

```

// These constants won't change. They're used to give names
// to the pins used:
const int analogInPin = A0; // Analog input pin that the potentiometer is
attached to
const int analogOutPin = 9; // Analog output pin that the LED is attached to

int sensorValue = 0; // value read from the pot
int outputValue = 0; // value output to the PWM (analog out)
int fuckFade = 1;
int fadeAmount;
int fadeHolder;

void setup() {
  // initialize serial communications at 9600 bps:
  Serial.begin(9600);

  // set variables to current time
}

void loop() {
  sensorValue = analogRead(analogInPin);

  // START FADE

  if(fadeHolder < sensorValue){
    fadeHolder = sensorValue;
  }

  fadeHolder = fadeHolder - fuckFade;

  if (fadeHolder > 400) {
    // map it to the range of the analog out:
    outputValue = map(fadeHolder, 400, 1023, 0, 255);
    // change the analog out value:
    analogWrite(analogOutPin, outputValue);
  }
  else {
    analogWrite(analogOutPin, 0);
  }
}

```

```
/*  
  // print the results to the serial monitor:  
  Serial.print("sensor = " );  
  Serial.print(sensorValue);  
  Serial.print("\t output = ");  
  Serial.println(outputValue);  
  
  // wait 2 milliseconds before the next loop  
  // for the analog-to-digital converter to settle  
  // after the last reading:  
  */  
  delay(20);  
}
```