60 HOURS CODE SPRINT
Home Automation

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Submitted to

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Home Automation

This project will allow you to control your home appliances(LED's) through internet from any part of the world.

What you'll need ?

Hardware requirements

- Raspberry pi
- 16 GB memory card
- LED
- Breadboard
- HDMI to VGA converter
- Male Female jumper wires
- Monitor
- Ethernet cable
- USB cable
- USB keyboard and mouse

Software requirements

- Raspbian OS
- SD formatter
- Python 3(IDLE)

Setting up your hardware and software

First of all, format 16 GB SD card with the help of SD formatter. After this download the raspbian operating system from https://www.raspberrypi.org/downloads/raspbian/

Then install the OS on the SD card. Now insert this card to the raspberry pi. Give the power supply to raspberry pi using USB cable and connect the monitor to it using HDMI to VGA converter. For the internet connectivity attach the Ethernet cable to pi. Attach the peripheral devices like keyboard and mouse. Now turn on the system.

Install Required Libraries and other tools

Run this two commands on the terminal

sudo apt-update

sudo apt-get upgrade

Python 2.7 and Python 3(IDLE) is preinstalled in the Linux OS.

Now install and import (to your file) two libraries of Python 3 that are pip and RPi.GPIO using following commands in terminal.
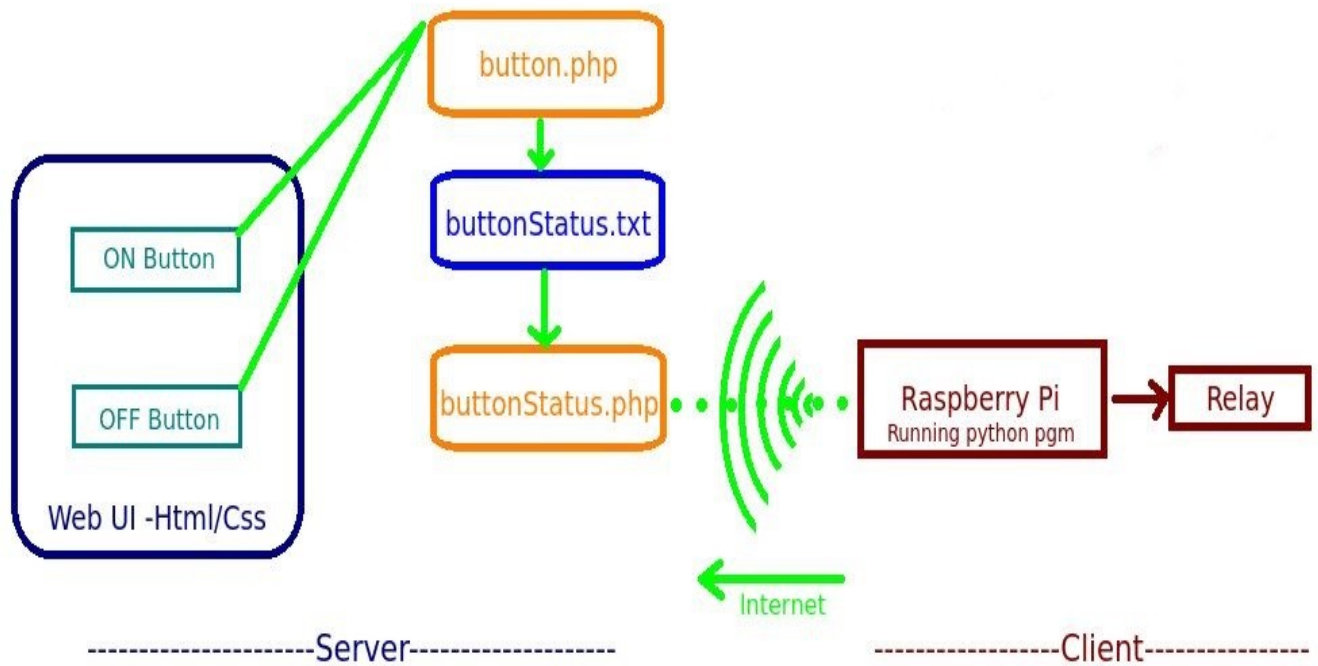
sudo pip install --upgrade pip

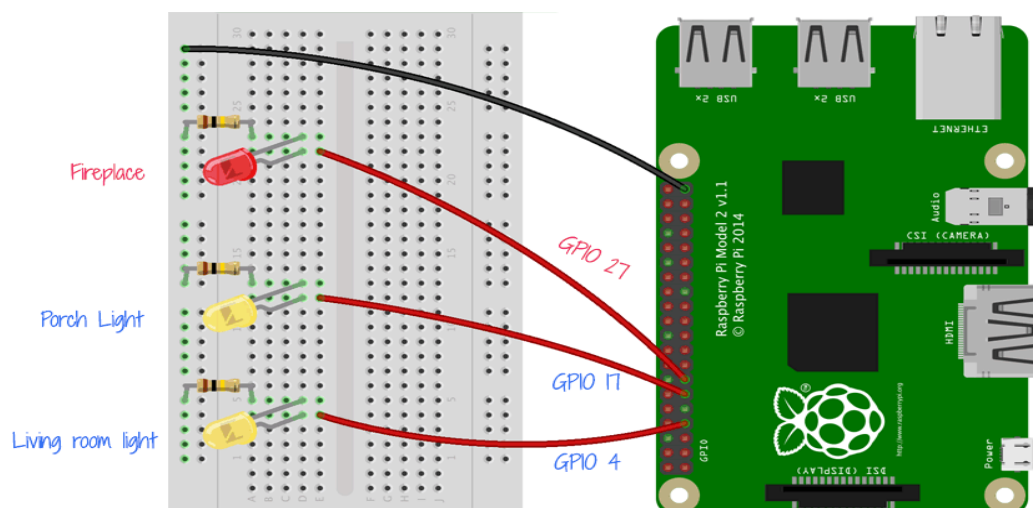*sudo pip install RPi.GPIO*

Coding logic

```
try: response=link
      status=response.read()
if status=='ON' :
      GPIO.output(5,True)
elif status=='OFF':
      GPIO.output(5,False)
```

Programming Code

Make the necessary connection and test the setups.

Final setup looks and output