

Six Nations Polytechnic

STEM/STEAM - Tech Wednesdays

Feb 2018 – Class #1 – Extra



Markus van Kempen

E: mvk@ca.ibm.com

T: @markusvankempen



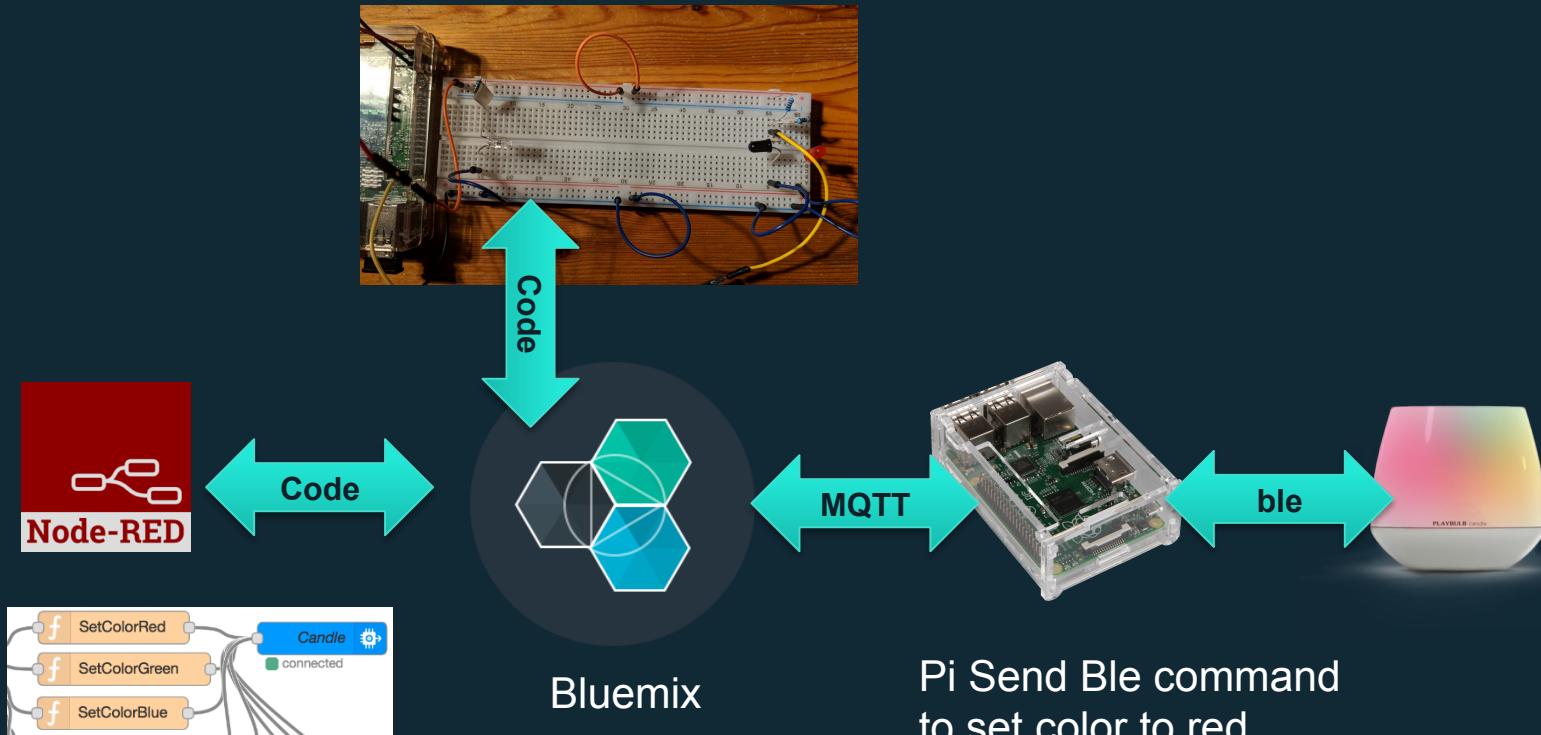
https://en.wikipedia.org/wiki/Six_Nations_Polytechnic



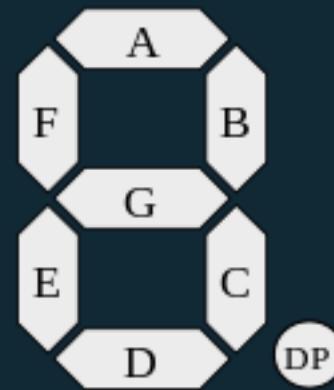
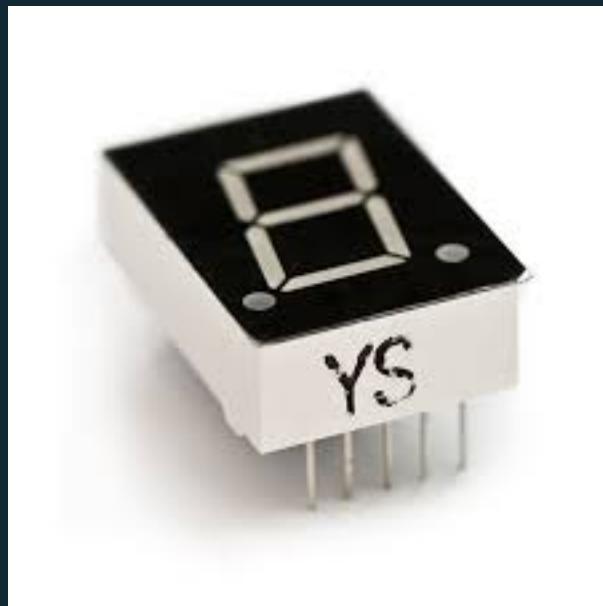
Creating Infrared Breaker aka Burglar Alarm and a LCD counter



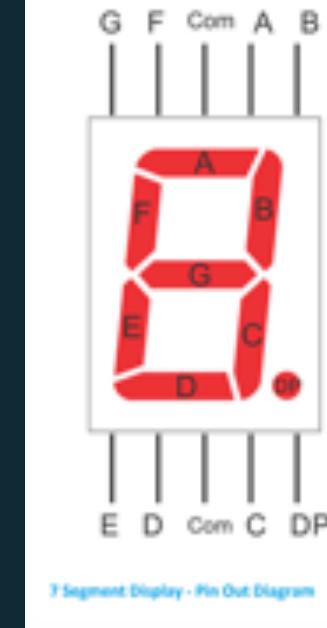
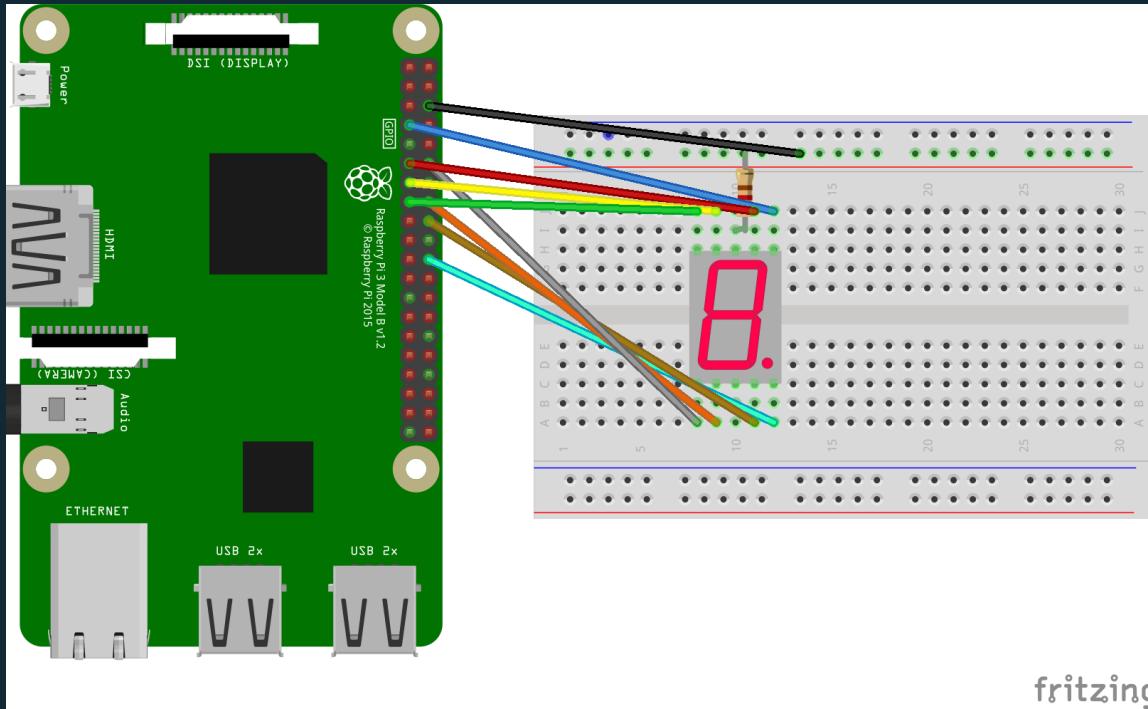
Setting the Light based on Events e.g when the Infra RED Beam is broken



7-Segment LCD

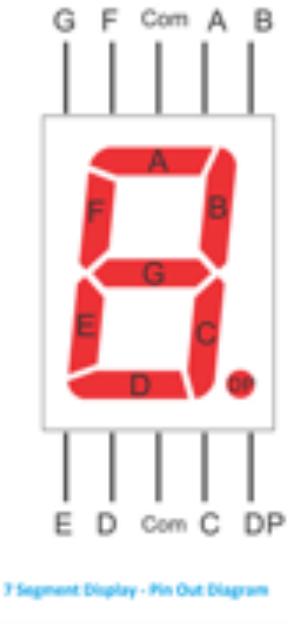
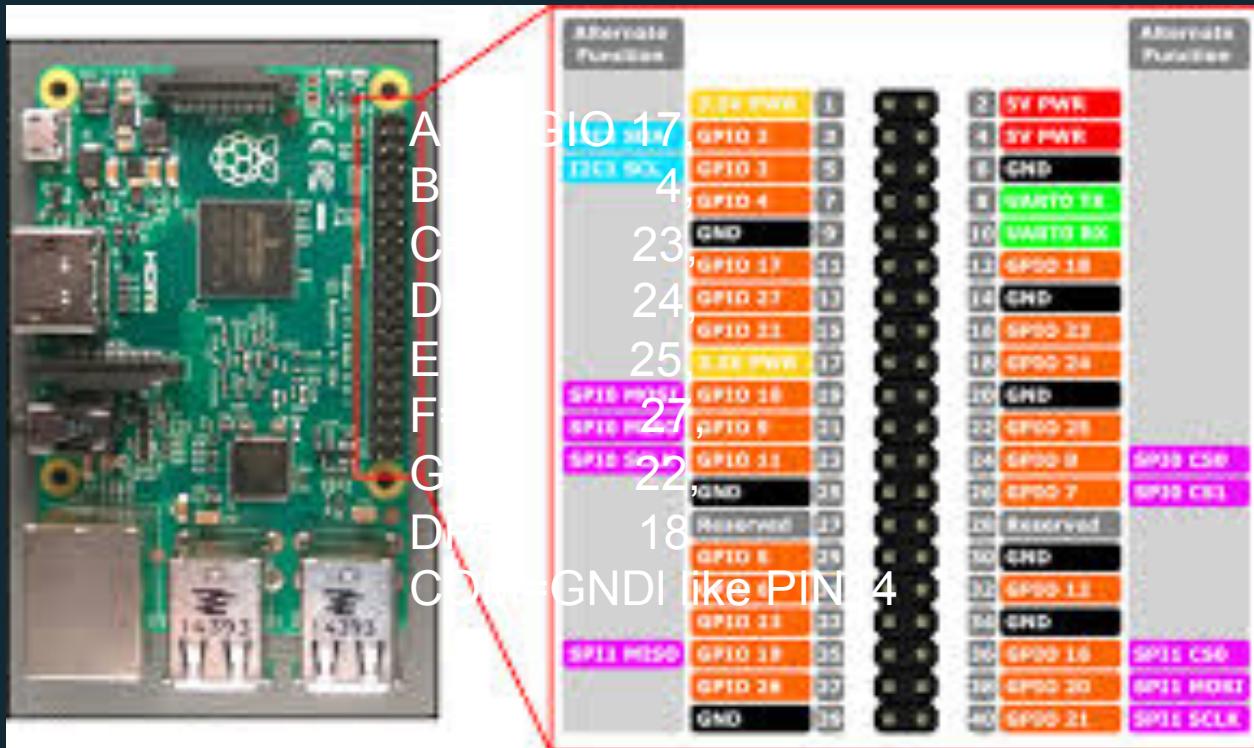


Setup the breadboard with the 7Seg LED/LCD



A= PIGPIO 17,
B= 4,
C= 23,
D= 24,
E= 25,
F= 27,
G= 22,
DP= 18
COM=GND like PIN14

PI Layout



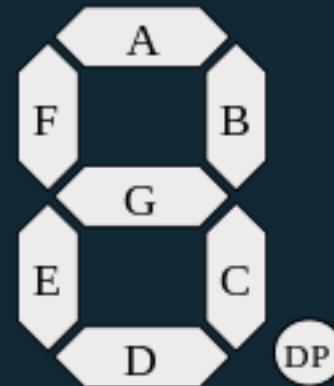
7 Segment Display - Pin Out Diagram

A= PIGIO 17,
B= 4,
C= 23,
D= 24,
E= 25,
F= 27,
G= 22,
DP= 18

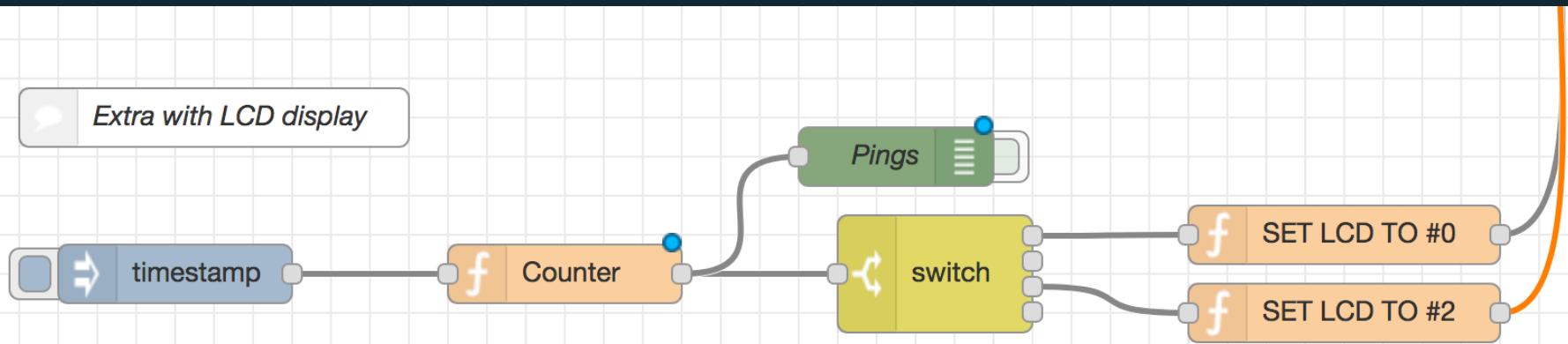
COM=GNDI like PIN14
IBM Watson IoT 7

Node-RED

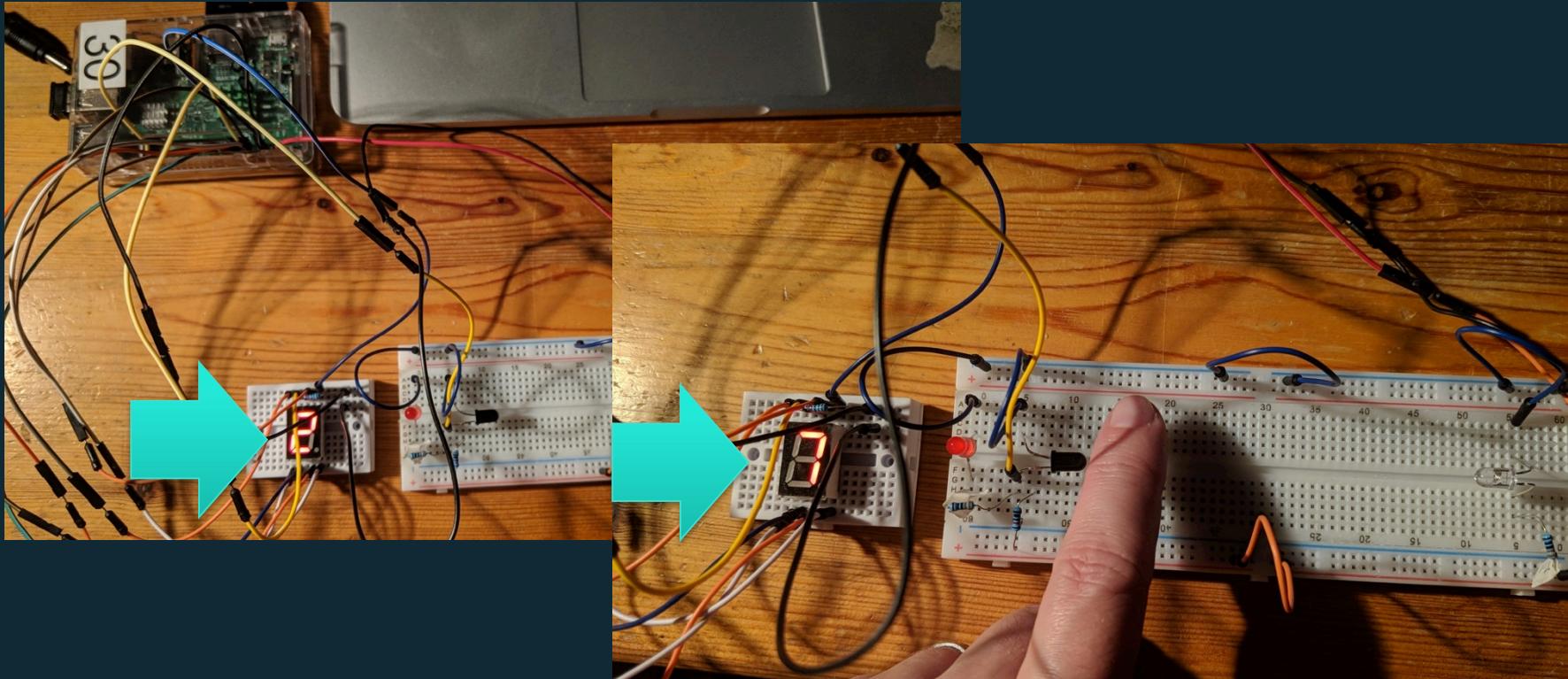
```
// You can send a command to the candle which address each panel  
// below would display #2  
var newmsg = {"cmd" : "set7SLED",  
    "A":1,  
    "B":1,  
    "C":0,  
    "D":1,  
    "E":1,  
    "F":0,  
    "G":1,  
    "DP":0  
}  
  
msg.eventOrCommandType = "set7SLED"  
msg.payload=newmsg ;  
return msg;
```



Node-Red Flow could start like



Result LCD should show Numbers



Reference

Node-Red Flow & Presenation for the class are at

<https://github.com/SixNationsPolytechnic/>

The IoT Code for the PI and Candle can be found here

<https://github.com/markusvankempen/playbulb>

Videos

<https://github.com/SixNationsPolytechnic/>





Six Nations Polytechnic

STEM/STEAM - Tech Wednesdays

Feb 2018 – Class #1



Markus van Kempen

E: mvk@ca.ibm.com

T: @markusvankempen



Burglar Alarm

Setting up the electronics

