## Exercise 6: Read from Serial Monitor

#### Equipment

For this exercise you will need:

- 1 x Arduino Uno
- $\bullet$  5 x LEDs
- 5 x Resistors  $\sim 60 220\Omega$
- Wires

 $\mathbf{ctrl} + \mathbf{k} + \mathbf{c}/\mathbf{u}$  to comment or uncomment blocks of code!

# Reading

Chapter 3, 4 & 6

### Setup

• Connect all 5 LEDs to five different digital output pins.

## Questions & Exercises

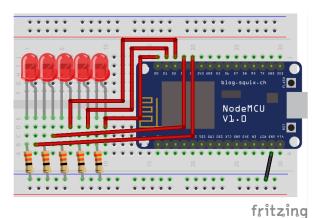
**6a:** What is a char? How many bits does one use?

**6b:** What is the resulting character stored in the variable *mychar*?

```
char mychar = '4';
int val = mychar-'0';
mychar = (char) (val+'A'-1)
```

6c: Make a program that lights an LED depending on what character has been send to the Uno

- The LEDs should represent the letters a, b, c, d and e. One LED for each letter.
- When sending one of the first five letters of the alphabet (case invariant) the corresponding LED must light up.
- All other characters should turn off all five LEDs.
- Lamps should only turn off if an unknown character is sent.



#### Hint

You can use a switch-case to make easy decisions depending on the input. The datatype char can be assigned the value of a ASCII caractar using ' ' two apostrophes (e.g. char myChar = 'b';). You can also use this denotation for compering two char values e.g. if(input == 'd'){. . .}