



FACULDADE DE  
CIÊNCIAS E TECNOLOGIA  
UNIVERSIDADE NOVA DE LISBOA

**Interação Pessoa-Máquina**  
**2018/2019**

# Smarter Hub

---

Stage 3: 1<sup>st</sup> Prototype (Paper)



**Realizado por:**

49544, Nuno Morais  
47592, Marta Carlos  
47651, Leonardo Correia  
47554, Jorge Alves

**Lab class N° P1**

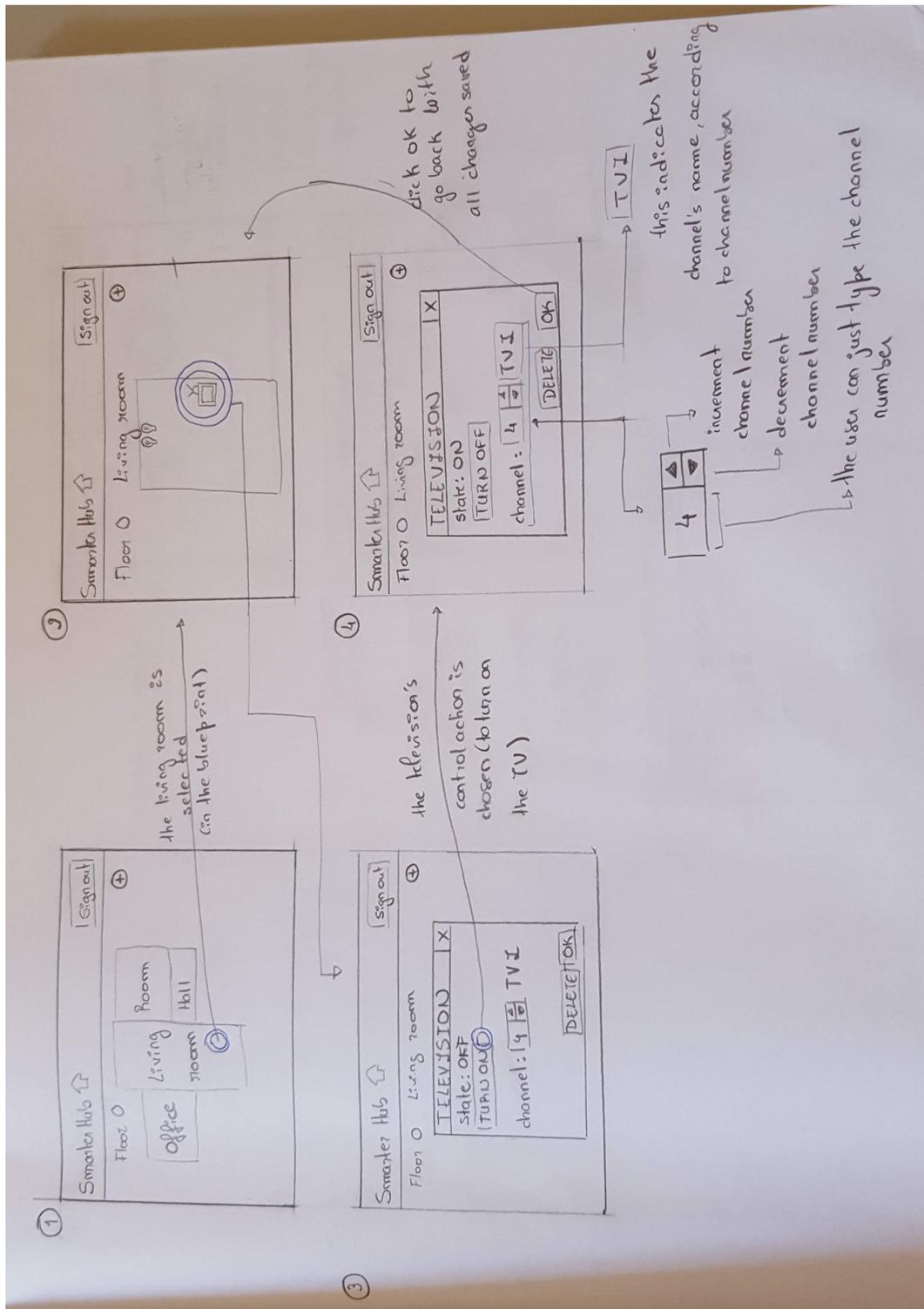
**Professor:**  
Teresa Romão

October 19, 2018

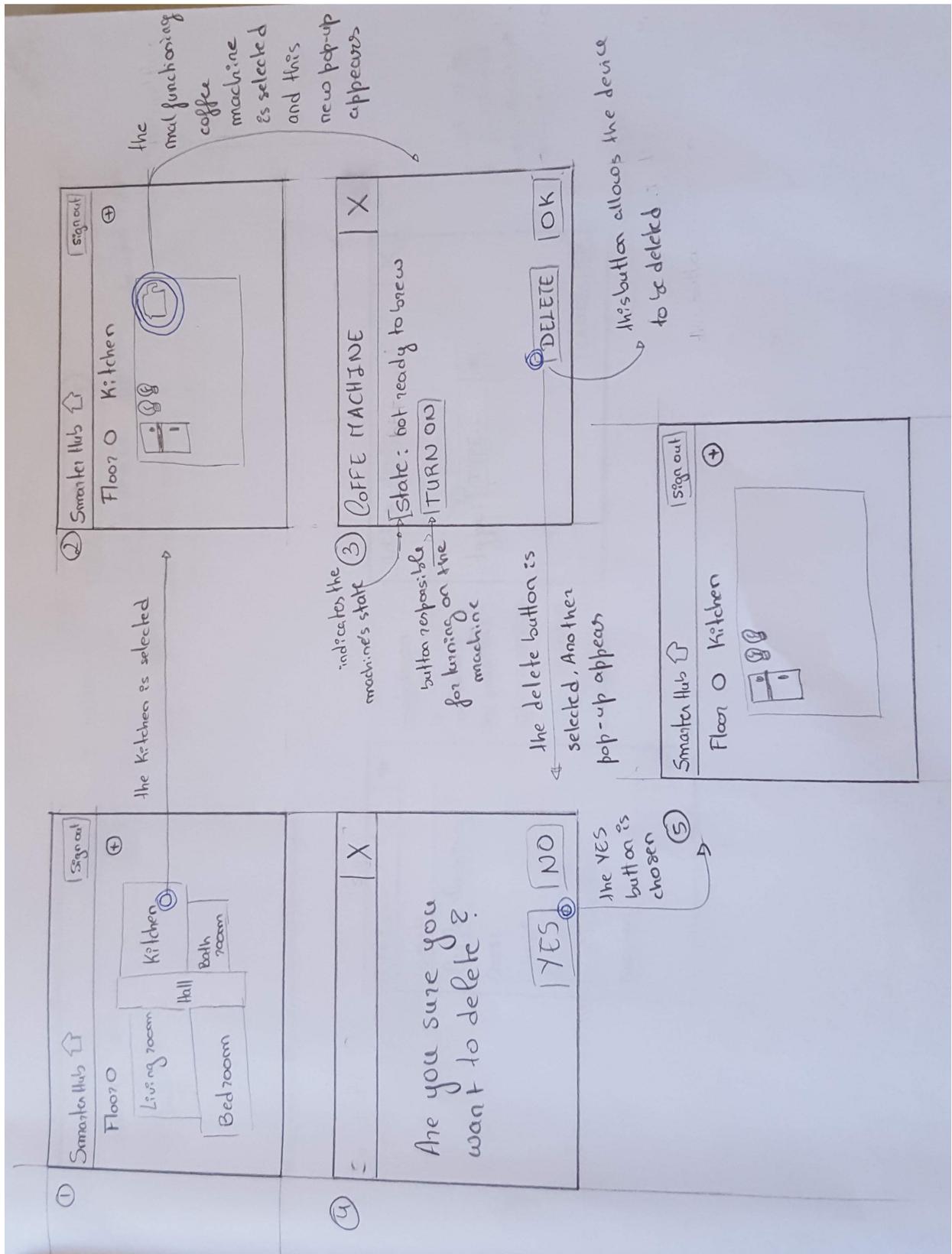
# Sketches and Scenarios' storyboards

Before any type of implementation was done, it was first discussed and analyzed how we would present our project to future users. To do that, it first started with the *sketching* process that later became the storyboards for each scenario.

## Scenario 1:



## Scenario 2:

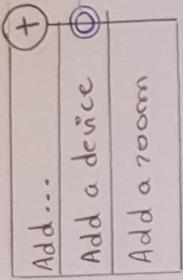


(the storyboard continues in the next page)



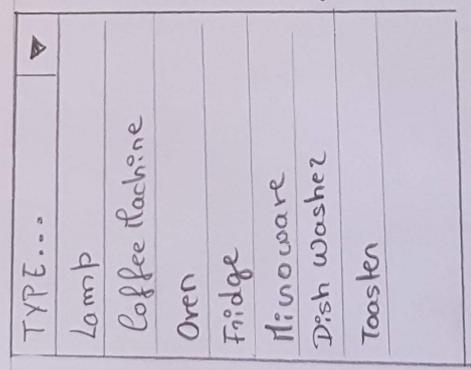
6.1

the plus button is clicked and a menu appears

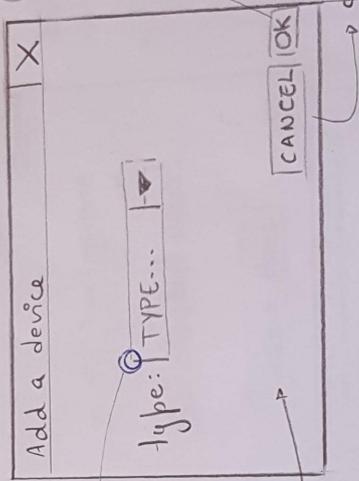


the add a device is clicked

6.2



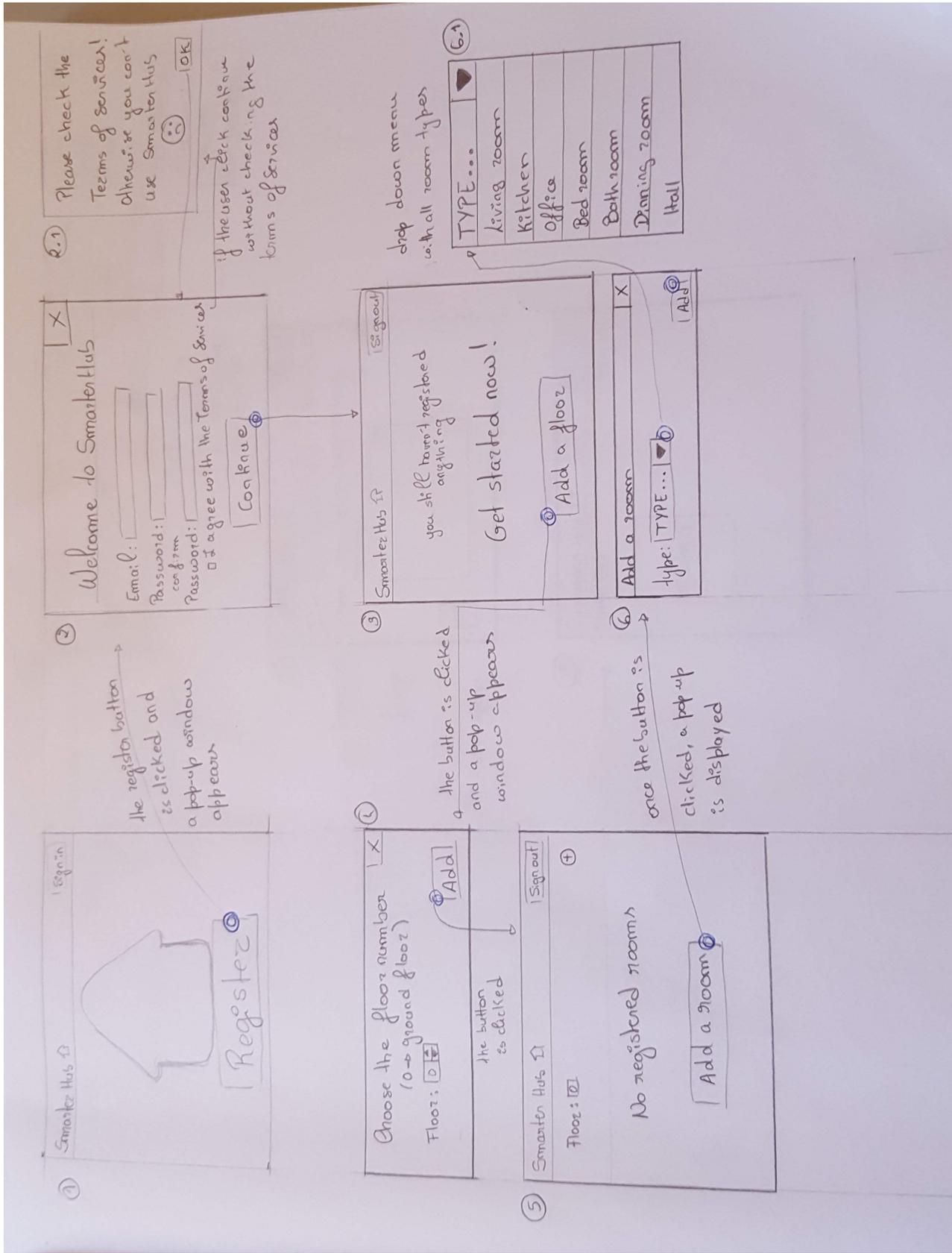
dropdown menu with all the possible kitchen devices when an option is chosen



click OK to finish and add the new device

click cancel to not add the device

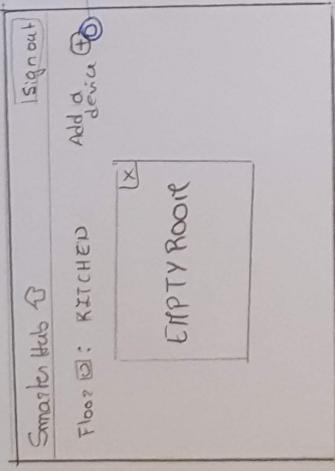
### Scenario 3:



(the storyboard continues in the next page)

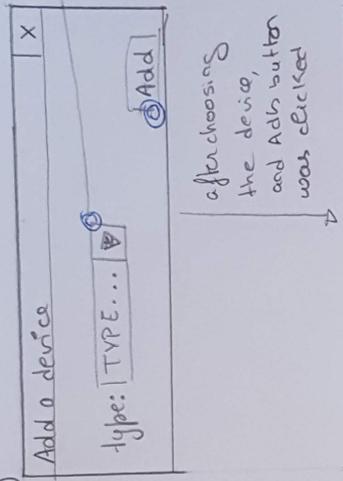
7.1

the Add a device button is clicked and a pop-up window appears



7

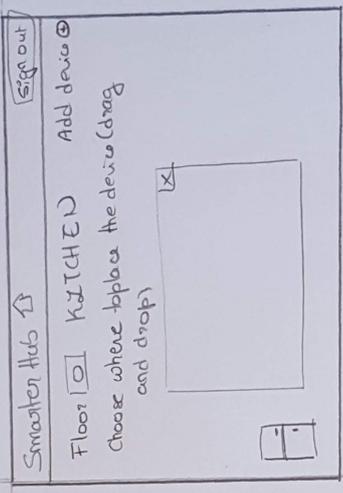
drop down menu with all possible devices according to the room



- | TYPE...       |
|---------------|
| Lamp          |
| Fridge        |
| Oven          |
| Coffe Machine |
| Microwave     |
| Toaster       |
| Dish Washer   |

8

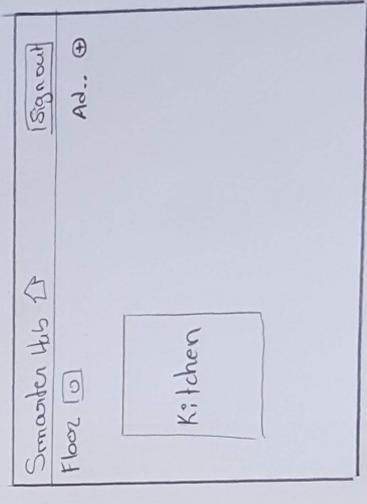
the user drags and drops the fridge icon into the room space



9

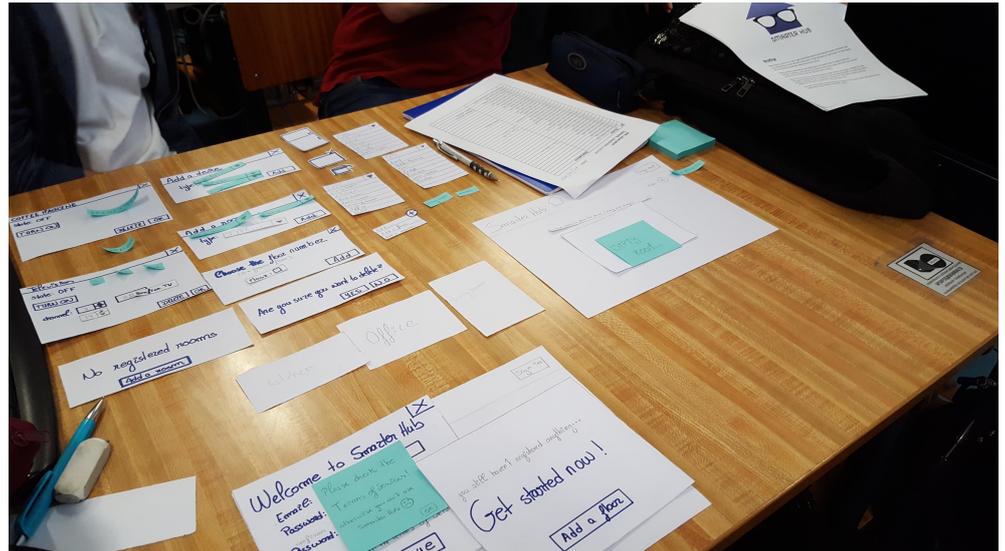
10

after clicking the cross on the room menu, the user goes to the house's blueprint and keep on adding new floors, rooms or devices



# Testing Day Prototype Photographs





## Briefing

Many times, you're in a rush to get somewhere and to just leave the house, but there's still so many devices to turn off and to deal with in many divisions of said house. Or, even worse, you just left the house and realized the stove was on.

Many problems that derive from these types of situations can be called simple and mundane problems, but everyone has had the misfortune to deal with them and lost their precious time on them (and we all know time is money).

When all the devices are starting to become smart devices, our project envisions to solve this type of problems with the help of this new arriving technology. The main focus of this project is to help its' user have all their smart devices' information stored in only one website and be able to control them with just a few clicks.

The user will be able to map their house's blueprint to the system, place and control all their smart devices (according to the house's rooms)

## **Tasks and Scenarios**

The test users were given certain scenarios to follow and each scenario aimed to describe possible tasks a future user of Smarter Hub would have to do. Further, we'll describe the scenarios provided to the test users and what tasks each scenario aims to describe.

### **Scenario 1:**

#### **Maria's husband just wants to watch the game**

Maria is in her office and her husband asks her to turn on the living room's TV since he doesn't know where he put the remote and he just can't miss the new Benfica game. Maria accesses the website, turns on the TV through the website and changes the channel to "Benfica TV" (channel 19).

#### **Tasks involved:**

1. Execute device's action: a user chooses a device to control and alters its' state (depending on the device)

### **Scenario 2:**

#### **Give John a break (give him a kitkat)**

John, who had such a lovely coffee machine, is now devastated because the machine came with manufacturing defects. Frustrated, John refuses to buy from that brand ever again and decides to go for the competition. John needs to delete the disappointing machine from Smarter Hub's system and add the competition's machine. Now, John can start doing his coffee while he takes his morning shower without putting a foot in the kitchen.

#### **Tasks involved:**

1. Delete device: personalize the user's interface by deleting a device
2. Execute device's action: a user chooses a device to control and alters its' state (depending on the device)

### **Scenario 3:**

#### **The Name's House. Smarter House.**

Zachary just bought a new house and wants to buy a few appliances. After returning from the electronics shop Zac entered the Smarter House website and registers his account.

Not only is he a new user, he also doesn't have any registered rooms (which are needed to register the appliances). To solve this issue Zac started by registering the rooms he has the appliances he wants to control in: his kitchen and living room. The home devices he wishes to control are specifically his television and fridge.

Once completed the register process, he wanted to test the system's settings, so he decided to change the channel on his TV. Consequently, at the end of the test, the TV had its channel changed from SIC (channel 3) to TVI (channel 4).

#### **Tasks involved:**

1. Register user: register the user in the system so they can register their house's blueprint, rooms and smart devices
2. Register house room: personalize the user's interface according to their house's blueprint
3. Register house device: personalize the user's interface according to the devices present in each room
4. Execute device's action: a user chooses a device to control and alters its' state (depending on the device)

# User Feedback

## First Test:

The first test subject didn't know how to leave the room menu and return to the floor blueprint. This easily can be solved by fading the background while solely focusing on the room menu and adding a cross to the top-rightmost corner of the menu window (this was tested after the first subject and the problem never surged again).

Understanding how to interact with the devices that appeared on the screen (room) wasn't intuitive for the first subject. Since the subject did not know that it was possible to customize the location of the rooms, the subject suggested the use of a message alert to guide the user.

The user was surprised when the devices registered inside a certain room didn't show up when he returned to the floor blueprint.

## Second Test:

The second test subject understood what to do with the devices and how to access their menus, but it wasn't obvious how to access the menu to delete a device.

He thought that when selecting a certain device type (in this case a coffee machine) it would come into view a list of existing devices of that type inside a room.

After completing the test, the user thought the overall look and feel of the site was intuitive.

## Third Test:

The third test subject said that the interface was intuitive and easy to understand.

The subject didn't read the warning informing about the drag and drop of device icons into the room blueprints, causing some confusion. Although, as soon as the subject read the warning (helped by the facilitator), the feature was understood.

There was, however, a common complaint: it was not easy to understand how to change the TV channel (the device used in two of the scenarios). To complete this action, one must choose the channel using the arrows or write the channel's name or number (this last option wasn't even understood by all the test users).