Practice work #4

At the last lesson we have sent some data to the cloud Go+ via MQTT protocol. On the follow step, we are going to consider some work with sensors.

First part

Try to change code from the last lesson (DataSendGo+.c or your created program) and get information from sensor then will send this data to the cloud for monitoring temperature, for example. Library mraa have already installed on the your boards and how to get information from sensor you can find: http://iotdk.intel.com/docs/master/mraa/aio_8h.html for analog and http://iotdk.intel.com/docs/master/mraa/gpio_8h.html for digital. Try indefinitely send data to the cloud for continuous monitoring temperature.

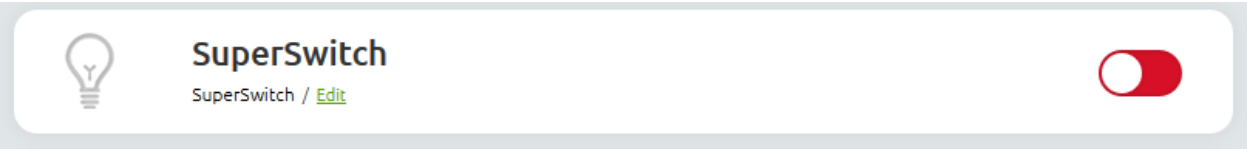
For using sensors we need connect SIG from sensor to A0 Galileo, VCC to V5, GND to GND consecutively.

You can see code on the folder on the Git. For compiling:

```
g++ DataSendLoop.c -lcurl -lmraa -o DataGo
```

Second part

On the next part we will realize process vice versa; changes from cloud to Galileo. Add new thing with type “Switch”.



Look for “Help” on the cloud for some instructions:

SWITCH	/server/income/ ?did=86ee73ae45d2f &action=ack &value=1	get the new state of device (ACK)
	/server/income/ ?did=86ee73ae45d2f &action=switch	switch status ON/OFF

For getting switch status you need subscribe to the server, https://eclipse.org/paho/ (or try this: https://github.com/hideyukisaito/ofxMosquitto) library will help us with that. After receive the status action:

1. Do something; start/stop blinking the LED, for example.
2. Send ACK for server, that you have obtained the packet.

If you don't have time to do that at University, will try to realize it at home and show on the next lesson.

P.S. Microsoft created own Windows version for Galileo, surprisingly, but it works!