// Declare variables to store temperature and voltage readings

float temp;

float vout;

float vout1;

// Setup function, runs once when the sketch starts

void setup() {

// Initialize serial communication at a baud rate of 9600

Serial.begin(9600);

// Set the built-in LED pin as an output

pinMode(LED\_BUILTIN, OUTPUT);

// Set pin A0 as an input

pinMode(A0, INPUT);

}

// Custom delay function for approximately 250 milliseconds delay

//The loop method actually depends on the system we are using , value of i in loop has to be changed by comparitive method as of delay required

//This code has approximate delay and works good in Tinkercad

void wait250ms() {

// Loop for an approximate delay of 250ms

for (int i = 0; i < 2000; i++) {

// Nested loop to add delay

for (int j = 0; j < 85; j++) {

// Do nothing, just loop

}

}

}

// Custom delay function for approximately 500 milliseconds delay

void wait500ms() {

// Loop for an approximate delay of 500ms

for (int i = 0; i < 4000; i++) {

// Nested loop to add delay

for (int j = 0; j < 170; j++) {

// Do nothing, just loop

}

}

}

// Loop function, runs repeatedly after setup

void loop() {

// Read analog voltage from pin A0

vout = analogRead(A0);

// Convert analog voltage to millivolts

vout1 = (vout / 1023) \* 5000;

// Convert millivolts to temperature in Celsius

temp = (vout1 - 500) / 10;

// Check if temperature is less than 30°C

if (temp < 30) {

// Turn on the built-in LED

digitalWrite(LED\_BUILTIN, HIGH);

// Call wait250ms function for 250 milliseconds delay

wait250ms();

// Turn off the built-in LED

digitalWrite(LED\_BUILTIN, LOW);

// Call wait250ms function for 250 milliseconds delay

wait250ms();

} else {

// If temperature is 30°C or higher

// Turn on the built-in LED

digitalWrite(LED\_BUILTIN, HIGH);

// Call wait500ms function for 500 milliseconds delay

wait500ms();

// Turn off the built-in LED

digitalWrite(LED\_BUILTIN, LOW);

// Call wait500ms function for 500 milliseconds delay

wait500ms();

}

}