University of Puerto Rico at Mayagüez

Department of Electrical and Computer Engineering

Final Report

HoMe

Taking more control over your home

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ICOM 4036

Language Tutorial

HoMe’s main purpose is to empower the home user a language to control their home and grow the possibilities of controlling the home. I have demonstrated the ability to type in commands and the system will recognize them and perform the intended actions.

The user has to download the source code and open a terminal. Once you are in the directory of the source code run python3 home.py. This will start the program and allow you to input commands to the system.

First you can try to add a room to the home:

add room LivingRoom

The words in red are reserved words or tokens that will be listed later.

That action added an empty room called LivingRoom.

You can see the status of the home by typing status into the console and the system is printed out.

That is a basic example of an operation.

The following operations can be performed:

Supported functions

* Printout Room Names
  + rooms
* Printout device names for a room name given
  + room bedroom\_name devices
* Printout global home status - test
  + status
* Printout room status for each device in the room including names and if timer is present
  + room bedroom\_name status
* Printout status for a device within a room.
  + room bedroom\_name status device\_name
* Add a room
  + add room room\_name
* Add a device to a room
  + add device room\_name device\_name
* Remove device\_name from room\_name
  + remove device room\_name device\_name
* Remove a room(delete) with devices inside
  + remove room room\_name

The structure of the home is similar to the following example.

{'name': "Carlos' 3nd Home",

'rooms': {'LivingRoom': {'Television': {'name': 'Television',

'powered': False,

'time\_off': '',

'time\_on': ''}},

'Sala': {'Camera': {'name': 'Camera',

'powered': False,

'time\_off': '',

'time\_on': ''},

'Cameras': {'name': 'Cameras',

'powered': False,

'time\_off': '',

'time\_on': ''}}}}

If you have any questions please contact carlos.fuentes1@upr.edu