Tecnologie per IoT

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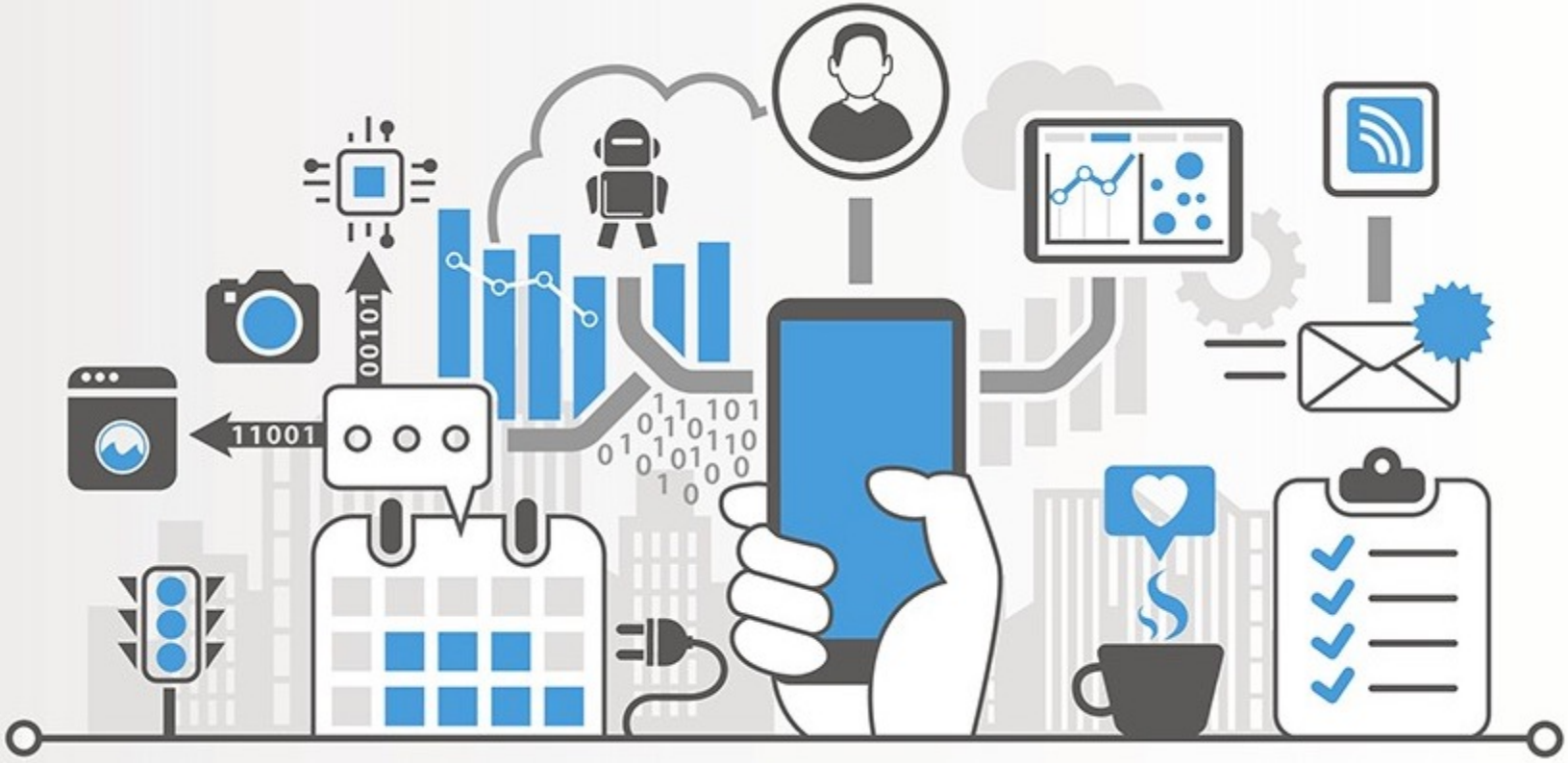
Lab1: Hardware



PART2: EXERCISE 1

Exercise 1

- Read specification on the lab PDF…
  - Some further details here

Exercise 1

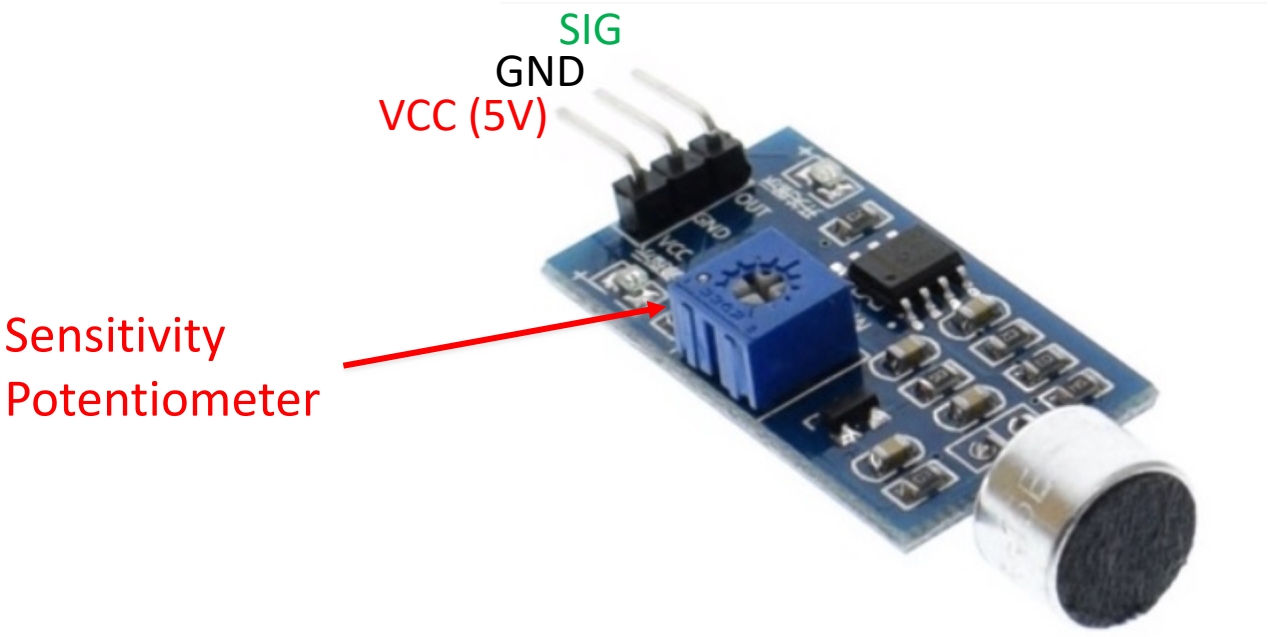
- Spec. 2)
  - LED light is proportional to current
  - With the circuit of Ex. 1.1, we can regulate the current by reducing the voltage drop
  - **We can control LED intensity using PWM!**

Exercise 1

- Spec. 4)
  - We didn’t look at the sound sensor yet…

Sound Module

- Does not have a real datasheet
  - Same connection as the PIR etc.
  - **Digital output!!** (microphone + threshold comparator)
  - **Active Low!!** (loud sound → SIG = 0, quiet sound → SIG = 1)



Exercise 1

- Spec. 6)
  - When presence is detected:
    - $T_{AC,min} = T_{AC,min,pres}$
    - $T_{AC,max} = T_{AC,max,pres}$
    - etc. (same for heater)
  - Otherwise:
    - $T_{AC,min} = T_{AC,min,abs}$
    - $T_{AC,max} = T_{AC,max,abs}$
    - etc. (same for heater)

Exercise 1

- The rest is up to you…