Arduino ADC

* The pins relevant for the analog to digital conversion in Arduino UNO are: A0, A1, A2, A3, A4, A5.
* The in-built Arduino UNO ADC has a max resolution of 10 bits that means we can convert it to a decimal range of 210 = 1024 (0 to 1023 in reality) that means that the analog value of 0 volts is mapped to 0 and the analog value of 5 Volts is mapped to 1023. Based on this values we obtain the smallest voltage step needed to switch from a value to another, 5/1024 = 4,9 mV.
* The resolution cannot be updated but it is possible to set the reference voltage that we want to use. In some devices of the arduino family such as Due, MKR and Zero, it is possible to play around with the resolution by using a specified function called analogWriteResolution(number of bits)

Arduino DAC

* Relevant pins, from 0 to 13 in arduino UNO
* Arduino microcontrollers do not have DACs built in so it is required to get an external one in form of module or to recreate a Digital to analog converting circuit.
* Depending on the module we can have different and desired resolutions.