VU Meter Using Arduino

by DR Design

Hi everyone, this is a quick and simple tutorial on how to make a VU(volume unit) using Arduino UNO and LEDs.

It is very good for beginners who are just learning how to use Arduino.

Parts needed: 1x Arduino (UNO)

1x Breadboard

12x 5mm LEDs

13x Wires

1x 100Ohm resistor

1x 500kOhm potentiometer

1x 3.5mm audio jack

1x good Will

Step 1: Video

https://www.youtube.com/watch?v=MBJRmV6LnxI

Step 2: Wiring

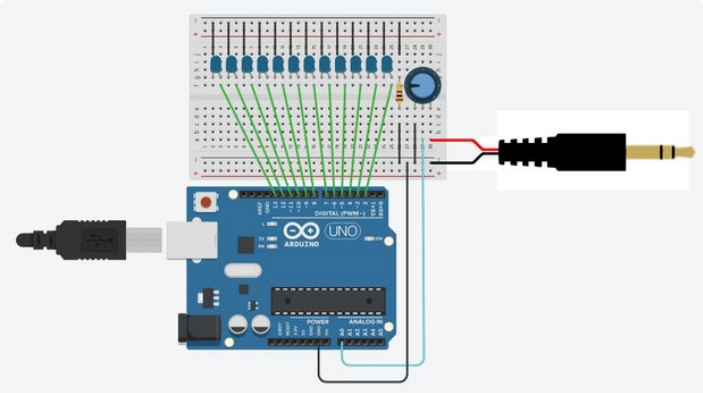
So first thing to do is to connect all the LEDs to the Arduino using breadboard. The easiest way is to linear connect all the LEDs to the desired Arduino pins using wires.

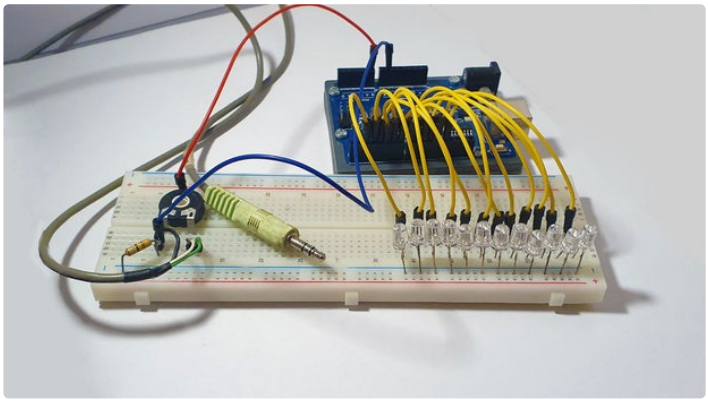
We have to add 100Ohm resistor to the circuit in order to limit the current through LEDs.

Then, the pot is added, it is used to regulate the sensitivity of the input signal, also the stereo jack is connected to the board

Also a TinkerCAD project:

VU meter TinkerCAD





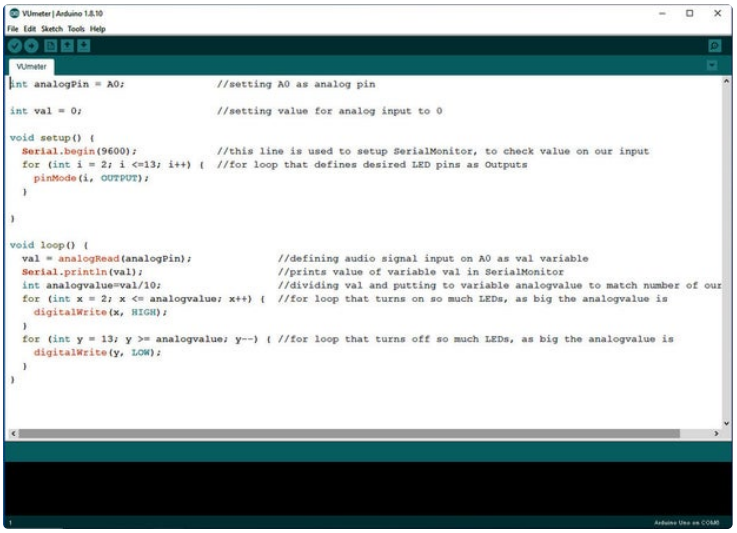
Step 3: Arduino Programming

Next thing is to write a program for Arduino. First we define A0 as analog input and define val value for the input signal.

Then we define PINs 2-13 as Outputs through FOR loop.

We define A0 as analogRead. Then we divide value with 10 and store it to analogvalue. This way we get a value that is more suitable to work within FOR loops.

First FOR loop turns on as much LEDs, as the value of analogvalue variable is. Second FOR loop does the opposite, it turns off LEDs when the value of analogvalue variable drops.



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Step 4: Conclusion

This is a very simple project that anyone can make, using only a few components to make a cool VU meter.

It is also good to understand how Arduino outputs works and also the For loop. Thanks for passing by....