Magic Wand code

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//This is an example using a servo motor triggered by a photoresistor

#include <Servo.h>    //include the library for the servo
Servo myservo;   //naming the servo myservo
int photocell; //setting up a variable for photocell
int lightsensor; //setting up a variable for lightsensor

void setup() {
  myservo.attach(9);  //set which pin the servo is connected to
  Serial.begin(9600);
}

void loop() {    //create a loop that will check for light repeatedly
   photocell=analogRead(A0);     //read the analog signal from the pin
   the photoresistor is connected to
   lightsensor=map(photocell,950,1023,0,150);     //translate
   photoresistor values (light) into the servo values (degrees),( first
   lower light value, second high light value, third start position of
   servo, fourth is the open position)


   myservo.write(lightsensor);      //tell the servo to move based on
   light value received from lightsensor map
   delay(4000);  //delay how long before the photoresistor is read
   again
   Serial.println(photocell,lightsensor); //write the values to the
   serial monitor for troubleshooting


}
```

Color coding

- Comment lines are grey. They provide useful descriptions but do not alter the functionality of the code.
- Command lines which relate to the servo are red
- Command lines which relate to the photoresistor sensor are blue
- A serial monitor is used for troubleshooting; it provides the values measured and calculated. Those lines are green.
- Command lines used for decision making based on light levels are orange.
- Command lines which are black are essential for every Arduino sketch