Sending Commands to Your Arduino From Your Computer

This is a very basic tutorial to teach you how to send commands from your computer directly to your Arduino board. Keep in mind, this is a very basic code, but hopefully it will provide you a leg up if you want to try some more complicated things.

In this tutorial we will make an LED light up when any key on the keyboard is pushed. Not everything in this code is necessary to do this, but the extra bits may be helpful if you want to do more complicated codes.

First plug an led into pin 13 (the long leg in 13, the short leg in GND).

Next plug your Arduino into your computer.

Upload the code listed at the end of this tutorial.

Open the serial monitor. You can do this by pressing the little magnifying glass in the upper right hand corner or by pressing ctrl+Shift+M

Type anything you want into the little box at the top and press enter (or send).

And that's all there is to it! The LED on your Arduino should light up for a second in response to a signal from the computer. This is only a very basic code, but with some more work you can make code that can be much more diverse and can identify key commands, or even control different ports using different keys.

Here is a good tutorial if you would like to take things further.

http://forums.trossenrobotics.com/tutorials/how-to-diy-128/complete-control-of-an-arduino-via-serial-3300/

```
int led = 13;//defines ledPin as digital pin 13. Now if we tell the arduino to turn on the LED, it will turn on pin 13.

int serialData = 0;// data and serial data are just variables to hold information.

int data = 0;



// the setup routine runs once when you press reset:
```

```
void setup()

{

Serial.begin(9600); //start talking with the computer. 9600 just tells the rate.



  // initialize the digital pin as an output.

  pinMode(led, OUTPUT);

}


// the loop routine runs over and over again forever:

void loop()

{

  if (Serial.available() > 0) //Serial.available will tell the board to look at the information being sent to it through the serial port.

  {

    //these 2 lines are not nessecary, but it's cool to see how the ARDUINO thinks.

    serialData = Serial.read(); //The arduino reads this data and writes it as one of our variables.

    Serial.println(serialData); //The arduino prints this data to the serial monitor so we can see what it sees.

    //NOTE: All the data the arduino sends will be converted to ASCII. This is why typing 1 will return a vale of 49 (the ASCII value of 1).Also, 10 is typed after every input becasue 10 is the ASCII value for enter.


    data = data +1; //add 1 to our data variable

  }

  if (data >0) //if our data variable is greater than 1

{
  digitalWrite(led, HIGH);   // turn the LED on (HIGH is the voltage level)

delay (1000); //wait for a second

digitalWrite(led, LOW); //turn the led off

data = 0; //set our data variable to 0

} //this whole process repeats forever.

}
```