These slides serve as a visual aid for the lecture, not as a comprehensive document or script.

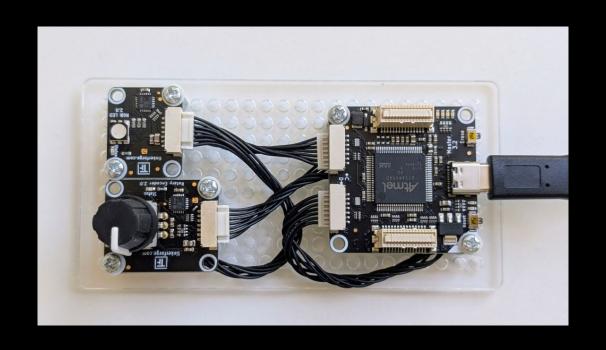
Please refrain from printing these slides to help protect the environment.

For any comments or feedback, please contact n.meseth@hs-osnabrueck.de.

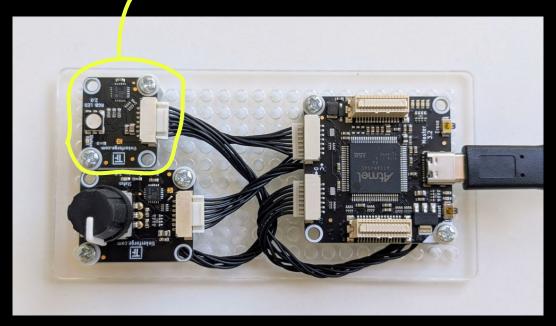


## IMAGES

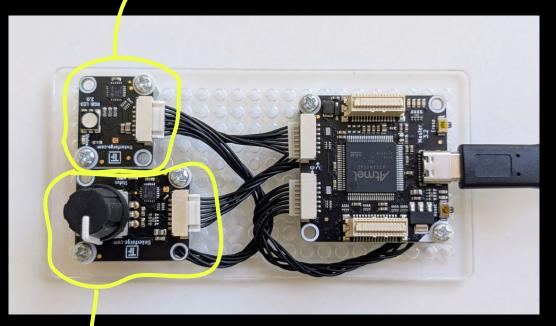
Supporting slides for <u>chapter 4</u> of the book Hands-On Computer Science



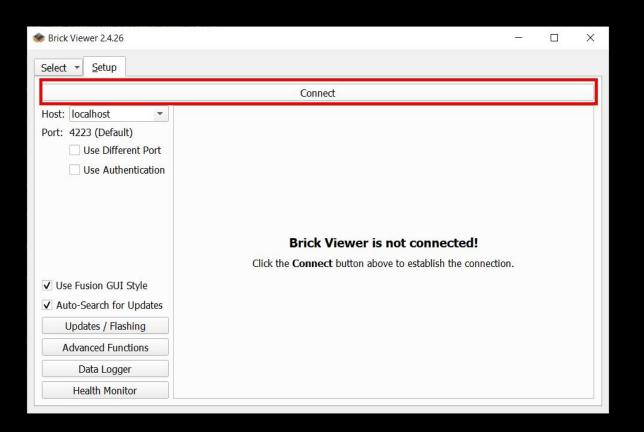
#### RGB LED

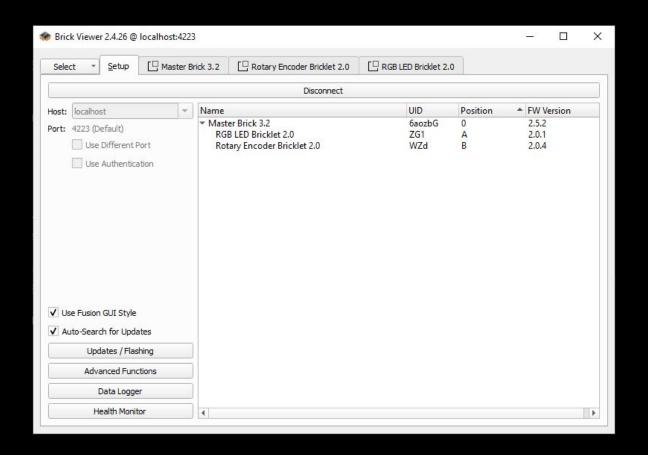


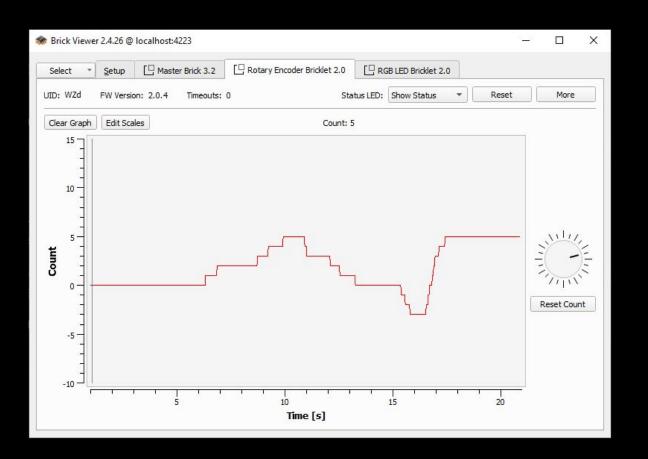
RGB LED



- Rotary Encoder







#### boilerplate code

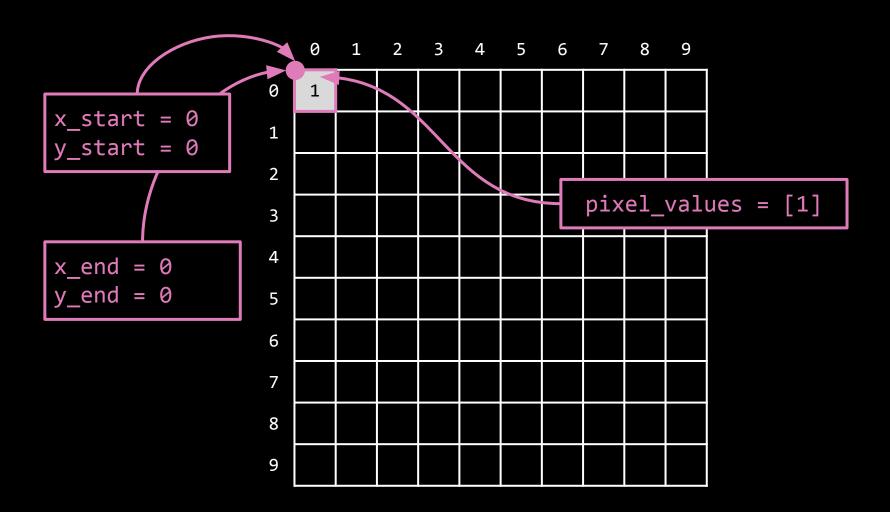
```
from tinkerforge.ip_connection import IPConnection
from tinkerforge.bricklet_rotary_encoder_v2 import BrickletRotaryEncoderV2
ipcon = IPConnection()
ipcon.connect("localhost", 4223)
knob = BrickletRotaryEncoderV2("WZd", ipcon)
```

#### reading the counter

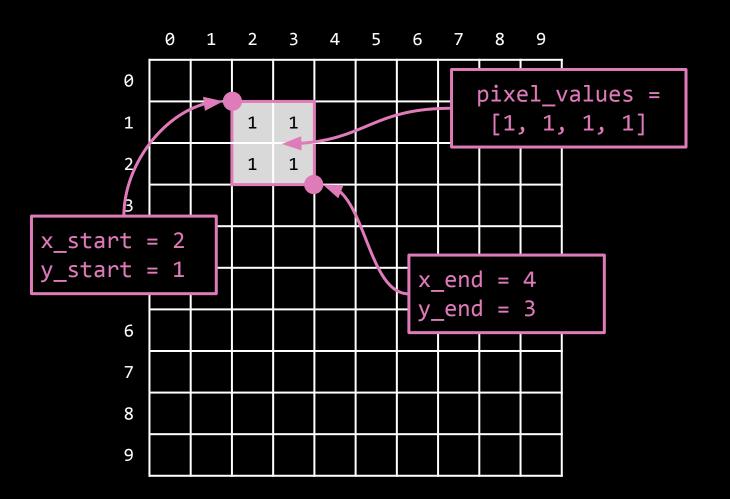
```
from tinkerforge.ip_connection import IPConnection
from tinkerforge.bricklet_rotary_encoder_v2 import BrickletRotaryEncoderV2
ipcon = IPConnection()
ipcon.connect("localhost", 4223)
knob = BrickletRotaryEncoderV2("WZd", ipcon)

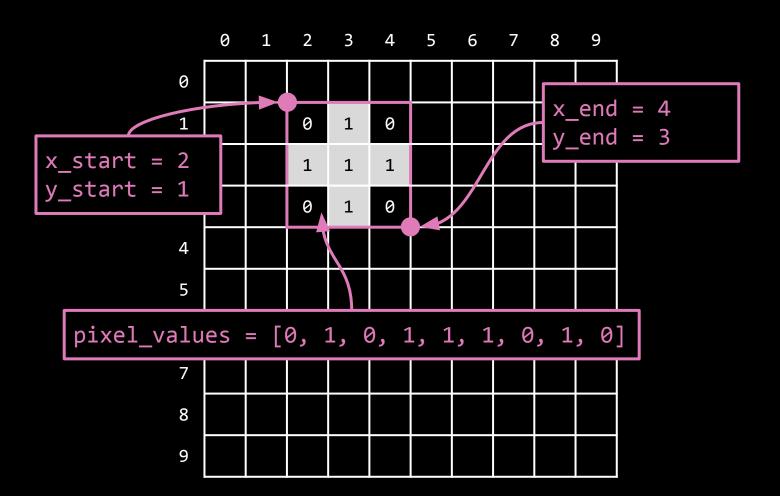
count = knob.get count(reset=False)
```

# PIXELS



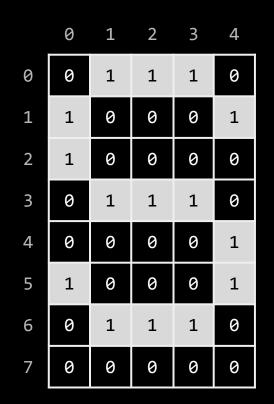
### BITMAPS





# LETTERS

	0	1	2	3	4
0	0	0	1	0	0
1	0	1	0	1	0
2	1	0	0	0	1
3	1	0	0	0	1
4	1	1	1	1	1
5	1	0	0	0	1
6	1	0	0	0	1
7	0	0	0	0	0



### ANIMATION

