



Team Manager

Bruno Lopes



Architect

Diogo Falcão



Product Owner

Fábio Matias



DevOps Master

Rúben Garrido

Personas

Sara Mathews

- **Age:** 39 years old
- **Job:** Doctor

• Sara seeks innovative ways to reduce her carbon footprint and strive for a greener, more sustainable future for all



Peter Williams

- **Age:** 28 years old
- **Job:** Software Engineer

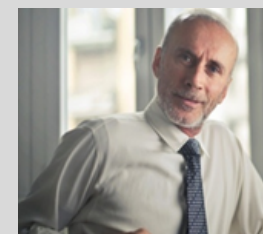
• Peter wants to manage his home, tracking energy and water consumption.



John Lennon

- **Age:** 56 years old
- **Job:** Lawyer

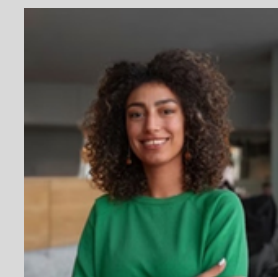
• He has various homes and the goal is to have an app to control all of them at once.



Anna Franklyn

- **Age:** 34 years old
- **Job:** Restaurant Owner

• Anna wants to keep track of her devices costs and reduce them.



Epics



Homes



Houses Divisions



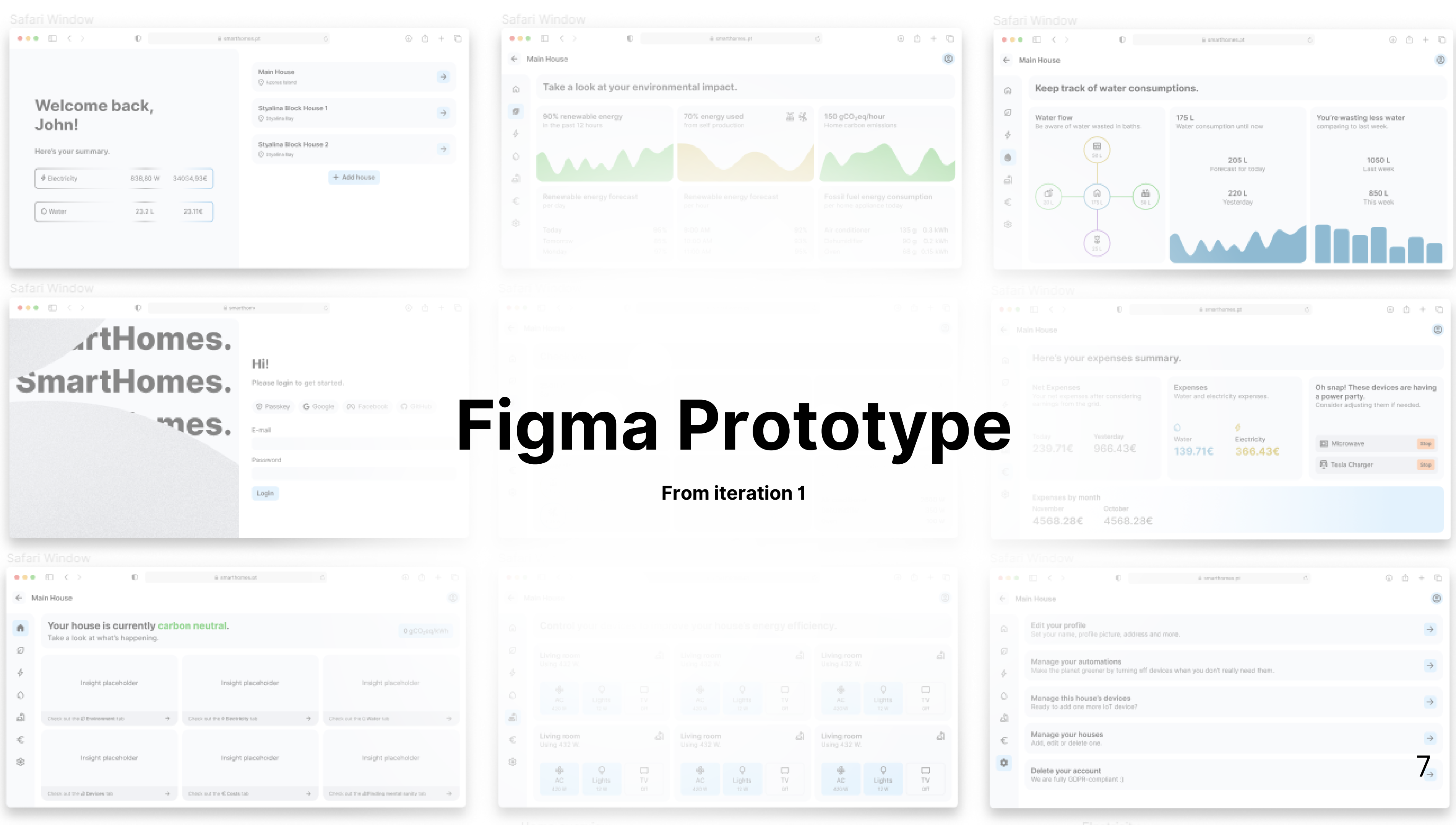
Smart Devices

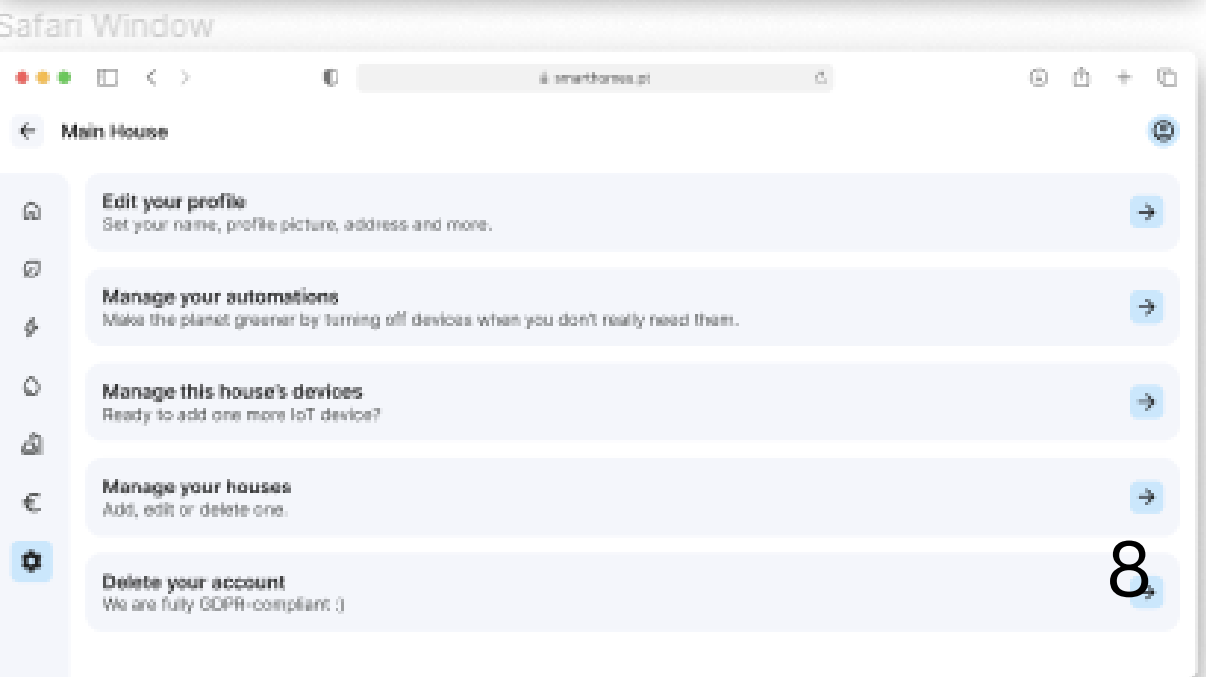
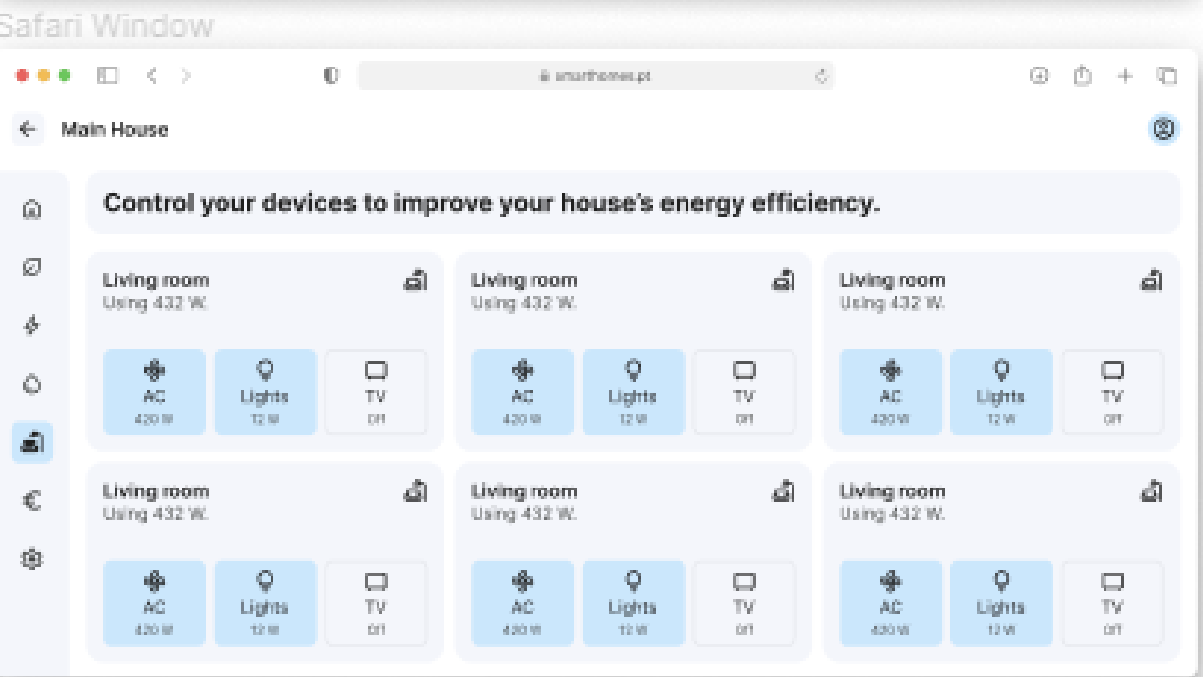
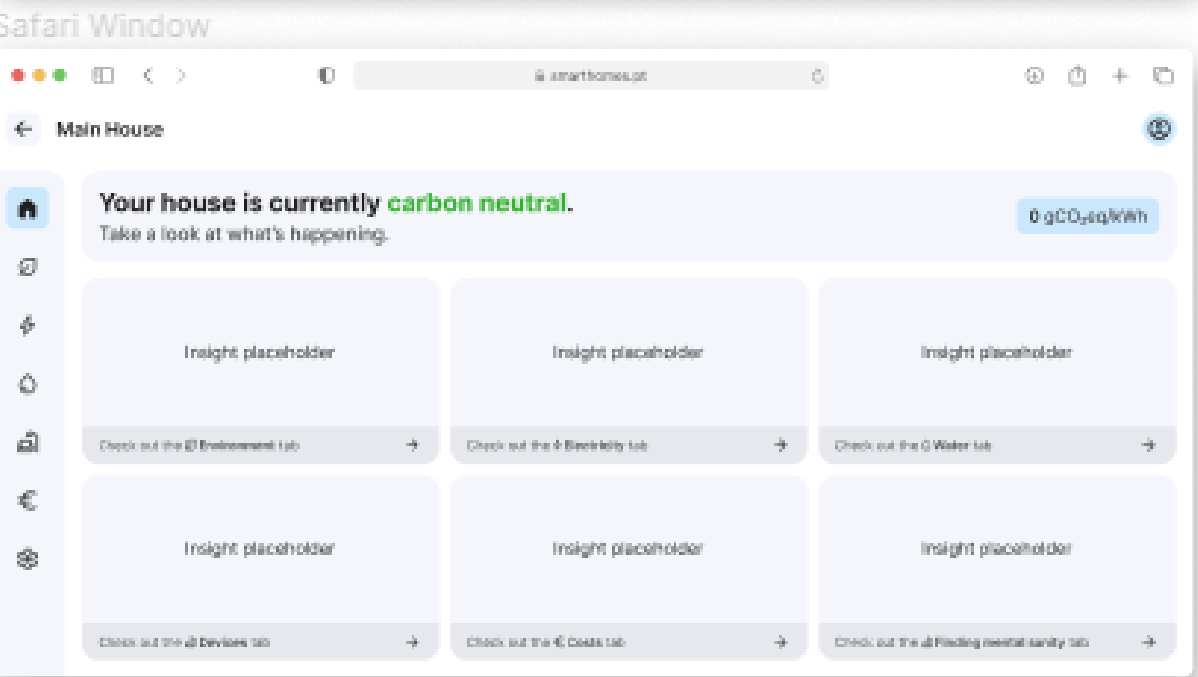
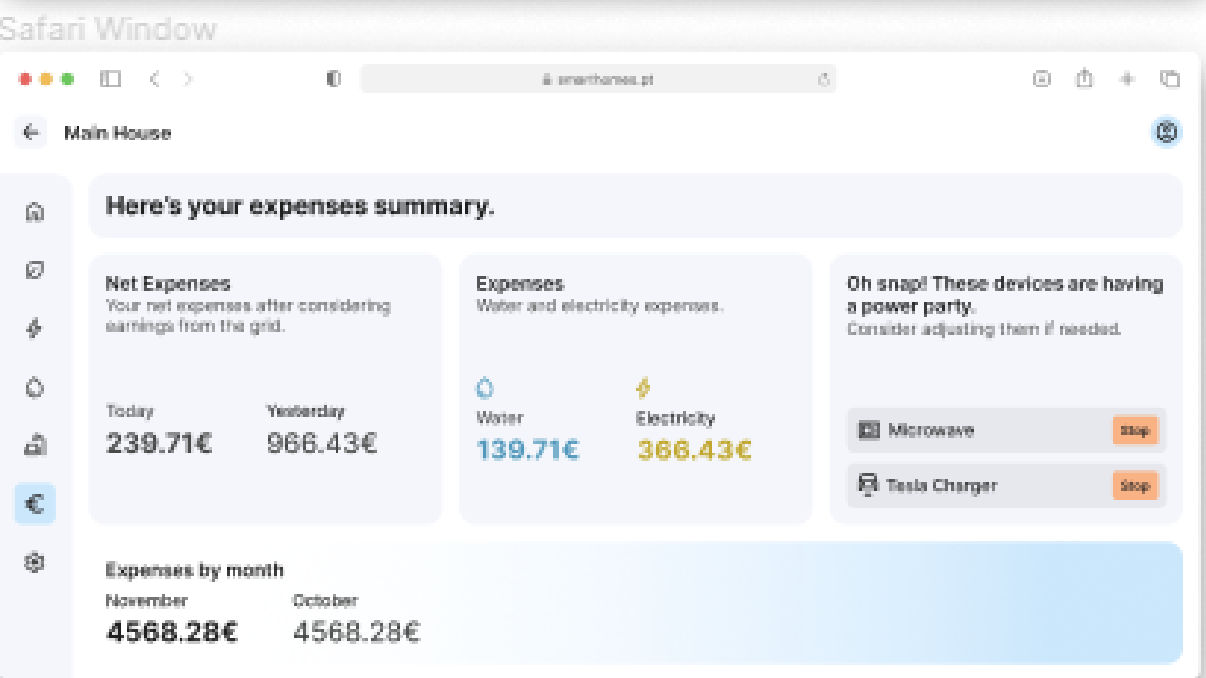
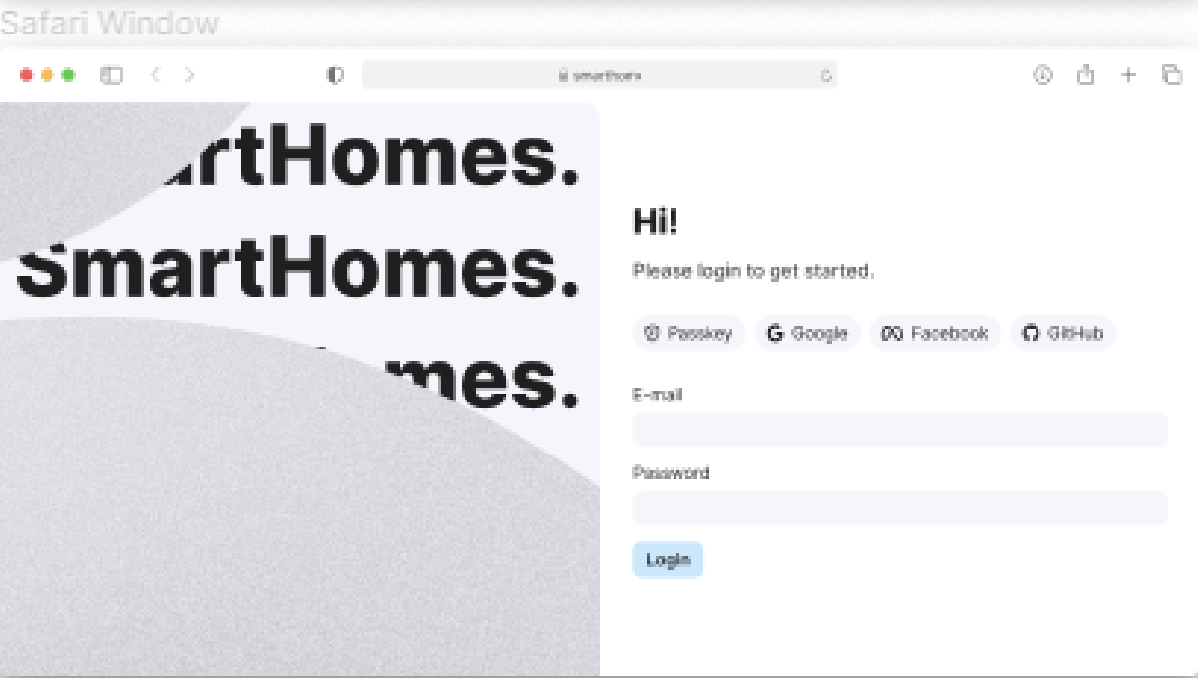
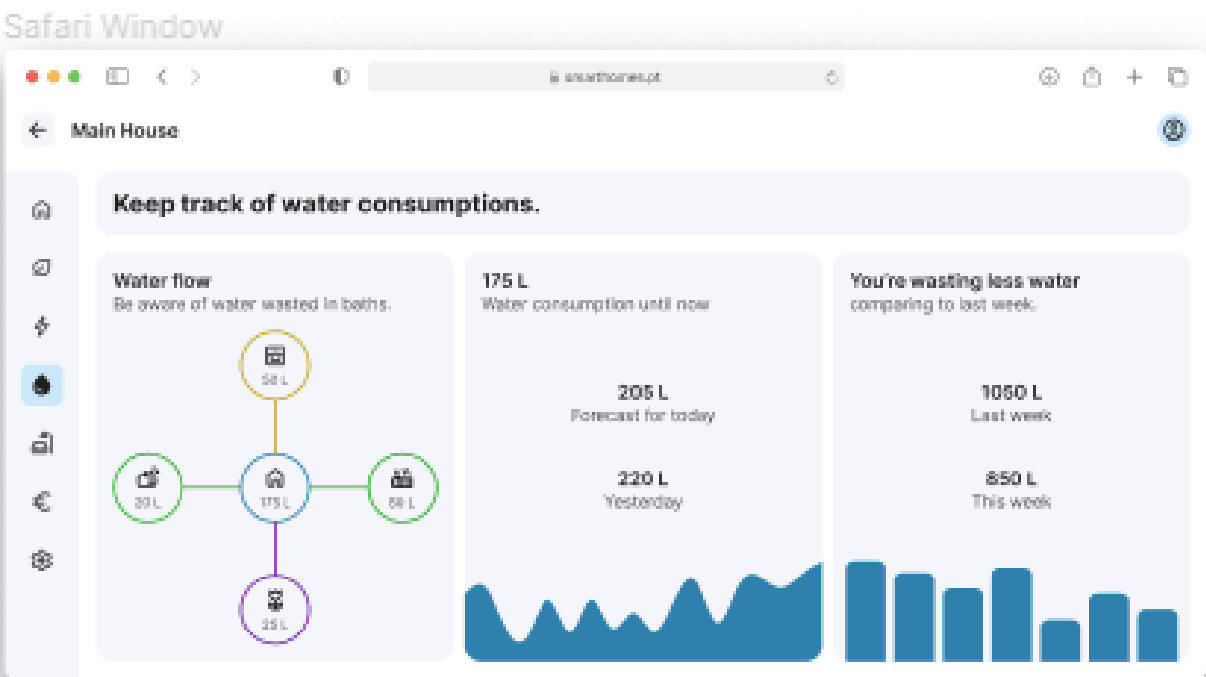
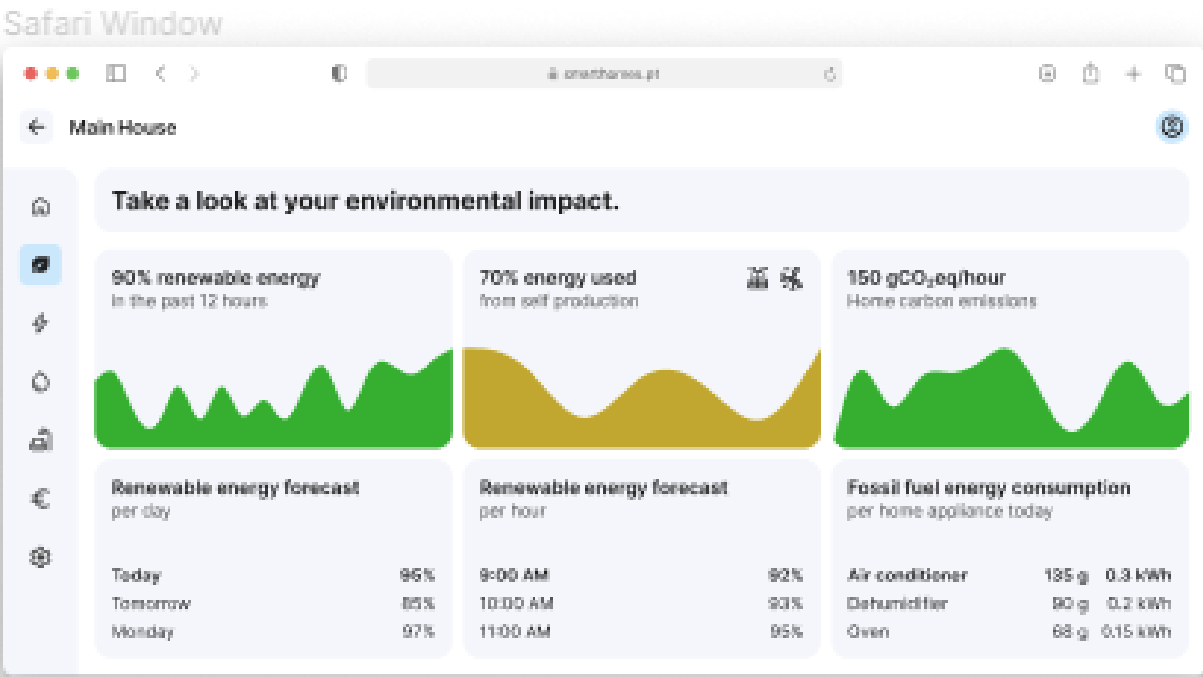
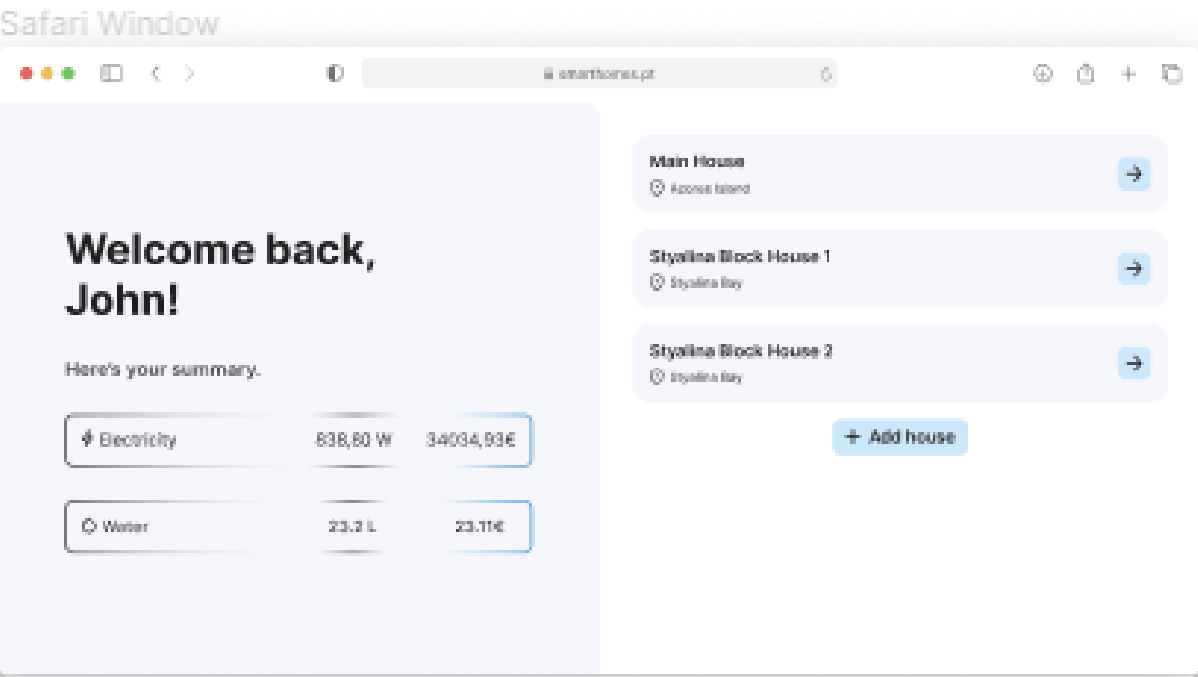


**Energy and Water
Management**

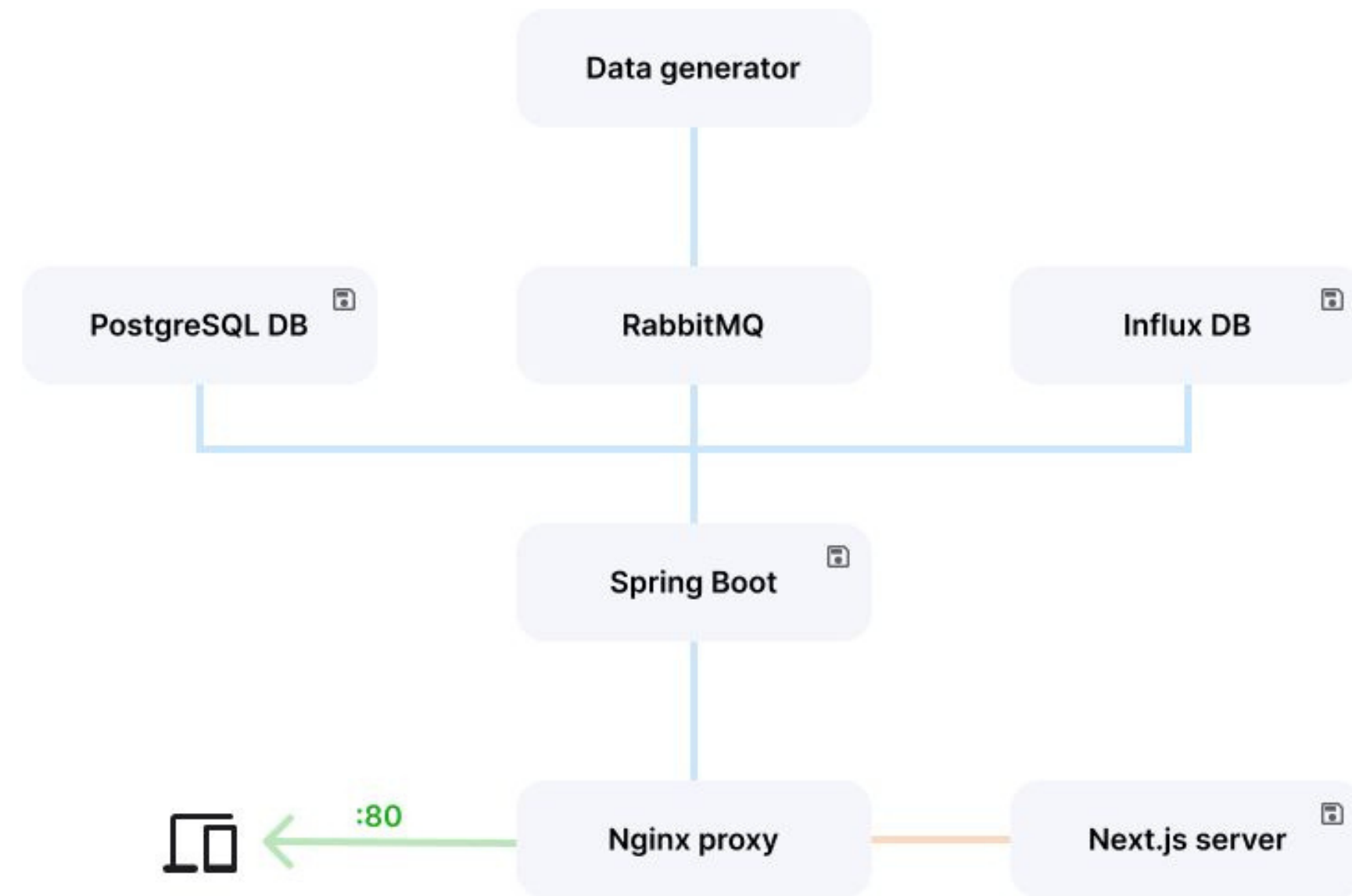
User stories

- As Anna, I want to register several houses and their electrical system in one app.
- As John, I need to control every bit of water used in a drought in its region.
- As Peter, I would like to oversee electronic devices connected to the house grid.
- As Ana, I would much like to get notified about the percentage of the grid energy that can supply the house.
- As John, I want to turn off electronic devices with just a few taps through the app.
- As Petter, I need to have a place where I can get a summary of all my electricity and water related costs.

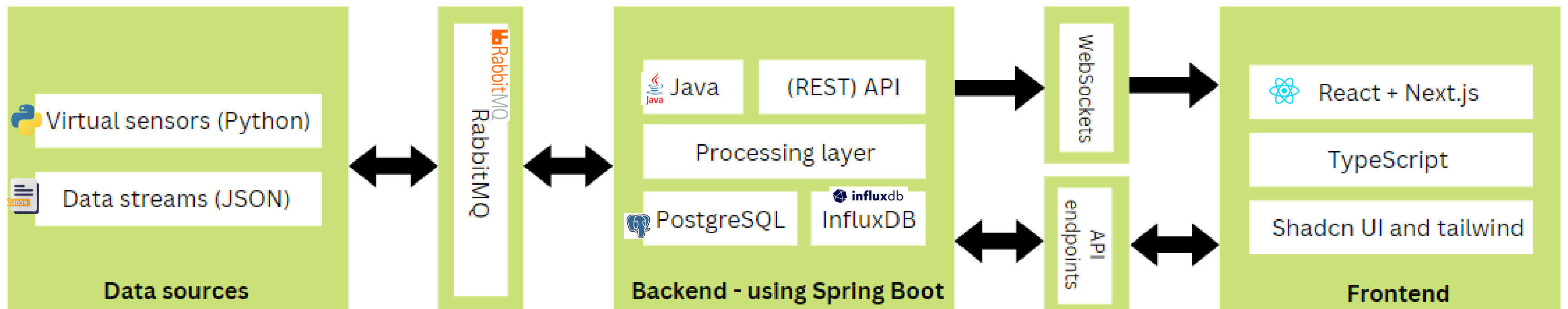










Containers organization



ARCHITECTURE



GitHub Board

<input type="checkbox"/>	<input checked="" type="radio"/> 0 Open	<input checked="" type="radio"/> 30 Closed	Author ▾	Label ▾	Projects ▾	Milestones ▾	Assignee ▾	Sort ▾		
<input type="checkbox"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	🔗 General Improvements			backend	frontend	🔗 1		
#73 by falcaodiogo was closed yesterday ⌚ updated yesterday										
<input type="checkbox"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	📄 Documentation			backend	documentation	🔗 1		💬 1
#25 by Brupez was closed yesterday ⌚ updated yesterday										
<input type="checkbox"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	⚙️ Finish settings			frontend		🔗 1		
#70 by RGarrido03 was closed 2 days ago ⌚ updated 2 days ago 🔵 5 tasks done										
<input type="checkbox"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	🏠 CRUD operations for home			frontend		🔗 1		
#68 by RGarrido03 was closed 2 days ago ⌚ updated 2 days ago 🔵 2 tasks done										
<input type="checkbox"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	📢 Enhance Previous Notifications PR			backend	frontend	🔗 1		
#69 by falcaodiogo was closed 4 days ago ⌚ updated 4 days ago										
<input type="checkbox"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	👤 Add support for more houses. house specification from backend			backend	data generator			💬 1



Brupez commented last week

Collaborator

Damn! Go you 🙌 Only one question, why the need for two Queues int the RabbitMQ?



RGarrido03 commented last week

Owner Author

The generator and Spring need two "channels" to communicate: one in the Spring->generator direction and another in the opposite one.
Otherwise, Spring and the generator would consume messages from the same queue. Not only that would create a desync, it would also not follow the Portuguese saying "pão pão, queijo queijo", as both messages types have different formats 🙌



1



Brupez merged commit d097807 into main last week

Revert



RGarrido03 mentioned this pull request last week

Add support for more houses, house specification from backend #8

Closed



Pull request successfully merged and closed

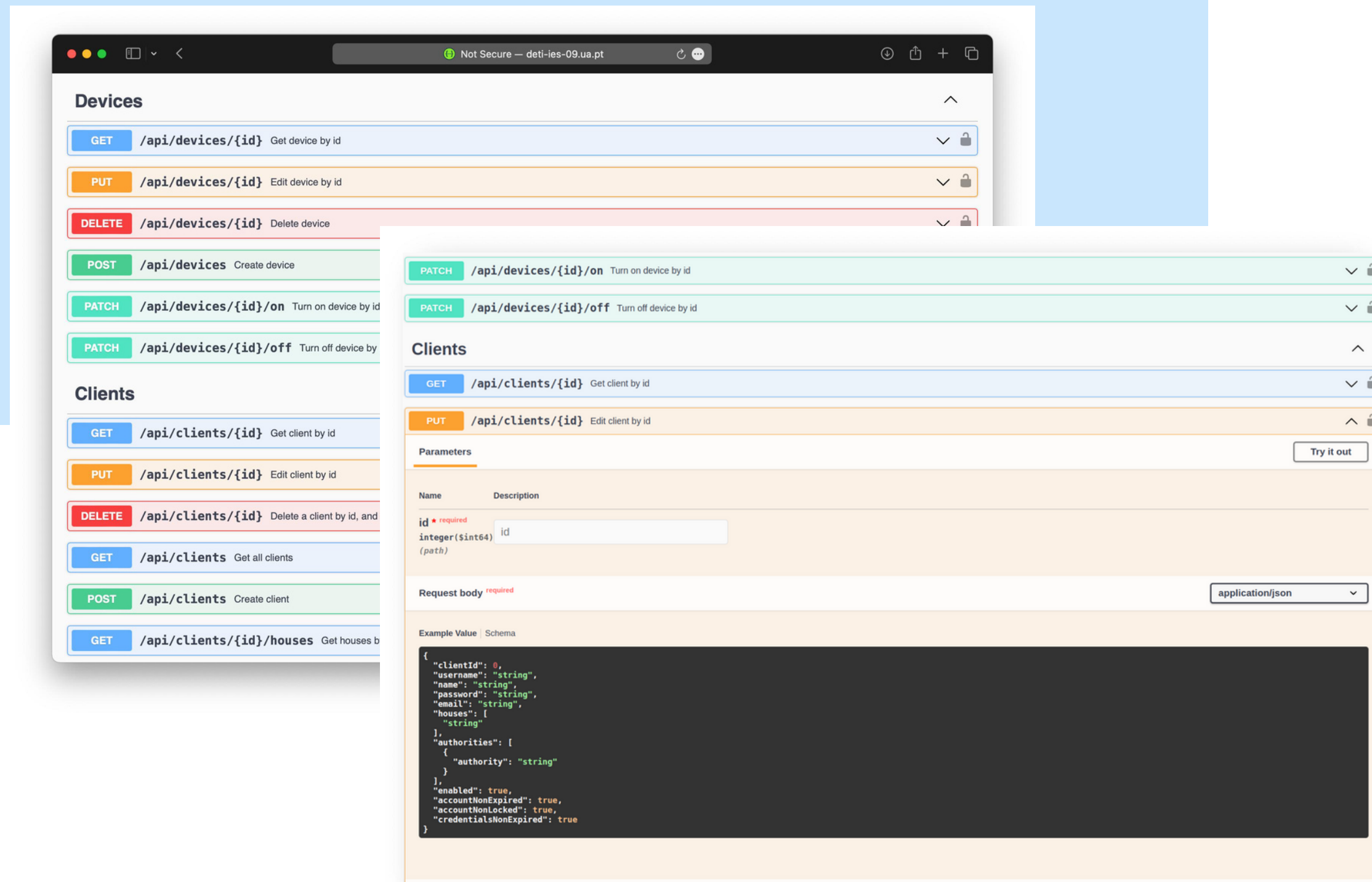
You're all set—the 8-add-support-for-... branch can be safely deleted.

Delete branch

14	🔗 Devices page #49	Brupez	Iteration 2
15	🏠 Register houses and devices #51	RGarrido03	Iteration 2
+ Add item			
Iteration 3 18 Nov 30 - Dec 13			
16	🕒 As John, I need to control every bit of water used in a drought in its region.		Iteration 3
17	🕒 As Peter, I would like to oversee electronic devices connected to the house grid.		Iteration 3
18	🕒 As John, I want to turn off electronic devices with just a few taps through the app.		Iteration 3
19	🏠 Home page #31	falcaodiogo	Iteration 3
20	🌱 Environment page #32	Brupez	Iteration 3
21	💧 Water page #33	Brupez	Iteration 3
22	⚙️ Settings page #35	SlicF	Iteration 3
23	💰 Costs Page #36	Brupez	Iteration 3
24	🔌 Websocket #37	falcaodiogo	Iteration 3
25	🔑 Complete authentication in frontend #38	RGarrido03	Iteration 3
26	🔑 Complete authentication in backend #39	RGarrido03	Iteration 3
27	🐙 GitHub Actions #40	RGarrido03	Iteration 3
28	⚡ Fetch grid data from REN / ENTSO-E #6	SlicF	Iteration 3
29	🔗 Devices page #34	Brupez	Iteration 3
30	🔗 32 environment page #59	Brupez	Iteration 3
31	🔔 Add Notification Support #60	falcaodiogo	Iteration 3
32	🔗 Add notification support #63	falcaodiogo	Iteration 3
33	👤 Add support for more houses, house specification from backend #8	RGarrido03	Iteration 3
+ Add item			
Iteration 4 7 Dec 14 - Dec 20 Current			
34	🕒 As Ana, I would much like to get notified about the percentage of the grid energy that can supp...		Iteration 4
35	🕒 As Petter, I need to have a place where I can get a summary of all my electricity and water relate...		Iteration 4
36	📖 Documentation #25	Brupez	Iteration 4
37	🏠 CRUD operations for home #68	RGarrido03	Iteration 4
38	🔔 Enhance Previous Notifications PR #69	falcaodiogo	Iteration 4
39	⚙️ Finish settings #70	RGarrido03	Iteration 4
40	🔗 General Improvements #73	falcaodiogo	Iteration 4
+ Add item			

SWAGGER

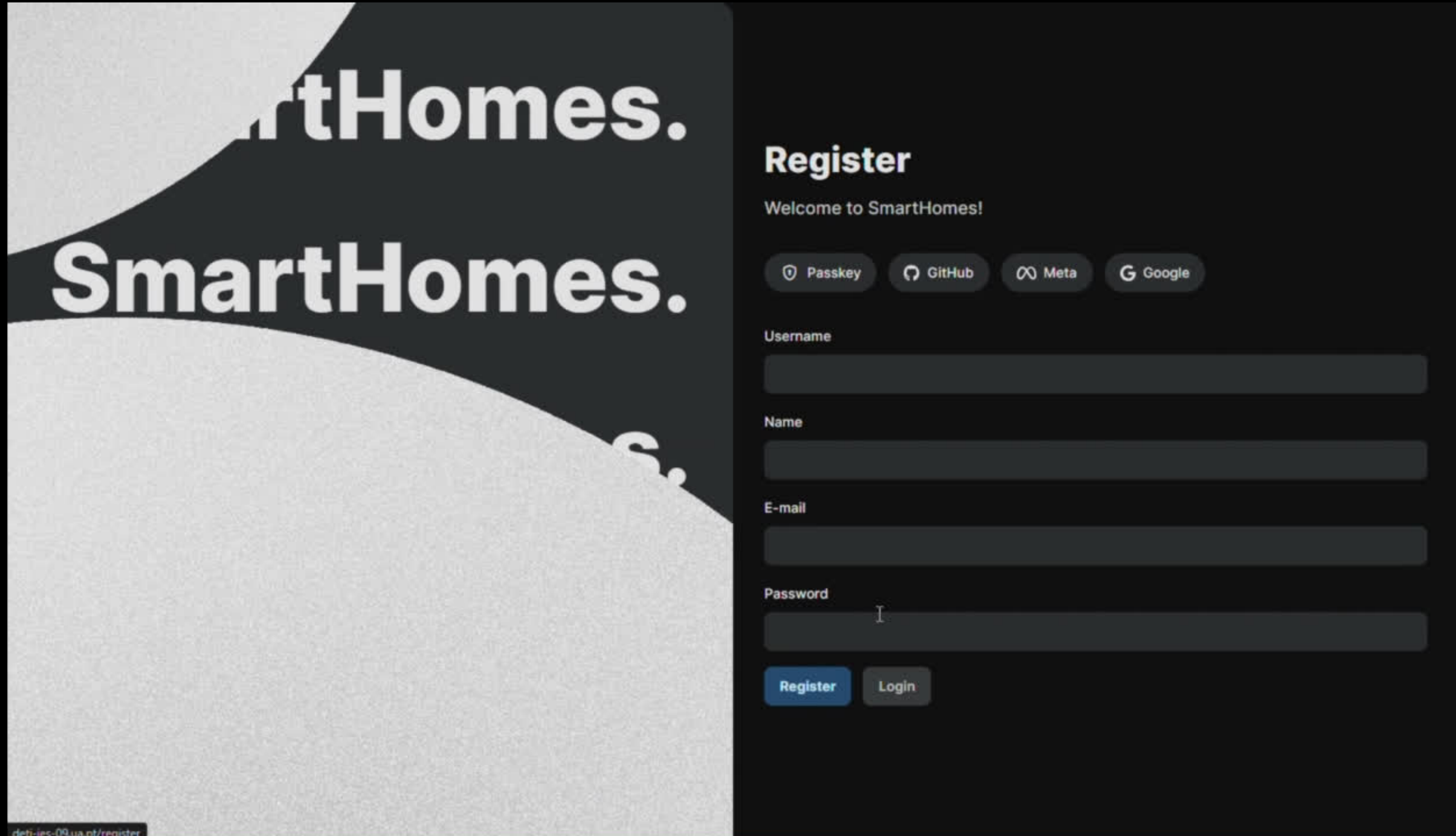
Rest API Documentation
Swagger UI



<http://deti-ies-09.ua.pt/api/docs/index.html>

DEMOS

As Anna, I want to register several houses and their electrical system in one app.



The image shows a web application interface for 'SmartHomes.'. The left side features a large graphic with the text 'SmartHomes.' in white on a dark background, and 'SmartHomes.' in dark on a light background. The right side is a registration form titled 'Register' with the subtitle 'Welcome to SmartHomes!'. It includes four social login buttons: 'Passkey', 'GitHub', 'Meta', and 'Google'. Below these are four input fields labeled 'Username', 'Name', 'E-mail', and 'Password'. At the bottom of the form are two buttons: 'Register' (in blue) and 'Login' (in grey). A small URL 'deti-ies-09.ua.pt/register' is visible in the bottom left corner of the page.

SmartHomes.

SmartHomes.

Register

Welcome to SmartHomes!

[Passkey](#) [GitHub](#) [Meta](#) [Google](#)

Username

Name

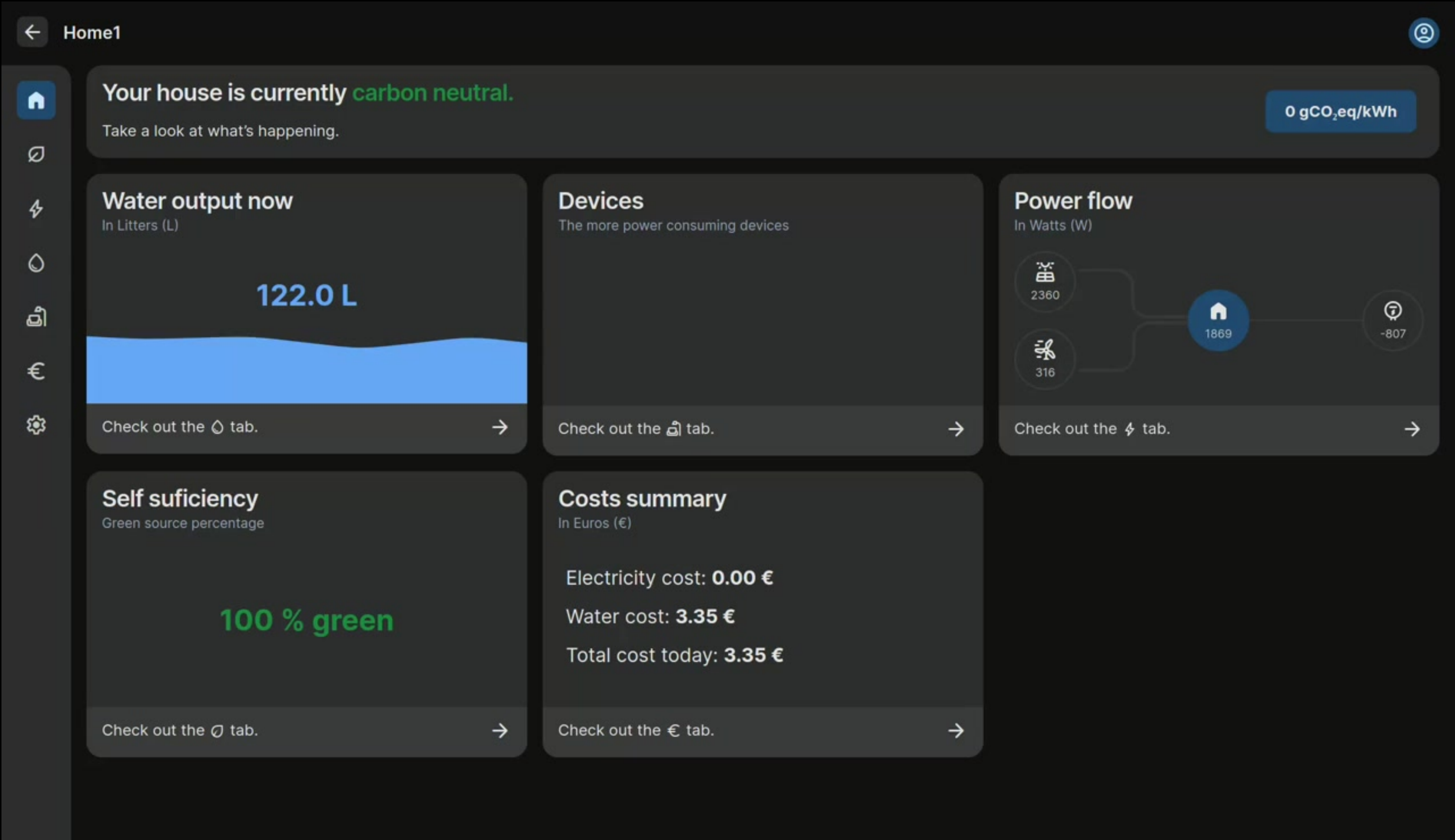
E-mail

Password

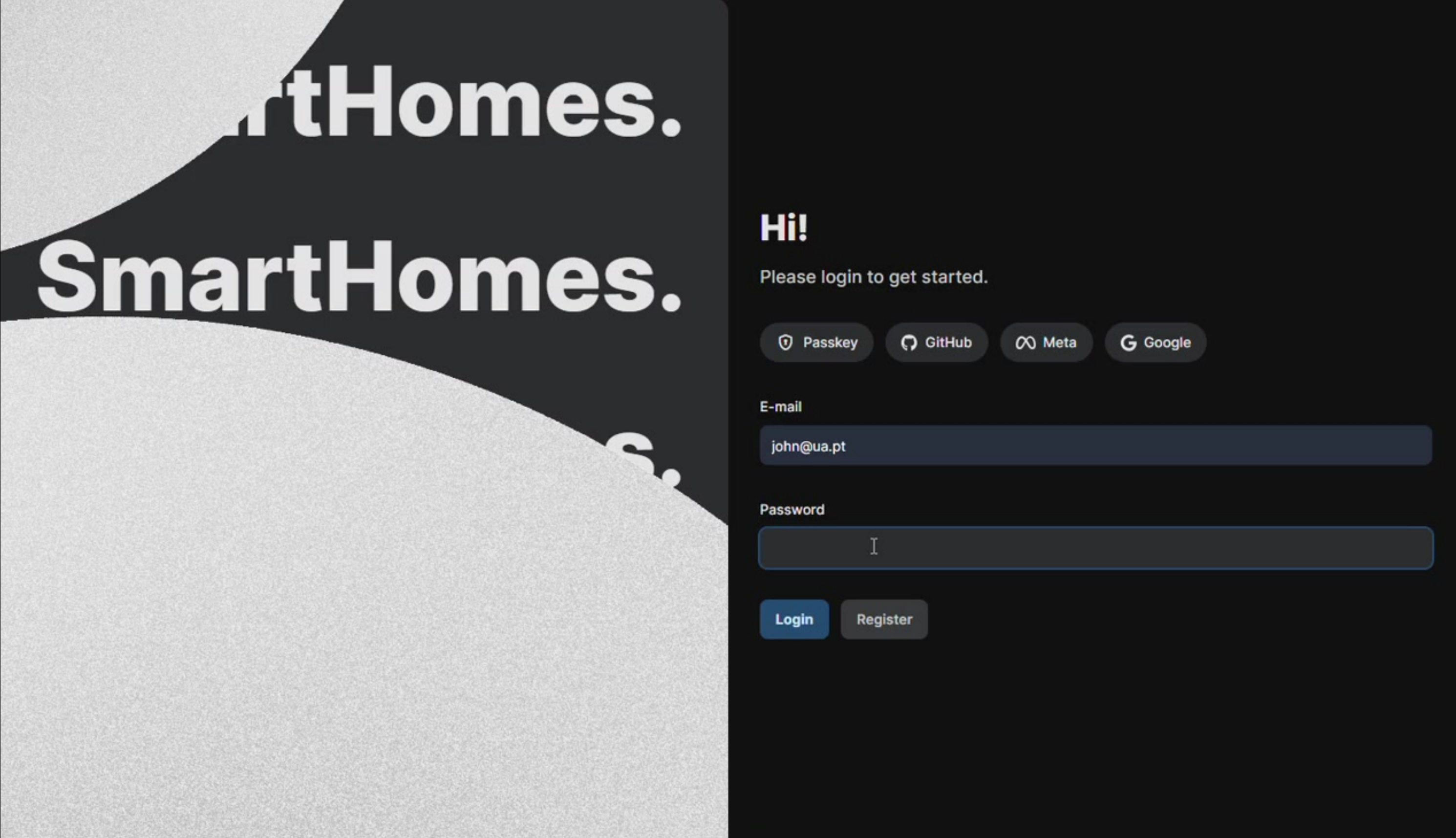
[Register](#) [Login](#)

deti-ies-09.ua.pt/register

As Anna, I want to register several houses and their electrical system in one app.



As John, I need to control every bit of water used in his house.



The image shows a login page for 'SmartHomes'. On the left, there is a large graphic with the text 'SmartHomes.' repeated twice in a stylized, overlapping manner. On the right, the login form is displayed. It starts with a 'Hi!' greeting, followed by the instruction 'Please login to get started.' Below this, there are four social login buttons: 'Passkey', 'GitHub', 'Meta', and 'Google'. The 'Passkey' button is highlighted. Underneath these buttons, there are two input fields: 'E-mail' and 'Password'. The 'E-mail' field contains the text 'john@ua.pt'. The 'Password' field is empty and has a cursor. At the bottom of the form, there are two buttons: 'Login' and 'Register'.

SmartHomes.

SmartHomes.

Hi!

Please login to get started.

Passkey GitHub Meta Google

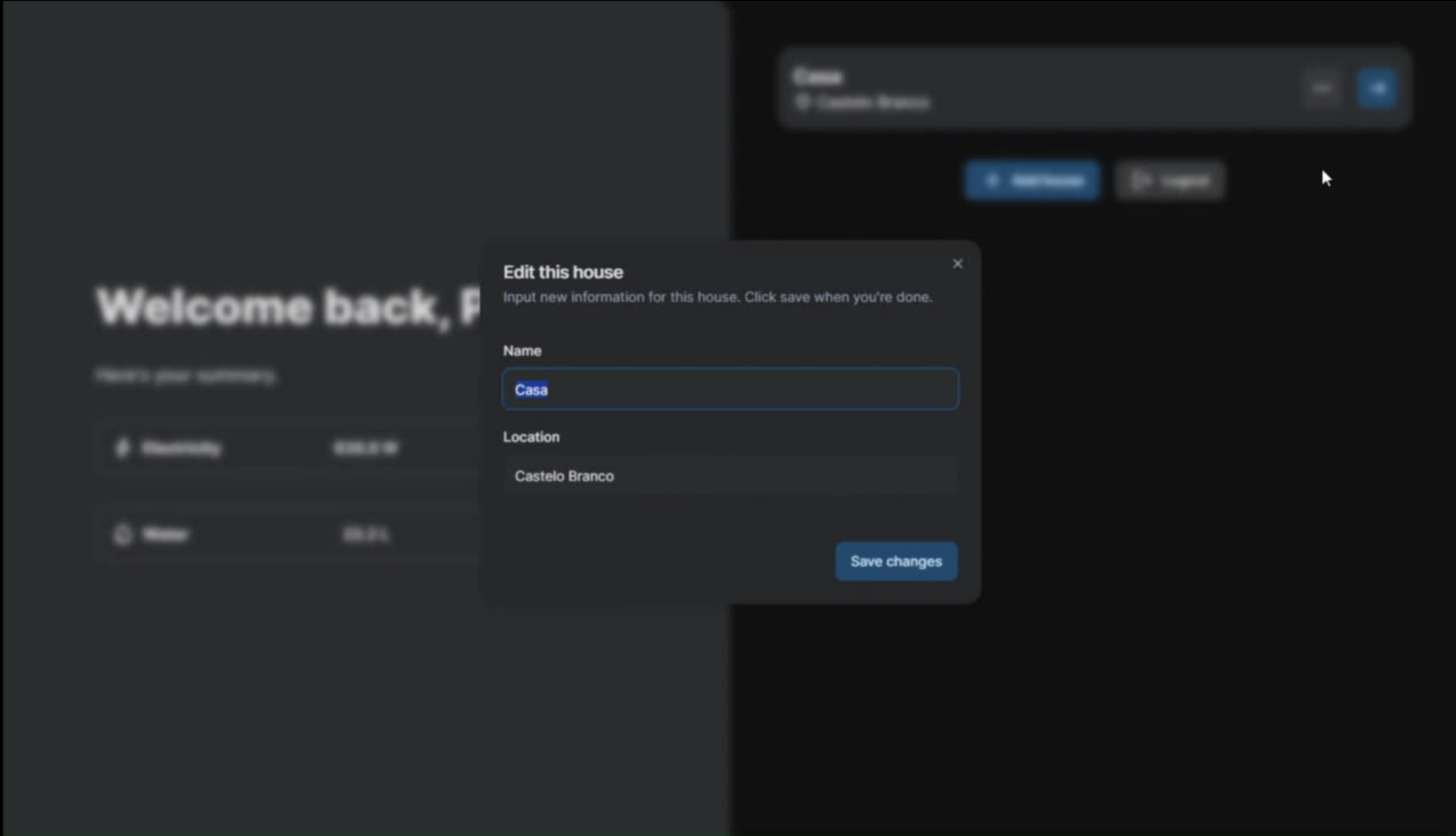
E-mail

john@ua.pt

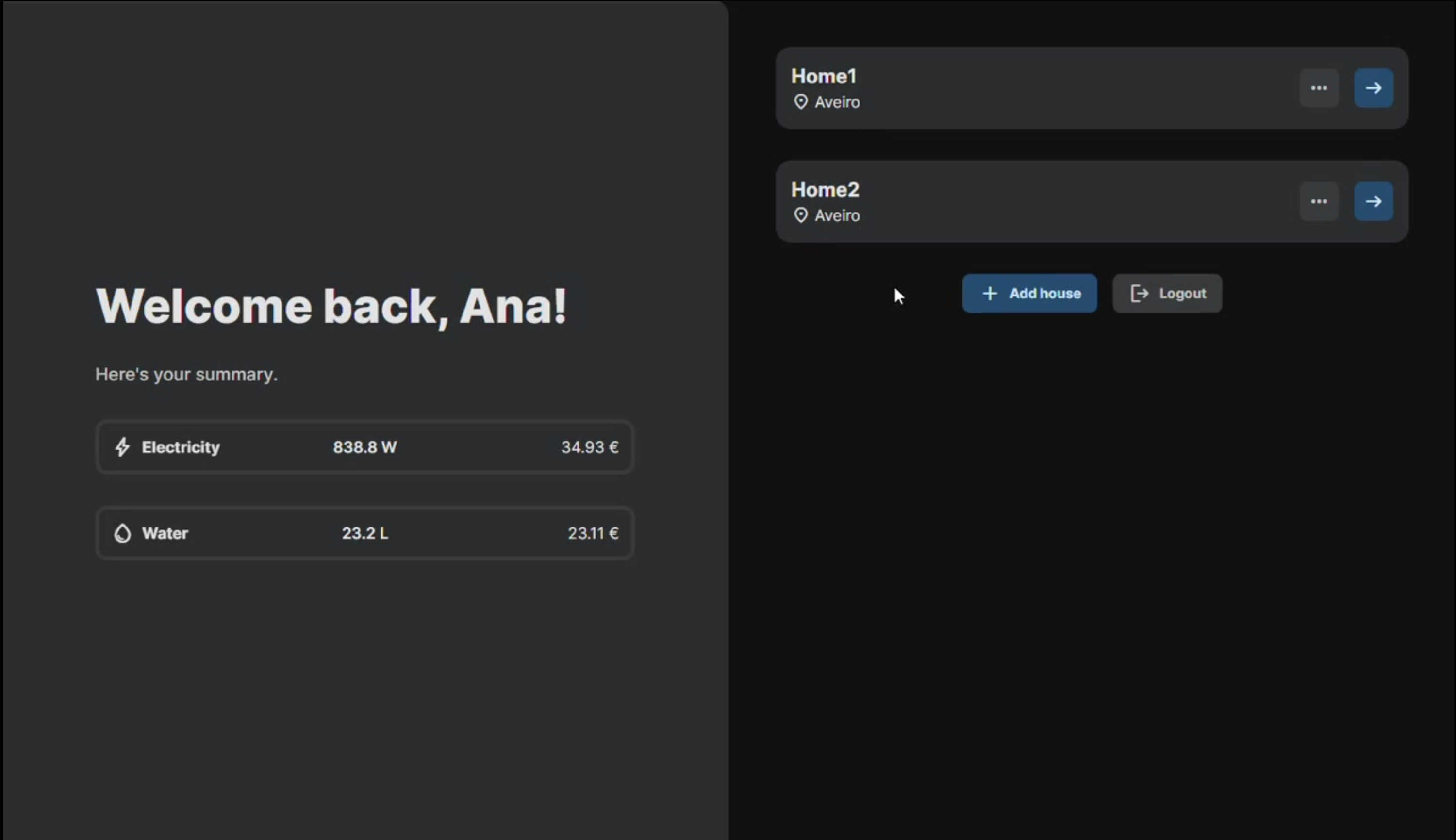
Password

Login Register

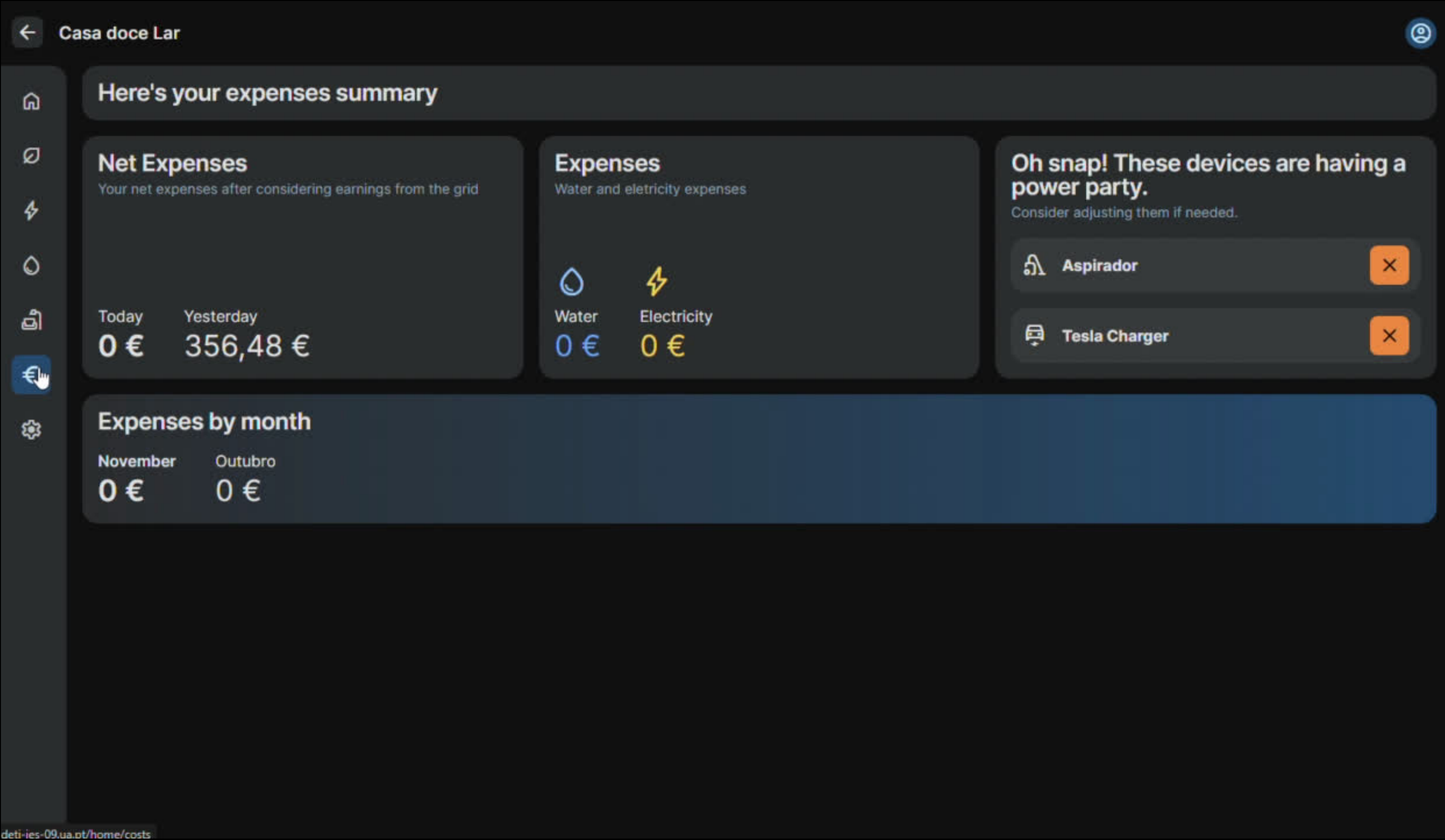
As Peter, I would like to oversee electronic devices connected to the house grid.



As Ana, I would much like to get notified about the maximum percentage of the grid energy that can supply the house.



As Petter, I need to have a place where I can get a summary of all my electricity and water related costs.



THANK YOU

Have any question?

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