MonitorOld

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Video

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Problem planted

- Reactive systems to help elderly people are not totally useful
- Reaction of the health care services depends of the human factor
- Easy tasks could become hard
- Families get worried
- Need to know what happen inside the house in order to act

MonitorOld

- System based on Smart House concept
- Monitorize the house
- Use of basic sensor network
- Cheap system and great scalability
- Fast response at the hazards of the environments
- Connection with the families and the health care services
- Security with smart contracts - ethereum
- Easy to use

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Solution Planted: First Prototype

Different modules to monitor and help people :

- Light and door detectors
- Connected pillbox
- Access to the data from internet,
  for the family or a doctor.

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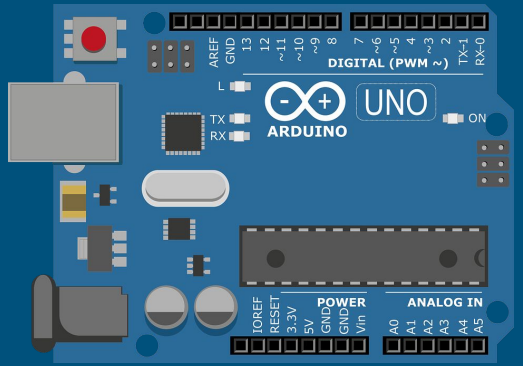
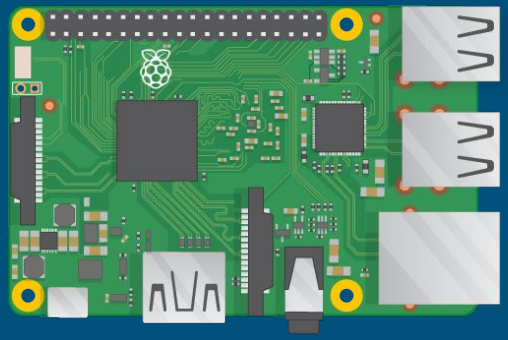
Components Used : Hardware

- Arduino Uno
- Raspberry Pi 2 Model B
- HC SR04 Sensors
- Basic Electronic Components (LED’s, resistances, etc.)





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Components : Software

- Ethereum
- Smart contracts
- Solidity
- Truffle
- WebApp Tool
- Ganache & ganache-cli

ethereum

TRUFFLE

SMART CONTRACT

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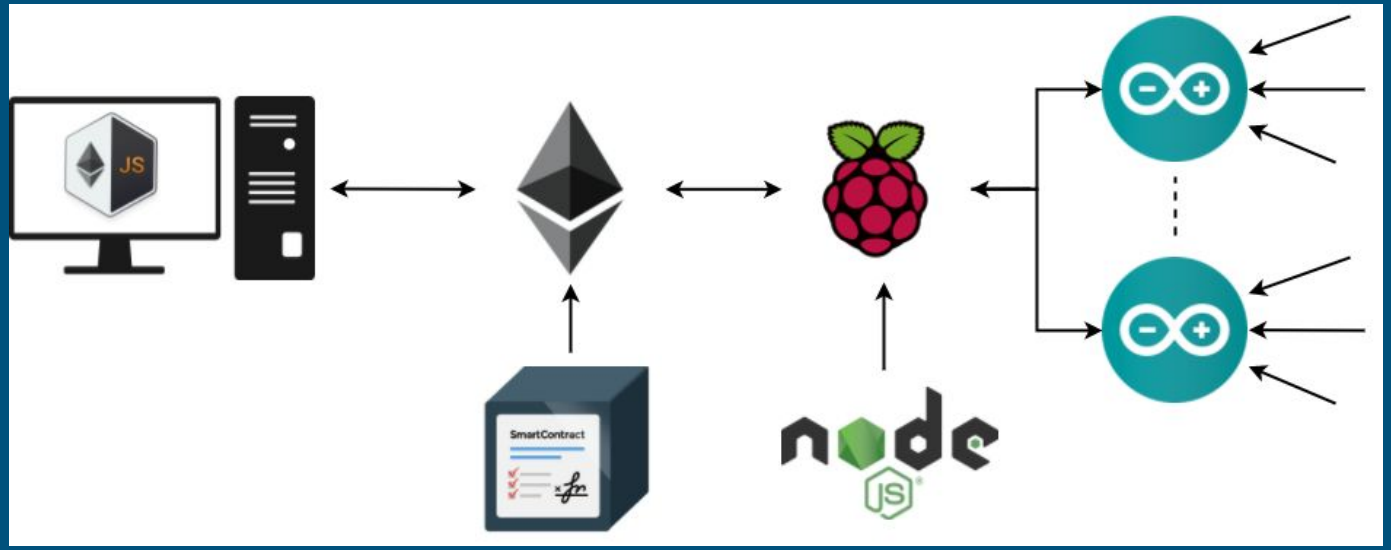
Architecture



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How works?

- MonitorOld is a modular system
- One box per device

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Architecture : Sensor - Arduino - Raspberry

- Button used to imitate the pillbox
- Movement sensors used in lights and door tasks
- Sends detected signal from Arduino to Raspberry (5 V -> 3.3 V)
- Raspberry indicates if led turn on or not (depends of the alarm)

Architecture: Ethereum

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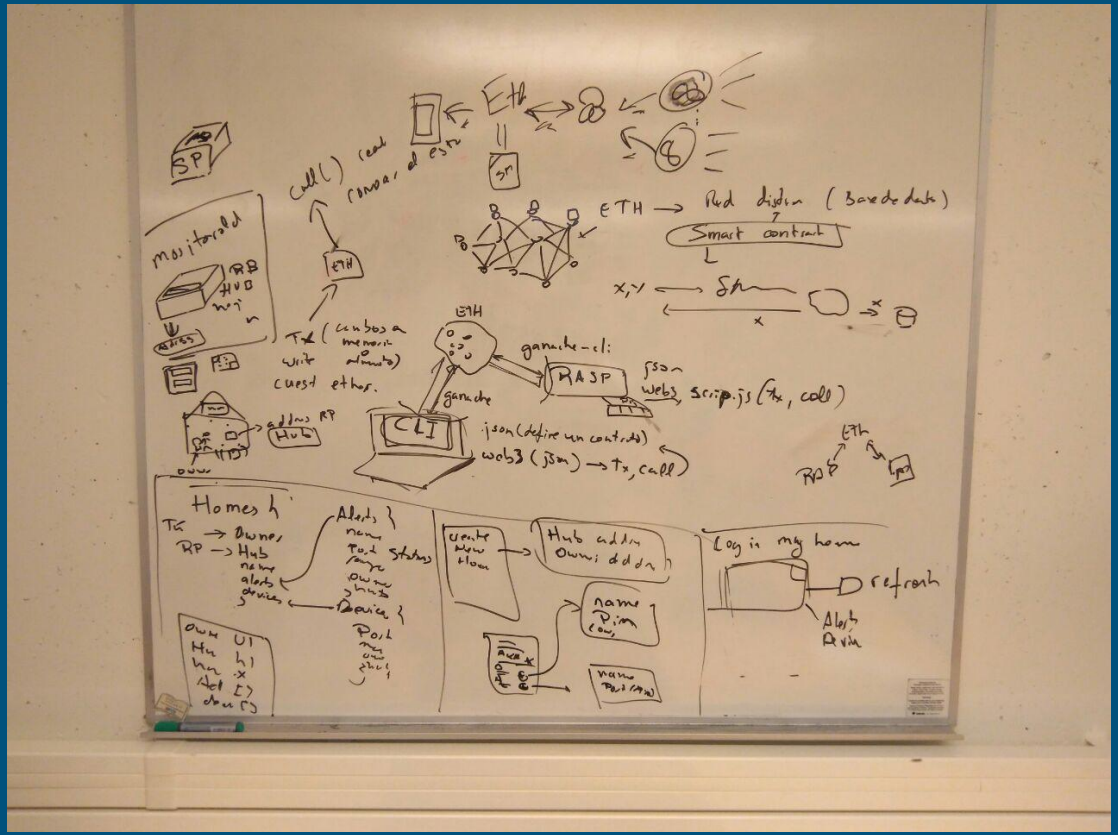
Architecture: Ethereum



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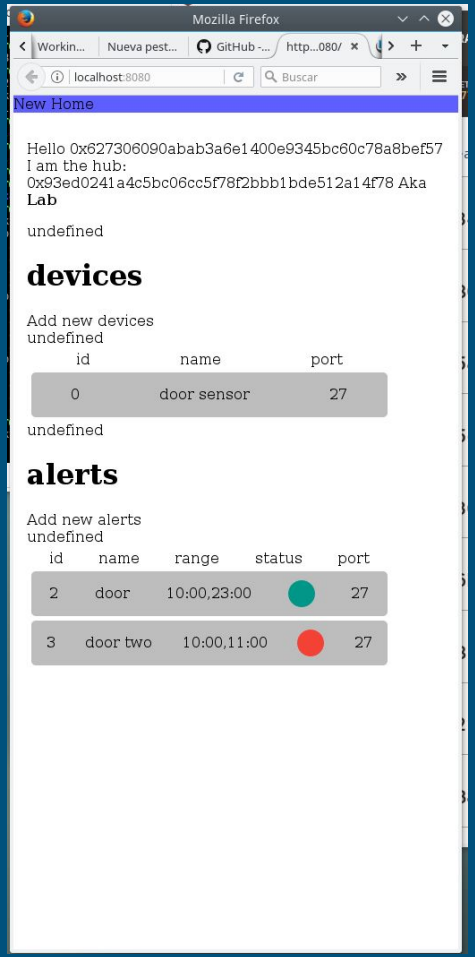
Architecture : Web App

- Register your system
- Register your device
- Set the alarms



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Problems faced

- Installing software on Raspberry
- Using and learning how to make Smart contracts
- Communication between Arduino - Raspberry - Smart contract

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Futures Lines

- Implement the system in a real house
- Creation and implementation of new tasks
- Improve the communication to avoid the delay as much as we can.

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Learning during this project

- Write a publishable report
- How to make an electronic device.
- Smart contracts and ethereum implementation.
- Implement an IoT system with smart contracts
- Teamwork

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Questions ?

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Demonstration