1 Setup of the project

1.1 Hardware used

We used an Arduino Nano ATmega328, bought at rs-components.

We used a ENC28j60 Ethernet shield, the version specifically for the nano. This seemed easier than a wifi shield because of this reason, and with a wifi shield it seemed we needed extra components and a circuit, and we didn't really understand it.

1.2 External software used

We decided on the PlatformIO IDE, (which uses python 2.7 and Clang for autocompletion) because it is a lot better than the standard Arduino IDE, and also seemed better than the Stino plugin for Sublime Text 3. A plugin for CLion also looked good but we didn't get that to work. PlatformIO worked when we imported an existing Arduino project, or when we created a new project with only one ino file in the source folder.

2 Code

2.1 Internet/Ethernet connection

To connect the Arduino and the Ethernet shield to the internet, we used the EtherCard library. Because the ENC28j60 uses a different default CS pin (10 instead of 8), we had to add that in the code when making the connection. This is done by changing

```
if (ether.begin(sizeof Ethernet::buffer, mymac) == 0)
```

(with no pin specified, so the default pin is used) to

```
if (ether.begin(sizeof Ethernet::buffer, mymac, 10) ==
    0)
```

Note the third argument `10` added after `mymac`.