Materials

- Arduino Uno
- RGB LED
- 3x 220 or 330 ohm resistors

Background & Set-Up:

You will use your Arduino to independently drive each color of your RGB LED (Red/Green/Blue). You will need to wire each one of the anodes of the LED to its own digital output for individual control.

You will set up the Arduino to communicate with your computer using the Arduino's serial port bus that communicates over the USB connection. Use the Arduino-PC Serial Comms starter code to see how to set up the connection. To send a message to your Arduino from your PC, open the serial port monitor (Tools->Serial Port Monitor). Double-check to make sure the settings match your parameters you set up in your program.

Goal:

You want to be able to individually control each one of the R/G/B LEDs by sending a command message from your PC to your Arduino. If you send an 'R', you want the Arduino to change the state of the Red LED (if it was on, turn it off and vice versa). If you send a 'G', you want the Arduino to change the state of the Green LED. If you send a 'B', you want the Arduino to change the state of the Blue LED.

Take note of how many different states or color combinations you can make. Make sure you properly handle cases where the user may send an incorrect letter; for example, an 'r' or an 'X'.

Special Notes:

Don't use Digital Output 0 or Digital Output 1. These pins are being used for serial communication with your computer.