Lab Handout Notes:

* PWM acts as a DAC or digital to analog converter
* 3 params define a DAC op characteristics:
  + Resolution = change in output lvl by smallest amt
  + dynamic range = min - max output lvl
  + DAC order
* Performance of DAC measured by:
  + Conversion speed
  + Differential nonlinearity
  + Integral nonlinearity total harmonic distortion plus noise
  + Zero offset
  + Monotonicity
  + Missing codes
* We use modulation to allow multiple info signals to be simultaneously communicated
  + Info = modulating signal
  + Carrier signal
    - Constant higher frequency that modulates/changes by info/modulating signal
  + After transmission
    - Info signal must be extracted from carrier using a “demodulator”
* PWM common in microcontrollers bc:
  + Easily generated
  + Easily demodulated with little to no external circuitry
* PWM carrier freq modulated by changing duty cycle of carrier wave in proportion to amplitude of info signal
  + Counter synthesizes sawtooth wave
  + Data stream synthesizes modulating wave
  + We use HW (output compare module) for easy access to generating
* etc.