UNC Charlotte, Department of Electrical and Computer Engineering
ECGR 4101/5101, Fall 2013, Homework #9
(20 points)

Assume we have a vehicle with four wheels, a drive motor, and a RX63N evaluation board. Assume one of the wheels has a four equally-spaced magnets which generate pulses on a Hall Effect sensor attached near the wheel (see the notes). The wheels are 20cm in diameter, and do not slip.

Write the code for the RX63N evaluation board to:

1) set up a timer to interrupt the processor every one second
2) set up an event counter
3) count an external signal using the event counter.
4) In an ISR, compute the velocity and distance travelled of our vehicle every second. Store this result in the global variables `velocity` and `distance`.