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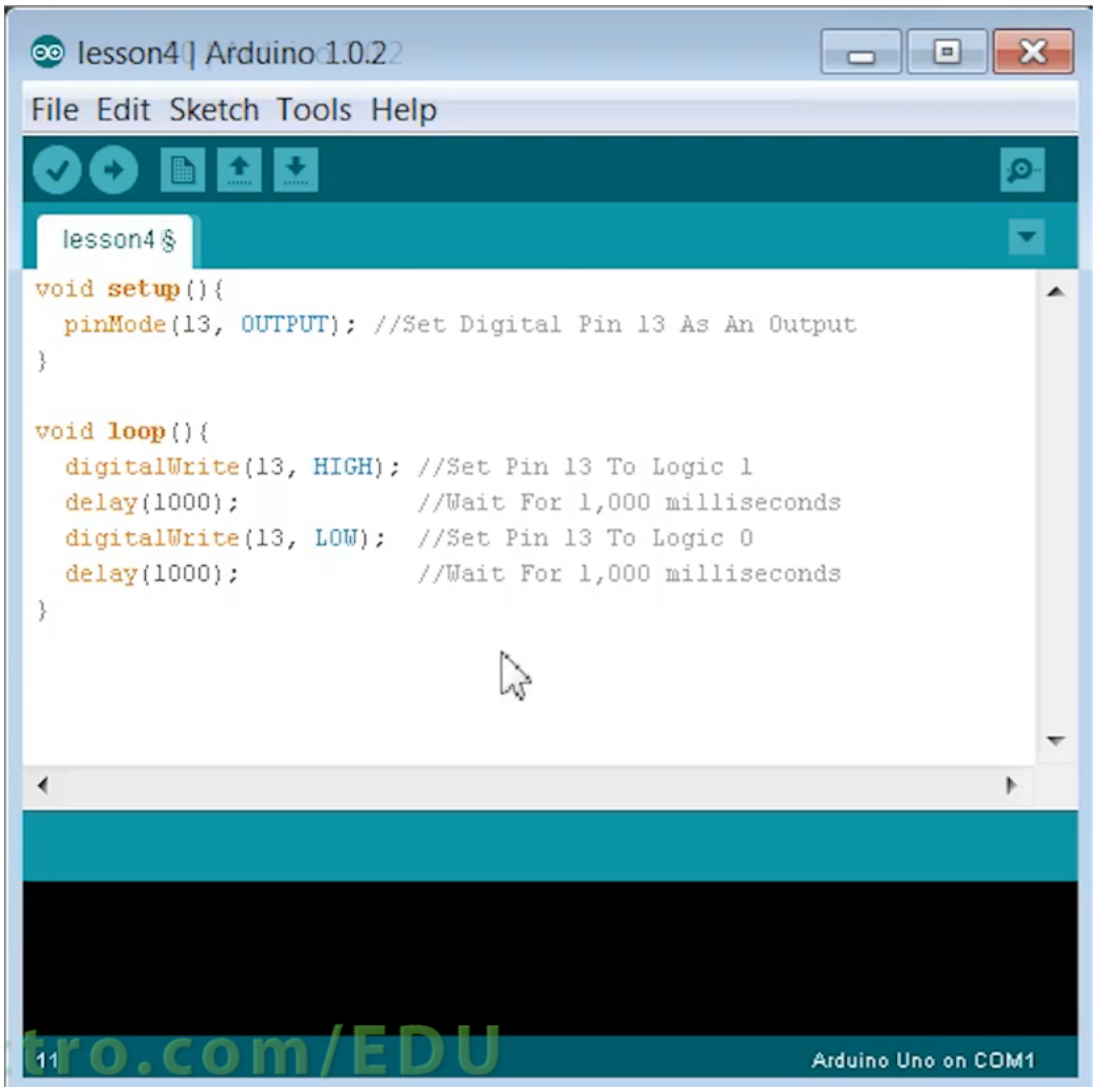
Introduction To Microcontrollers Electronics – Lesson 10: AVR vs Arduino

FORMULAS

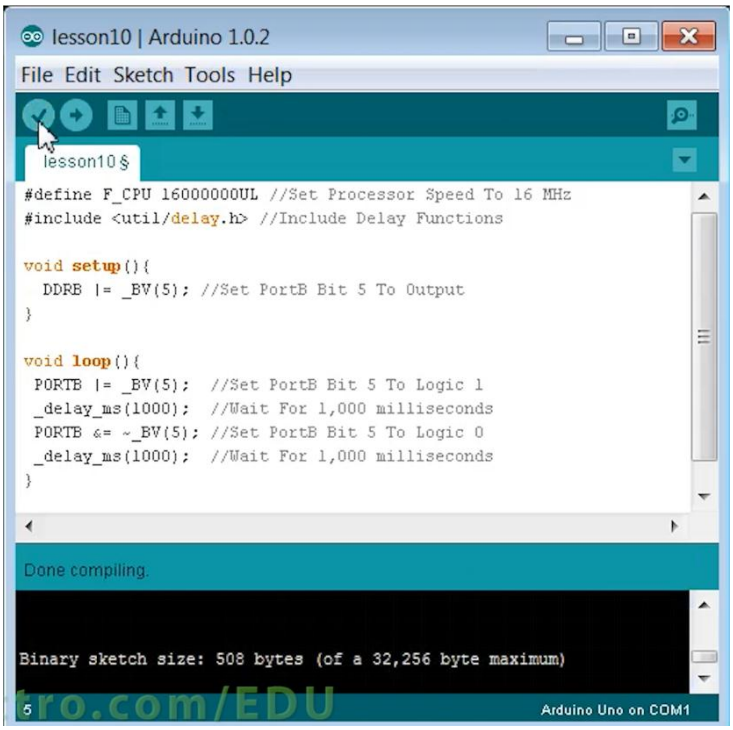
The following formulas and information are meant to go with the online lesson found here:
http://www.pyroelectro.com/edu/microcontrollers/avr_vs_arduino/

EXAMPLE ARDUINO PROGRAM

In lesson 10 we explored a different way to write programs directly for the AVR microcontroller. To do this, we took the original code from lesson 4 where we blinked an LED and converted it over to avr-gcc code. Below you can see the original blinking LED program from lesson 4:



The avr-gcc conversion of lesson 4's code can be seen below. Each line has the same function as the arduino platform code, but instead of using the nicely named and functionally limited arduino api calls, we used the native avr-gcc elements like DDRB and PORTB to get access to input and output ports. As well as the delay function.



ADDITIONAL INFORMATION

If you have any questions about the formulas or information found in this document, please feel free to head on over to the forums and ask us some questions!
http://www.pyroelectro.com/forums/viewforum.php?f=25