Interação Pessoa-Máquina 2018/2019

HABITECH

Stage 4: Computational Prototype

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Briefing

Is your Smart Home difficult to manage? Does it feel like a chore to do anything with it? HABITECH has got you covered!

With HABITECH, you can design and manage your Smart Home as easily as clicking a few buttons. No need to fit your household around an app.

HABITECH is designed so it fits with your household instead. Want to have a TV in the bathroom? What's stopping you?

HABITECH starts with a default setting of divisions (you can remove these divisions if you want to). After that, just add/remove any division as you please.

You can add devices to any existing divisions and configure them with barely any effort at all! If you really like that fridge in your living room, you can add it to your favorites so you never miss it.

All it takes is a few buttons to progress!

Application's functionalities

Habitech provides a smart home controller for several devices around the house. It is possible to create rooms and virtual devices. Virtual devices can be found by the room they are associated to and by the category of device the belong to. Each virtual device has a controller page which, depending on the type of device, allows to perform operations on that device (for example, it is possible to change intensity or bright color in a smart lamp). A device can also be added to favorites, so that the most used devices can be found faster in the application.

All the proposed functionalities were implemented in the prototype. However, we had a few problems adding the dynamic icons to it, since there was no way to add relative paths of images to the objects. To circumvent this issue, we provide, in the next section, an account to test the prototype and a brief set of instructions on how to do it.

Prototype's resources and instructions

The developed prototype can be downloaded from the URL: https://github.com/gilalves1995/ipm-habitech-pro. To download the .zip file with all the contents click on "Clone or download" and then "Download ZIP". The .zip contains the following files:

- habitech-prototype-current.vp (prototype file)
- habitech-prototype-html (folder containing the HTML version)
- ipm-stage4.pdf (report)

The prototype was developed using the tool *Justinmind*. The project can be tested by selecting the folder *habitech-prototype-html* and open *index.html*. Although this is an option, we had a few problems with the dynamic icons in the prototype, so we created a Justinmind account for testers and the prototype can be tested by following the steps:

If you want to test it on a browser

1. Go to https://www.justinmind.com/ and click "Download Free"
2. Click "Sign in" -> Email Address: steamfmsteam@gmail.com and Password: ipmhabitech
3. Select gilc.hermen.10@gmail.com and click "Sign in"
4. Open the prototype "habitech-prototype-current"

If you want to test it on a smartphone

1. Download from GooglePlay or AppStore the application "Justinmind"
2. Enter Email: steamfmsteam@gmail.com and Password: ipmhabitech and click "Sign in"
3. Open "habitech-prototype-current" (all the 3 versions are equal, you can choose any)

Scenarios

In this section, we will identify three real life scenarios of possible interactions between the platform and the users. After the textual description of the scenario, we present the correspondent storyboard, projected through the developed prototype. The identified scenarios are the following:

a. Scenario 1

Andrews notices he frequently uses the virtual appliance named "central- heating# 01" of type "Heating". He then decides to add this appliance to his list of favorites, so that he can access it more quickly. The appliance is successfully added. As a result of this operation, Andrew is now able to rapidly select this appliance from the "favorites" page.

He selects the appliance, turns it on and increases the temperature from 20º C to 25º C through the controller.

b. Scenario 2

John and Scarlett will marry at the end of the month and they need a home to stay after the honeymoon for 3 months while theirs is being built. John installs the app and sees that their home has a bedroom, a toilet, a kitchen and an office. He also notices that the default house has only the first 3 rooms, as mentioned before. John creates a new room and he leaves the default name, "Office". The room is successfully added.

Then, he adds all the appliances of the room: sockets, lightning, blinds, monitor and the computer. The appliances are successfully added. As a result of this set of operations, John and Scarlett will have the default rooms and the office with all their appliances. Missing only add the appliance to the default rooms and changing its state.

c. Scenario 3

Pamela is very gifted women and she cook a lot of tasty things. She notices that the old oven is with some problems and she drives right to a tech company to buy a new one. When Pamela arrives home, she mounts the new oven and, as a good user of HABITECH, wants to add this new feature to the "virtual" kitchen.

Pamela adds the new appliance. She choose and change the default name to "CookMachine". The appliance is successfully added. Pamela turns it on and increases the temperature to 300ºC through the controller. After all this panic, she makes a very good cake to celebrate.