ECE296 Lab 7 - Arduino Color Detector

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int red, blue, green;
int delay_time = 100;
int sensor;

void setup() {
    pinMode(2, OUTPUT); // Red
    pinMode(3, OUTPUT); // Blue
    pinMode(4, OUTPUT); // Green
    Serial.begin(9600);
}

void loop() {
    digitalWrite(2,HIGH);
    digitalWrite(3,LOW);
    digitalWrite(4,LOW);
    delay(delay_time);
    red = analogRead(A0);
    red = map(red, 230, 670, 0,
       255);

    digitalWrite(2,LOW);
    digitalWrite(3,HIGH);
    digitalWrite(4,LOW);
    delay(delay_time);
    blue = analogRead(A0);
    blue = map(blue, 340, 675, 0,
       255);

    digitalWrite(2,LOW);
    digitalWrite(3,LOW);
    digitalWrite(4,HIGH);
    delay(delay_time);
    green = analogRead(A0);
    green = map(green, 240, 666,
       0, 255);

    Serial.print("red = ");
    Serial.println(red);
    Serial.print("blue = ");
    Serial.println(blue);
    Serial.print("green = ");
    Serial.println(green);

    if (red > 175 && blue < 176 &&
        green > 168){
        Serial.println("RED");
    }
    else if (red < 183 && blue >
       170 && green < 180){
        Serial.println("GREEN");
    }
    else if (red > 180 && blue >
       205 && green < 182){
        Serial.println("CYAN");
    }
    else if (red < 200 && blue <
       186 && green > 182){
        Serial.println("MAGENTA");
    }
    else if (red < 85 && blue < 85
        && green > 35){
        Serial.println("BLUE");
    }
    else if (red < 245 && blue <
       240 && green > 229) {
        Serial.println("YELLOW");
    }
    else if (red < 30 && blue < 2
       && green < 0) {
        Serial.println("BLACK");
```

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    }
    else if (red > 240 && blue >
        240 && green < 255) {
         Serial.println("WHITE");
    }
    else {
         Serial.println("UNKNOWN
            COLOR");
    }
}
```