SuperHack 2017

Challenge 1

Hack the quality of life with a hint of technology

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Background

Hack the quality of life with a hint of technology

In recent years, awareness has been raised regarding the topic of improving the quality of life for people with a disability. Moving from the old belief of impairment as a problem that needs to be fixed, to a social model that acknowledges the reality of the impairment, but accepts it as part of human diversity.

Therefore, the physical and social environment must be able to accommodate people living with impairment, so they can participate in society on an equal basis with others.

For people with reduced mobility, the requirements for the physical environment seem well-known and straightforward. Important progress has been made in terms of infrastructure to enhance accessibility, but now it is time to take it to the next level and add the latest technology into the equation.

The first steps of creating this environment should start from home, where mobility and autonomy takes the standard approach. For an example; controlling lights or room temperature
can be tedious if reaching the controls is difficult and/or takes a long time.

Understanding   disability.   (2017).   *And.org.au*.   Retrieved   1   December   2017,   from https://www.and.org.au/pages/understanding-disability.html
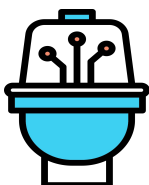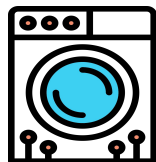
The Challenge

We want you superheros to create a wireless home control device, so the user can conveniently change their environment conditions for their preferred comforts. This is not just a regular remote control, we want your device to make sure that the conditions are the right ones for the user!

We want you to let your imagination wilder but don't forget to make sure your device is capable of handling the user requirements that you have defined.
As an example we mentioned lights and temperature, but you are free to explore any other relevant variables.

Keep in mind that some users might not be constrained to one medical condition. So, being able to seek assistance of a caregiver and ensuring the user that help is on its way, can be handy.

Also, sometimes the user might be unable to ask for help. If you can identify, detect and notify any threatening situation, you'll be scoring extra points.
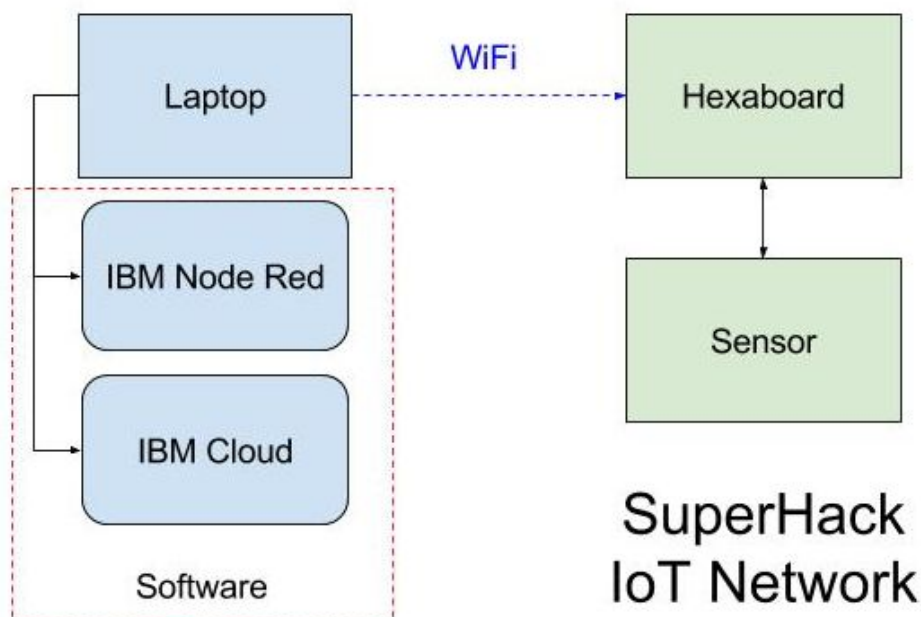
Dimensions of the Hack

Tech you will be using

During the SuperHack event our mentors will help you create an Internet of Things network. You will be using software on your laptop to connect to some provided hardware over a WiFi connection.

A solution to this challenge requires a home equipped with devices capable of controlling the variables of your choice. As you only have one Tekt Board, you will have to use it to simulate the house/environment of your design. Make sure you are clear in your presentation to what interface the user sees, and how it simulates in an overview.

Finally, you must use IBM BlueMix and Node Red for your solution. Do not rely on the controller and the simulation of the house being implemented in the same physical device, otherwise the proof of concept would not be complete.

SuperHack IoT Network

Judging Rationale

Theme	Criteria	Description
Idea & Use Case	Originality	Is this a fresh, original and exciting implementation?
	Viability	Is there a real demand for this implementation? Is there examples of early traction?
Experience	Intuitiveness	Is the overall user experience intuitive? Does the flow make sense?
	Presentation	Did the pitch and presentation create excitement and interest?
Technical Difficulty	Quality	Does it actually work? Could this scale as a real solution with multiple users?
	Ingenuity	How well did the implementation mashup interesting and relevant technologies?

" Superheros of innovation to the hack \m/ "