Assignment preparations

Drivers

Install Arduino IDE

Download and install from https://www.arduino.cc/en/Main/Software. The workshop is tested with version 1.8.5.

Install ESP8266 board support

Follow the instructions on https://github.com/esp8266/Arduino#installing-with-boards-manager

Testing the Arduino installation

In the menu Tools -> Board there should be a list of "ESP8266 boards" which should include "NodeMCU 1.0 (ESP-12E Module)".

Install some libraries

- PubSubClient
- Time
- TimeAlarms
- WifiManager

Install Python 3

Use your favorite package manager or download from https://www.python.org/downloads/. Make sure `virtualenv` is installed.

Create a virtualenv for the assignments

On Windows you might not need the `-p python3` argument.

```
$ cd host
$ virtualenv -p python3 env
$ env/bin/pip install -r requirements.txt
```

To test that everything was properly installed run python and execute `import asyncore`:

```
$ env/bin/python
Python 3.6.5rc1 (default, Mar 14 2018, 06:54:23)
[GCC 7.3.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import asyncore
```

Install Mosquitto

Either install Mosquitto server and client packages from your platform's package manager or download and follow the instructions from https://mosquitto.org/.

After installation you should have the commands `mosquitto_pub` and `mosquitto_sub` available.

Install Wireshark (optional)

Either install the Wireshark packages from your platform's package manager or download and follow the instructions https://www.wireshark.org/.