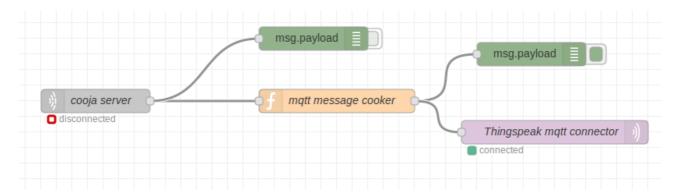# Asnaghi Simone   Challenge 3

Thingspeak channel link: https://thingspeak.com/channels/1726235 (channel ID: 1726235)

Block analysis:

- Cooja server is a block to handle the tcp input request, set to listen for the port 60001 on localhost to catch the printf instruction of the simulated mote.
- Mqtt message cooker is a block containing a javascript function that handles the input string and convert it into topic and payload of the mqtt message to be sent.

```
var num_msg=3;
var field1;
var field2;
var field3;
var CHANNEL_ID= "1726235";
for (i=0;i<num_msg;i++)
{
   if (i===0)
   {
    field1=msg.payload[0];
   }
   if (i===1)
   {
    field2=msg.payload[2];
   }
   if (i===2)
   {
    field3=msg.payload[4];
    msg.topic= 'channels/'+CHANNEL_ID+'/publish';

 msg.payload='field1='+field1+'&field2='+field2+'&field3='+field3+'&status=MQTTPUBLISH';
    return msg;
   }
}
```

- Thingspeak mqtt connector is the block containing clientId, username, password, and the server address (mqtt3.thingspeak.com) and its port (1883).

In Cooja the simulator is set to run at a speed of 100% and use as mote the sky mote (telosb) running the compiled app contained in the source folder of the challenge.

Source folder contains:

- LedCodeAppC.nc : this is the app structure file.

- LedCodeC.nc: this is the file containing the effective source code of the mote.
- Makefile: this contains the instruction for the "make telosb" command run to compile the code and obtain a .exe executable stored into the build folder.
- At the beginning of the operations, led status is set to 0,0,0 so the first entry is for all leds equals to zero.