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////////////////////////////////////
//          The Laundromat          //
// ESP8266 Pushover message on Light Dependent Resistor reading //
//          May 2020                //
// Read Cycle Done LED and send message to phone to get laundry //
////////////////////////////////////

#include <ESP8266WiFi.h>
#include <ESP8266WiFiGeneric.h>

char * LaundryMessage1[] = {"Do your laundry. Or do not. There is no try.", "Live long and prosper
with clean laundry.", "Beam me up Scotty, I need to finish my laundry.",
    "Come get your laundry. Resistance is futile."
};

char * LaundryMessage2[] = {"If you can make the Kessel run in less than twelve parsecs, you can get
your laundry.", "Help me, Obi-Wan Kenobi. You're my only hope for clean laundry.", "It is highly
illogical that you do not get your laundry.",
    "Clean laundry. Make it so! "
};

char * LaundryMessage3[] = {"I find your lack of faith in clean laundry disturbing.", "Resistance is
futile, come get your laundry.", "Dammit Jim, I'm a doctor not a laundry person.",
    "To boldly go where no one has gone before, the laundry room."
};

int total;
int counter = 1;
unsigned long previousMillis = 0;
int randomNumber = 0;

// Change variables below as needed
int numNotify = 3; // How many messages max do you want to recieve?
const long interval = 120000; // interval at which to check sensor 60000 = 1 minute
const int Sensor = 17; //LDR analog pin on esp8266 Feather Huzzah
const int lightLevel = 450; // threshold of ldr sensor
char * LaundryMsg = "Your Laundry Is Done!";

// Pushover
String Token = "Your Token Here";
String User = "Your User String Here";
int length;

// Your WiFi
WiFiClient client;
const char* ssid = "WiFi Name";
const char* password = "WiFi Password";

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void setup() {
  Serial.begin(9600);
  Serial.print("Connecting to ");
  Serial.println(ssid);
  WiFi.mode(WIFI_STA); //Client mode only
  WiFi.begin(ssid, password);
  while (WiFi.status() != WL_CONNECTED) {
    delay(100);
    Serial.print("_");
  }
  Serial.println("");
  Serial.print(ssid);
  Serial.println(" successfully connected");
  Serial.print("IP address: ");
  Serial.println(WiFi.localIP());
  delay(50);
  pinMode(Sensor, INPUT);
  analogWrite (Sensor, LOW);
  randomSeed(analogRead(0));
}

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void loop() {
  unsigned long currentMillis = millis();
  if (currentMillis - previousMillis >= interval) {
    previousMillis = currentMillis;
    Serial.print(F("Sensor = "));
    readSensor();
    total = 0;
  }
}

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byte pushover(char *pushovermessage) {

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  String Msg = pushovermessage;
  length = 81 + Msg.length();
  if (client.connect("api.pushover.net", 80)) {
    Serial.println(F("Sending message..."));
    delay(50);
    client.println("POST /1/messages.json HTTP/1.1");
    client.println("Host: api.pushover.net");
    client.println("Connection: close\r\nContent-Type: application/x-www-form-urlencoded");
    client.print("Content-Length: ");
    client.print(length);
    client.println("\r\n");
    client.print("token="+Token+"&user="+User+"&message="+Msg);
    /* Uncomment this to receive a reply from Pushover server:
    while(client.connected()) {
      while(client.available()) {
        char ch = client.read();

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        Serial.write(ch);
    }
}
*/
client.stop();
Serial.println(F("Done"));
Serial.println(F(""));
delay(100);
}
}

void readSensor(){
    randomNumber = random(3);
    for(int x=0; x<=4; x++) { // get average of 5 samples for better accuracy
        int var = analogRead(Sensor);
        Serial.print(var);
        Serial.print(", ");
        total = total+var;
    }
    total=total/5;
    Serial.println(F(" "));
    Serial.print(F("Sensor Avg = "));
    Serial.println(total);
    Serial.print(F("lightLevel = "));
    Serial.println(lightLevel);
    Serial.print(F("numNotify = "));
    Serial.println(numNotify);
    Serial.print(F("counter = "));
    Serial.println(counter);
    Serial.println(F(" "));

    if(total >=lightLevel && counter <=numNotify) {
        if (counter == 3){
            LaundryMsg = LaundryMessage1[randomNumber];
            counter++;
        }
        if (counter == 2){
            LaundryMsg = LaundryMessage2[randomNumber];
            counter++;
        }
        if (counter == 1){
            LaundryMsg = LaundryMessage3[randomNumber];
            counter++;
        }
        pushover(LaundryMsg); // Send to Pushover app
        Serial.println(F("Laundry done!"));
        Serial.println(F(""));
    }
}
}

```