/\*PCE-20 Modified by Pat McMahon 12/10/2022.Uses Pat's 20 Plug & Code Examples.

  Mega analogWrite() test

  This sketch fades LEDs up and down one at a time on digital pins 2 through 13.

  This sketch was written for the Arduino Mega, and will not work on other boards.

  The circuit:

  - Connections-LEDs attached from pins D2 through D13 plus A0 through to A4 plus to ground.

  created 8 Feb 2009

  by Tom Igoe

  This example code is in the public domain.

  https://www.arduino.cc/en/Tutorial/BuiltInExamples/AnalogWriteMega

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// These constants won't change. They're used to give names to the pins used:

const int lowestPin = 2;

const int highestPin = 19;

void setup() {

  // set pins 2 through 13 as outputs:

  for (int thisPin = lowestPin; thisPin <= highestPin; thisPin++) {

    pinMode(thisPin, OUTPUT);

  }

}

void loop() {

  // iterate over the pins:

  for (int thisPin = lowestPin; thisPin <= highestPin; thisPin++) {

    // fade the LED on thisPin from off to brightest:

    for (int brightness = 0; brightness < 255; brightness++) {

      analogWrite(thisPin, brightness);

      delay(2);

    }

    // fade the LED on thisPin from brightest to off:

    for (int brightness = 255; brightness >= 0; brightness--) {

      analogWrite(thisPin, brightness);

      delay(2);

    }

    // pause between LEDs:

    delay(100);

  }

}