

```
int ledPin = 9;
int brightness = 0;

void setup() {
  // initialize serial communication at 9600 bits per second:
  Serial.begin(9600);
  //set up the pin as an output
  pinMode(ledPin, OUTPUT);
}

// the loop routine runs over and over again forever:
void loop() {
  // read the input on analog pin 0:
  int sensorValue = analogRead(A0);
  // print out the value you read:
  Serial.println(sensorValue);
  //make the value of the brightness be between 0 and 255
  brightness = map(sensorValue, 0, 1024, 0, 255);
  //set your pin brightness to the brightness value
  analogWrite(ledPin, brightness);
  delay(1);      // delay in between reads for stability
}
```