Music Alarm

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Presentation

Music Alarm

- Goal of our project : Make an Arduino which detects moves and then play funny songs

Steps followed (1)

Step 1

- Using directly the sensor's output signal, light a led when sensor detect a move
- Use a program which prints the value of the sensor when it detects a move and light an external and internal led

Step 2

- Use a program to automatically reloads a client html page launches from a arduino server
- Use the program which automatically reloads a client html page from the arduino server to only show a message when the sensor detects something

Step 3

- Send a message from client to server, server responds with the message without reloading the client page

Step 4

- listen an audio link

Steps followed (2)

Step 5

- have an ihm to store link

Step 6

- With the program from the precedent step, play a song when the sensor detects something and don't reloads as the song don't end
- Use Sockets to play the song on the web page, started from server without reloading the page

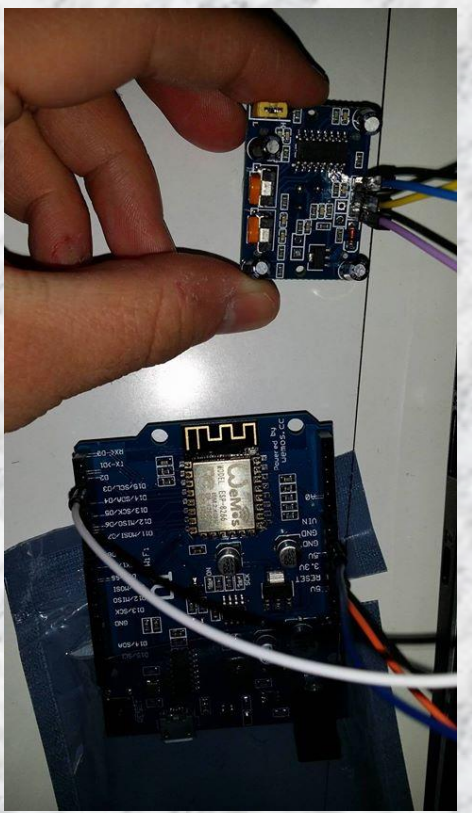
Step 7

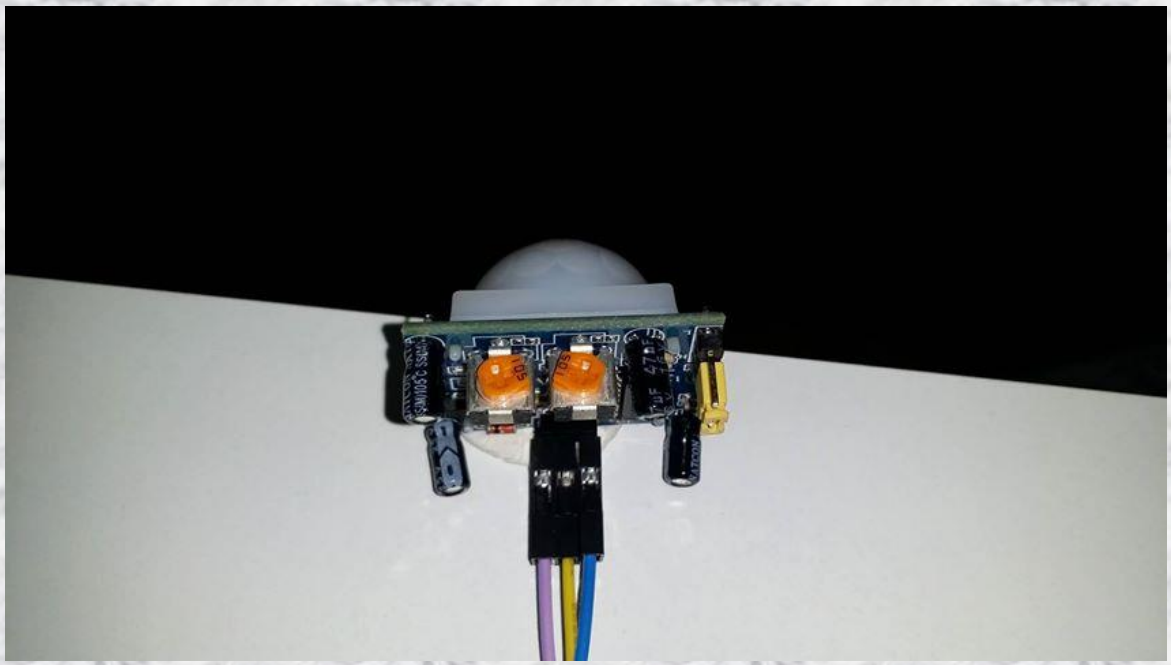
- Add an interface to load different songs of differents format

Step 8

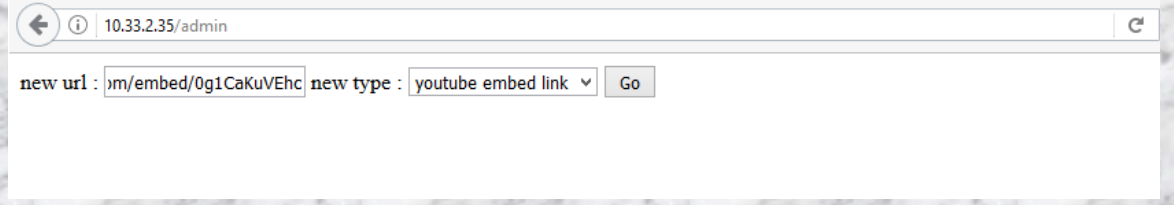
- Add a mailing function to warn when the trap is triggered

“Final” product





Web Interface



DEMO

Day 1

Play with an Arduino to discover it and to get more knowledge on how to do this project.

Start with simple tests in order to :

- Turn on/off Led light
- Connect to a Wifi network and create a web server
- Play with different electronic components

Look for the differents components needed for the projects, and bought the component

Day 2

Use and configure a PIR motion sensor

Make a server on ESP8266 then use it with the motion sensor

Make a websocket server

Day 3

Create a web interface

Listen an audio link

Documentation

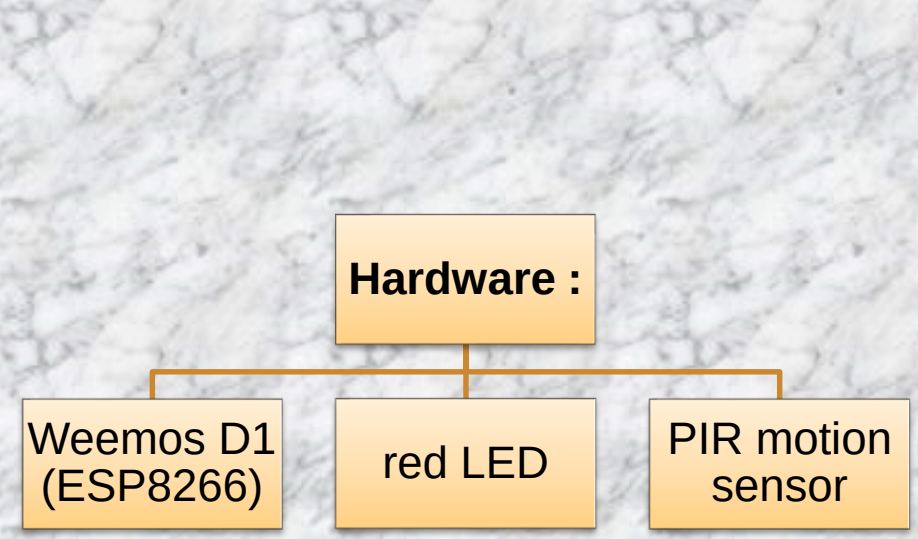
Update the web interface

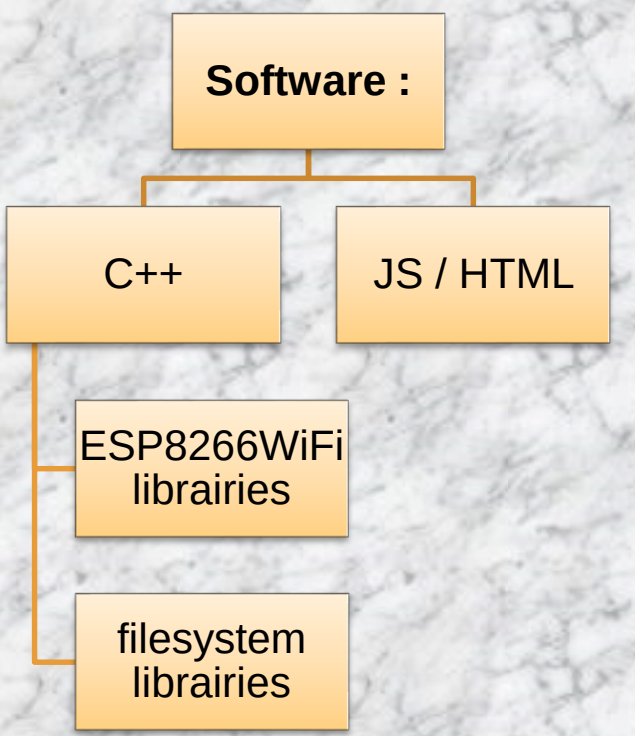
- Store the link
- Load different songs of different formats

Day 4

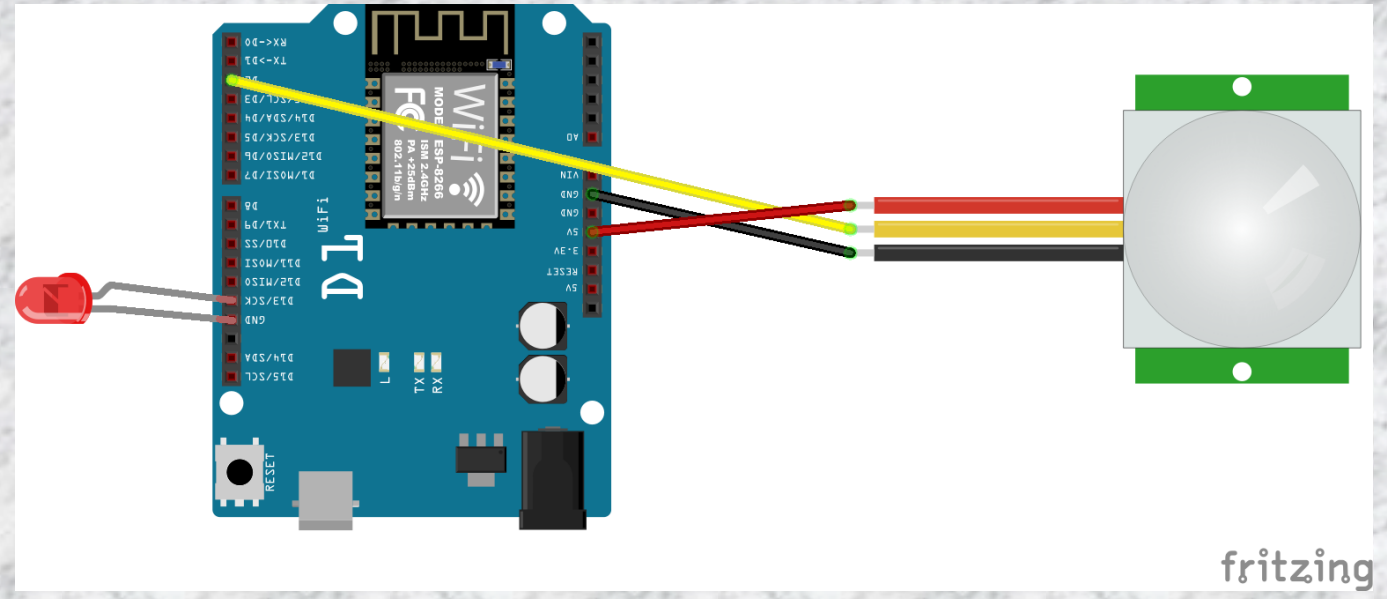
- Debugging
- Refactoring
- Modify the web interface
- Add an emailing function
- Update the documentation

Technology


Hardware :
Weemos D1 (ESP8266)
red LED
PIR motion sensor


Software :
C++
JS / HTML
ESP8266WiFi librairies
filesystem librairies

Wiring schematic



Costs for one unit (non bulk)

Name:	Price
Weemos D1	13.00 €
RED LED	0.01 €
PIR motion sensor	7.20 €
Total	20.21 €

Improvements

Hardware

- Camera to record faces when song is triggered
- Explosiiion

Software

- Send SMS
- Stop the listening before starting when triggered

Thanks for your attention

Do you have any questions?