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1  /**
2   Light Triggered Action - Mission Possible MK2
3   Ward Melville HS Science Olympiad - Team A - 2017-2018
4   lightTiny.ino
5   Purpose: Triggers the next action when the resistance of a photocell changes more than a
        threshold value.
6
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8   @version 1.1 1/26/2018
9   */
10
11 // Definitions for microcontroller pin numbers
12 const int PHOTOCELL_PIN = 1;
13 const int OUT_PIN = 4;
14
15 // Variables for states of the pins
16 int photocellValue;
17 int photocellBase;
18 bool statusOut = LOW;
19
20 void setup() {
21   // Set the microcontroller pins as either inputs or outputs
22   pinMode(PHOTOCELL_PIN, INPUT);
23   pinMode(OUT_PIN, OUTPUT);
24
25   // Set the output pin to low
26   digitalWrite(OUT_PIN, LOW); // Write the output pin to LOW
27
28   // Read the initial value of the photocell (ambient light)
29   photocellBase = analogRead(PHOTOCELL_PIN);
30 }
31
32 void loop() {
33   photocellValue = analogRead(PHOTOCELL_PIN);
34
35   if(photocellValue - photocellBase >= 150 && statusOut == LOW) {
36     // If the difference (NOT ABSOLUTE VALUE) between the current reading and the ambient
        reading is greater than the threshold...
37     delay(500); // Delay 500 milliseconds (0.5 s) to allow observation
38     statusOut = HIGH; // Set the out status to on
39     digitalWrite(OUT_PIN, HIGH); // Trigger the next action
40   }
41 }
42
```