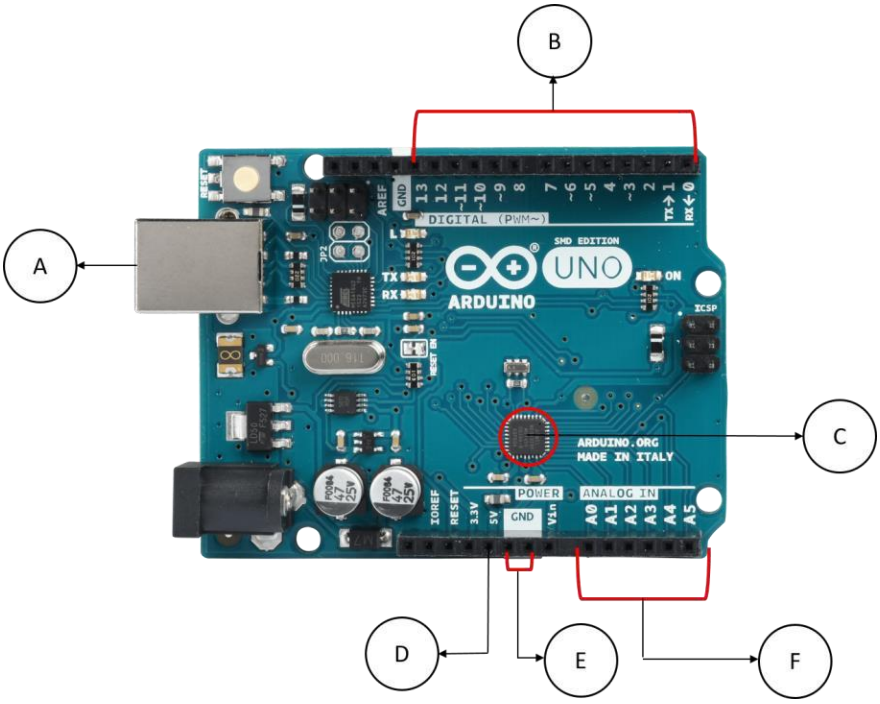
ENME 461 Prelab 1

Read '**A Primer on the Arduino Microcontroller.pdf**', then '**Lab 1- Introduction to Arduino.pdf**' before the lab. These documents can be found on D2L.

You will be using the Arduino Software (IDE) in all of the labs for this course. This will be provided on the lab laptops, but they are quite slow. As an alternative, it is recommended that you download the software on your own laptop and bring it to the lab (you will be working individually and will need the software downloaded on your laptop). You can download the software from the following link: https://www.arduino.cc/en/Main/Software

Answer the following questions and hand them in to your TA at the beginning of your lab session:

1. Label the indicated parts of the Arduino Uno microcontroller and describe what they do.



2. Give 2 applications for a microcontroller.

3. Describe the behaviour and purpose of the two main functions of an Arduino sketch: setup() and loop()

4. A) Explain how a potentiometer works.
   B) A potentiometer is attached to a source of 5 V and ground (0 V). The total resistance of the potentiometer is R. The wiper is one third of the way from ground to source. Draw an equivalent circuit of this potentiometer representing the resistance on both sides of the wiper using two resistors in series. Indicate the voltage measured and the resistance of each resistor.