Worksheet 6b: Let's build a CO2 traffic light

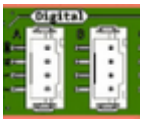
Dear students,

the following worksheet will guide you through the development of a CO2 traffic light.

1. Structure of the breadboard

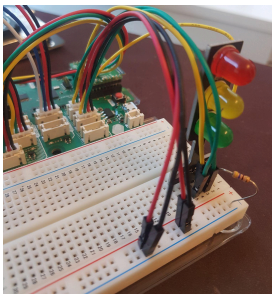
In the first step we have to connect the traffic light LED to our breadboard. It should look like this in the end.

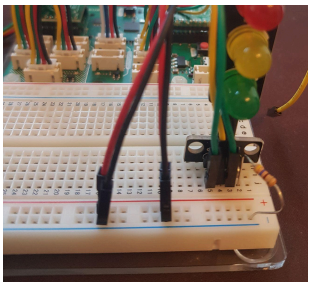
For this you need two universal cables, one side of which has pins.

You plug both cables with the white side into “Digital” A and B. 

You put the black cables in the row from the negative pole and the red cables in the row from the positive pole.

You also need a resistor.  You plug this in in front of the GRD of the LED traffic light and the other side in the negative pole (or column)



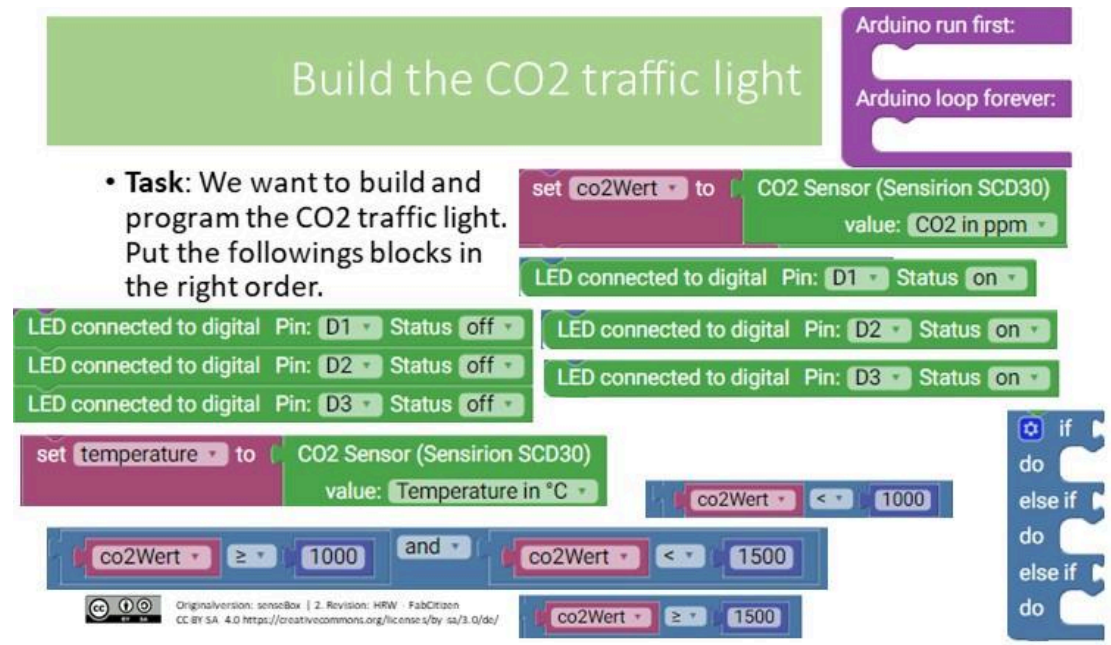


Important: Please let your course supervisor check the structure before you continue.

2. Programming the board

Now go to blockly.sensebox.de

In the following some tips on which blocks you need. Now put the blocks together correctly.

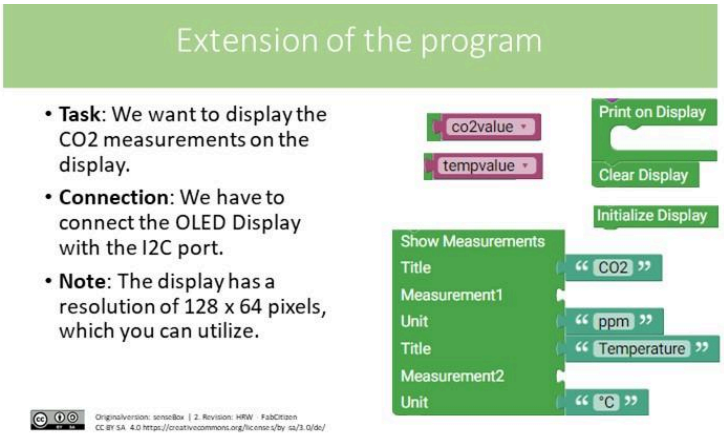


3. Load the program onto your board

If you want to load the program onto your senseBox, follow the steps below:

- ☐ Click on the orange button so that the program compiles.
- ☐ A pop-up window will open.
- ☐ Go to "Save File".
- ☐ Press the red reset button on the senseBox twice and wait until it turns green.
- ☐ Drag the .bin file onto the senseBox.
- ☐ Test if it works.

4. Test your program Extend your program so that the values are shown on the display.



Sources:
https://docs.sensebox.de/hardware/sets-co2-ampel/#3--software-aufspiele-und-testen, retrieved on the 19th September 2021