Digital Multimeter (DMM) Assignment

Measuring Resistance:
- Set DMM to resistance mode ('Ω' icon)
- Confirm that it behaves as expected:
    - Separate probes and verify 'OL' reading (overload)
    - Touch probe tips together and verify ~0Ω reading
    - Measure resistance of a 330 Ω or 10k Ω resistor
      (A multimeter is often much quicker than looking up the resistor color codes.)
- Questions:
    1. What's the full resistance of the potentiometer (across the two outer pins)?
    2. What are the lowest and highest resistances that can be achieved on the middle pin with the dial turned fully clockwise or counterclockwise.

Measuring Continuity:
- Set to continuity mode (icon). In this mode DMM will beep when it measures low resistance (less than ~20Ω).
- Touch probe tips together and verify that DMM beeps
- Questions:
    1. Is the housing of the USB port grounded? (I.e., is it connected to the GND pin?)
    2. **BONUS:** There is set of 6 male pins on your Arduino labeled *ICSP*. Can you determine which of these pins (if any) connect to GND and 5V?

Measuring Voltage:
- Set to DC voltage mode (icon). In this mode the voltage on the red probe is measured with respect to the black probe. Typically you will connect the black probe to Gnd/0V.
- Touch probe tips together and verify 0V reading.
- Questions:
    1. Measure the voltage on the 5V and 3.3V pins — are they close to their nominal values? (Be sure to measure with reference to ground.)
    2. Wire up an LED with a current-limiting resistor and turn it on. Measure the voltage drop across the LED leads. Now can you predict the voltage across the resistor? Measure to confirm your prediction.