Digital identity

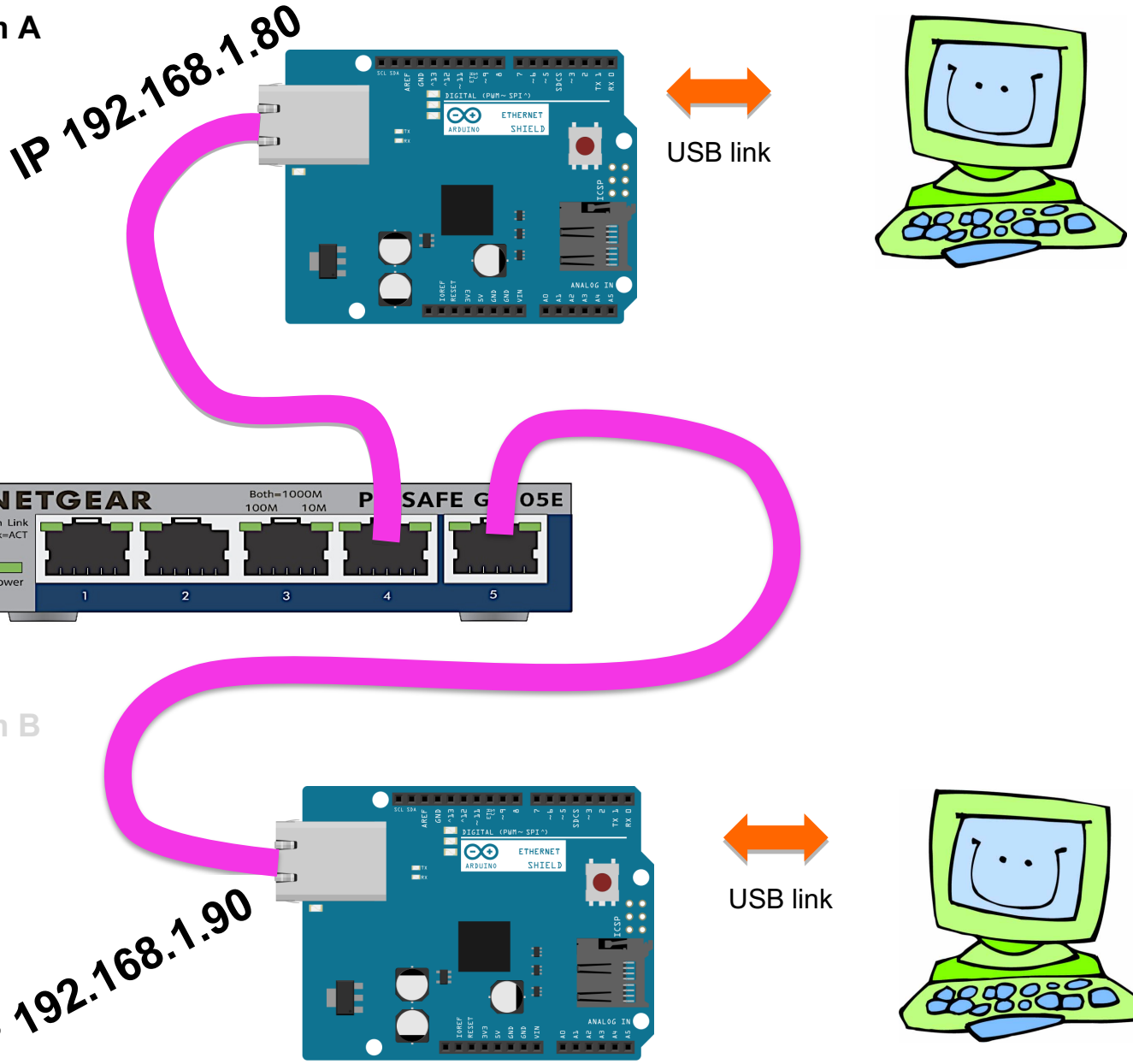
IP Port Mirroring Workshop

In 2018, Is there a Safe Way to Transmit by network your Confidential Data ?

You will use an Arduino card like an adapter to connect yourself to a computer.

Two teams [A & B] will try to safely transmit to and receive data from each other.

Team A



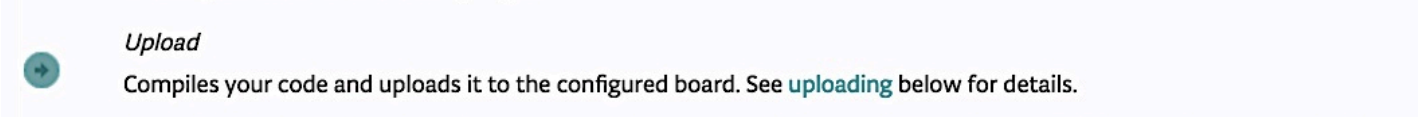
Team A Step 1 :

Connect your Ethernet shield [previously connected to the Arduino card] to the port 4 of the switch Netgear GS105e V2.

Team A Step 2 :

Open the Arduino IDE [integrated development environment].

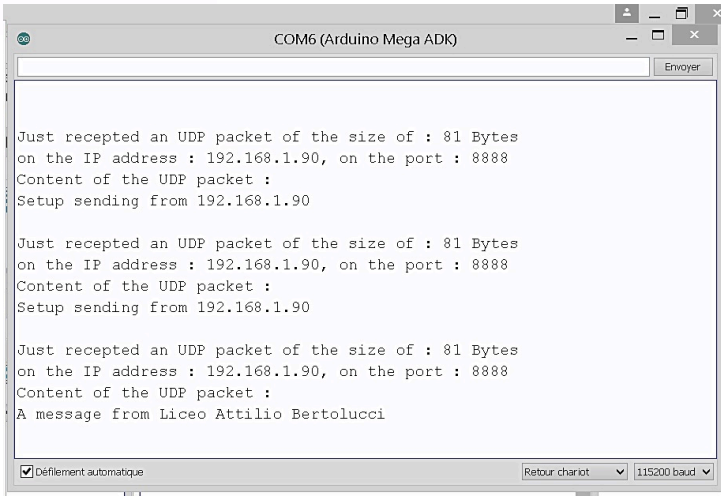
- Select an UNO kind of Arduino card
- Select the right serial Port connected to the Arduino card [for instance COM6]
- Upload the sketch "UDPSendReceiveString80To90.ino".



- Open an Monitoring window

Select the speed rate of 115200 bits per second

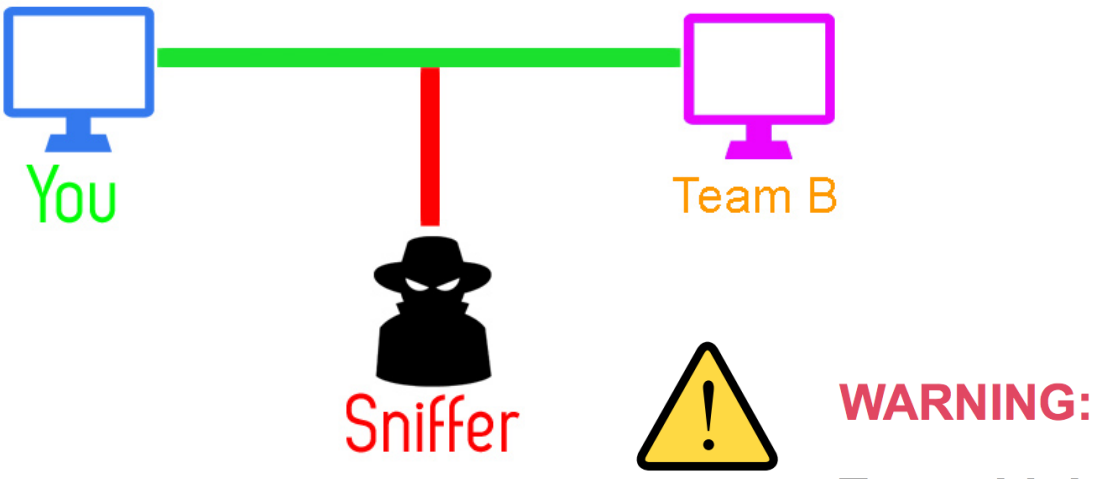
Select Carriage Return mode



Team A Step 3 :

Start a Chat between you and Team B

Question : Is there any sniffer on the network between you and Team B ?



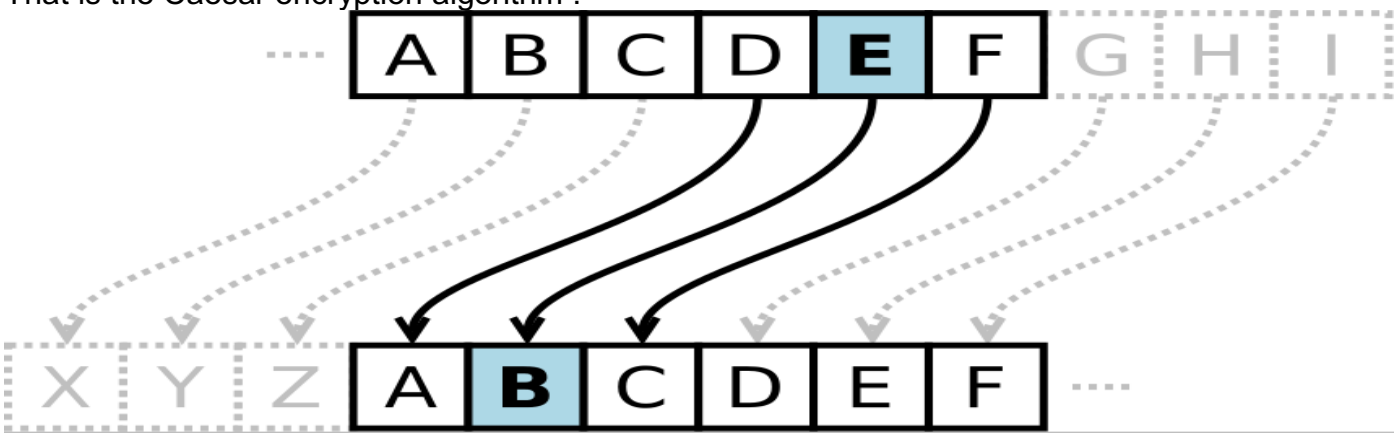
Check if anyone are sniffing your chat from the switch of your network…

So may we share encrypted messages on our network ?

The goal is to convert a plain text to a cipher text like this :

```
Plain Text:    ABCDEFGHIJKLMNOPQRSTUVWXYZ
Cipher Text:   XYZABCDEFGHIJKLMNOPQRSTUVW
```

That is the Caesar encryption algorithm :



Team A Step 4 :

- Upload the sketch "CipherUDPSendReceiveString80To90.ino".

Team A Step 5 :

Start a new Chat between you and Team B

- Open an Monitoring window

Any sniffer guys will only be able to read a cipher message like this :

So be aware when you chat online !