# **Smarthomd**

## **Hardware Connection**

**Using WiringPi number** 

#### **LED** pins

Pin 7, 0, 2, 3, 25.

#### **SPI** pins

MOSI MISO SCLK 3V3

SPI Module:

MCP3208 - 8Channel Analog Digital Converter.

### **I2C** pins

SDA SCL

I2C Module:

BMP180 - Temperature and Pressure Sensor.

LCD1602 - 2 Line 16 Characters LCD Display.

#### L293D pins

Pin 21(LEFT), 22(RIGHT), 23(ENABLE)

### **Button pins**

Pin 6(UP), 5(DOWN), 26(LEFT), 4(RIGHT)

#### **Alarm Light**

#### **Mecury Switcher**

Pin 27

#### DHT11

Pin 28

#### **Motion Detector**

Pin 29

## **Software Setting**

- 1. How to build. Command make will take over everything. Just go to the folder "src" and type: make
- 2. How to run. Run: sudo ./bin/smarthomed It will start a web server listening on <yourIP>:80. And you can interact with the screen display to check value.
- 3. Send your Siri or Google Assistant request to following URL and it will give you the response.

```
"LED ON": GET "http:// <Your IP> /switch/on?led= <LED Number> ",

Response: 200 OK

"LED OFF": GET "http:// <Your IP> /switch/off?led= <LED Number> ",

Response: 200 OK

"LED STATUS": GET "http:// <Your IP> /status?led= <LED Number> ",

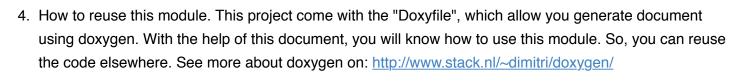
Response: 200 OK, data: 0 off, 1 on.

"BMP180": GET "http:// <Your IP> /temp/status",

Response: 200 OK, data: {"temperature": 24.5, "humidity": 0%}

"DHT11": GET "http:// <Your IP> /temp_humi/status"

Response: 200 OK, data: {"temperature": 21.5, "humidity": 30%}
```



5. Demo Video

ToDo

6. How to contact. email: Xiangyu.Guo@asu.edu