

아두이노로

조도와 습도에 따라 반응하는

무드등 구현하기

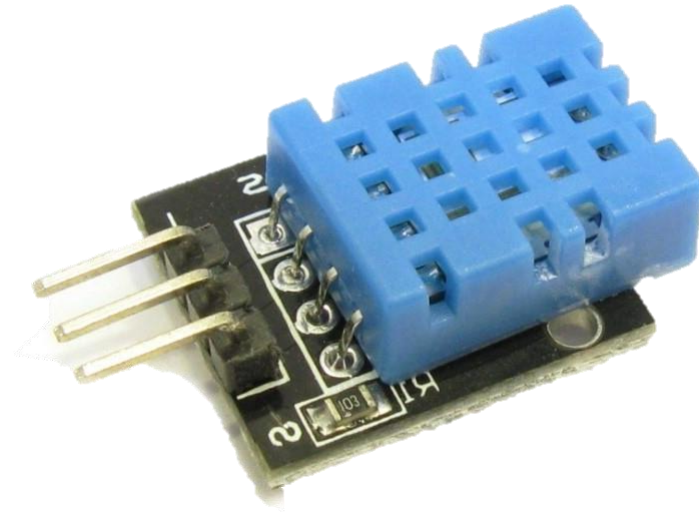
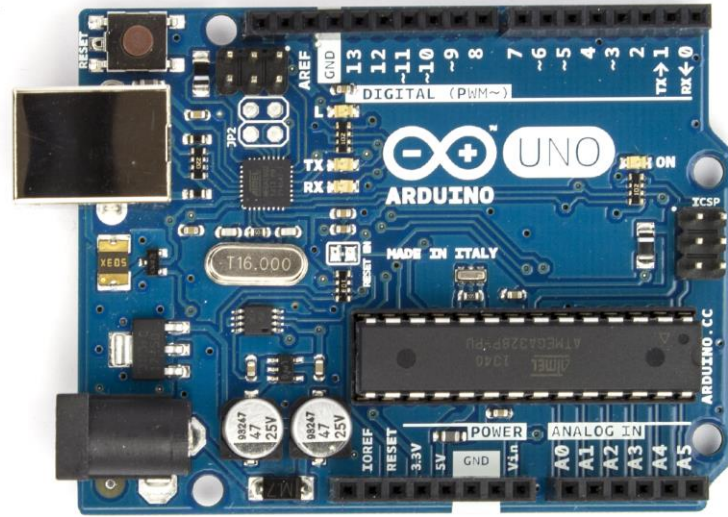
상상도



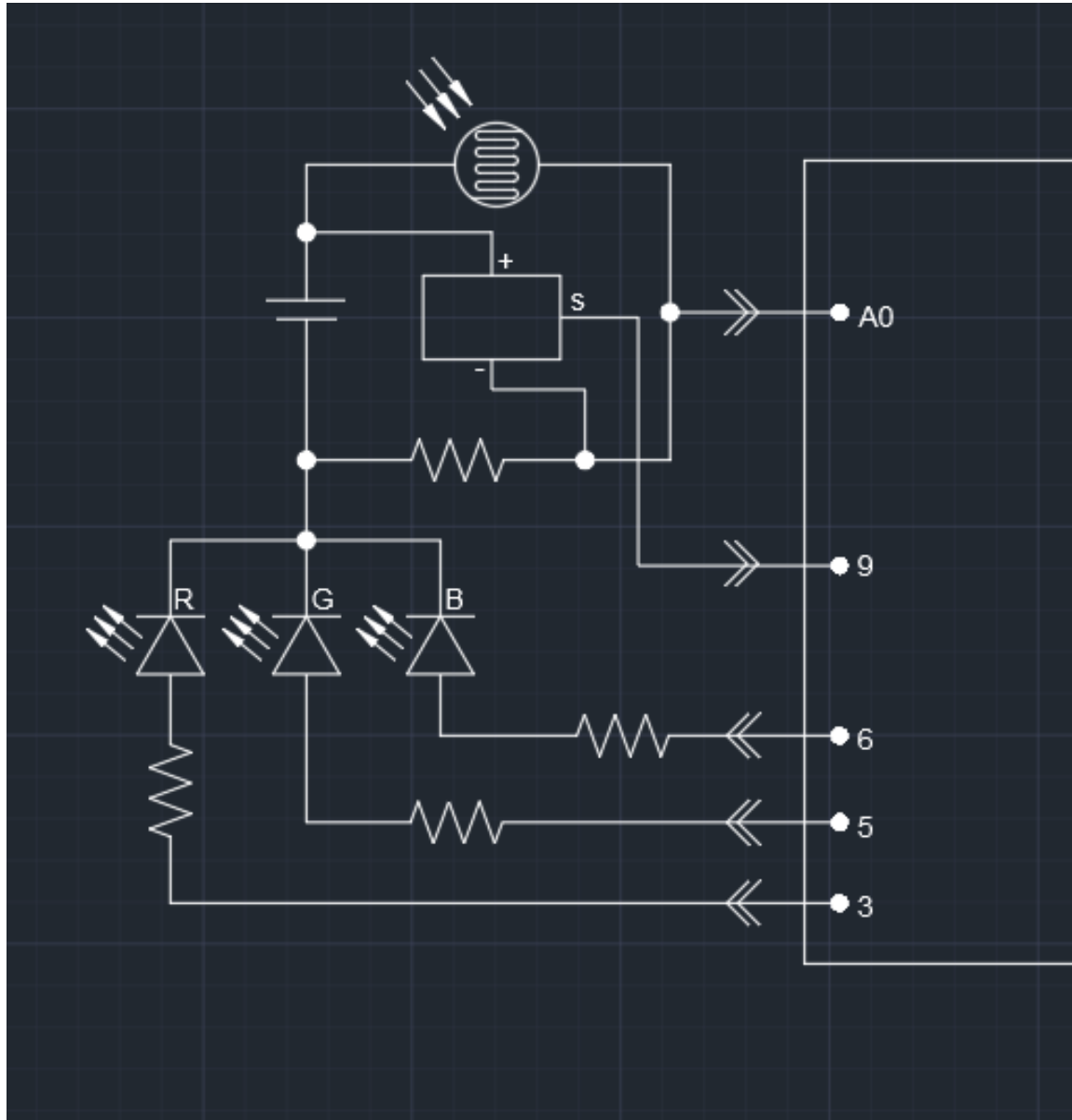
대충 요런거

사용된 기기, 센서

- 아두이노 우노
- 온습도센서 DHT11
- 조도센서



회로



코드

sketch_feb27a §

```
1 #include "DHT.h"
2 #define DHTTYPE DHT11
3 #define DHTPIN 9
4 #define photo_in A0
5 #define LED_R_out 3
6 #define LED_G_out 5
7 #define LED_B_out 6
8
9
10 DHT dht(DHTPIN, DHTTYPE); //습도센서 설정
11 int photo = 0;
12 int humid = 0;
13 int temp;
14 float red, green, blue;
15
16 void setup() {
17     pinMode(photo_in, INPUT);
18     pinMode(LED_out, OUTPUT);
19     dht.begin();
20 }
21
22 void loop() {
23     photo = analogRead(photo_in);
24     humid = dht.readHumidity();
25     red = 2500 - pow(humid);
26     green = 2500 - pow(humid-50);
27     blue = 2500 - pow(humid-100);
28     if (red<0) red=0;
29     if (green<0) green=0;
30     if (blue<0) blue=0;
31     analogWrite(LED_R_out, map(photo*red/2500, 0, 1023, 255, 0));
32     analogWrite(LED_G_out, map(photo*green/2500, 0, 1023, 255, 0));
33     analogWrite(LED_B_out, map(photo*blue/2500, 0, 1023, 255, 0));
34     delay(1000);
35 }
```

코드

sketch_feb27a §

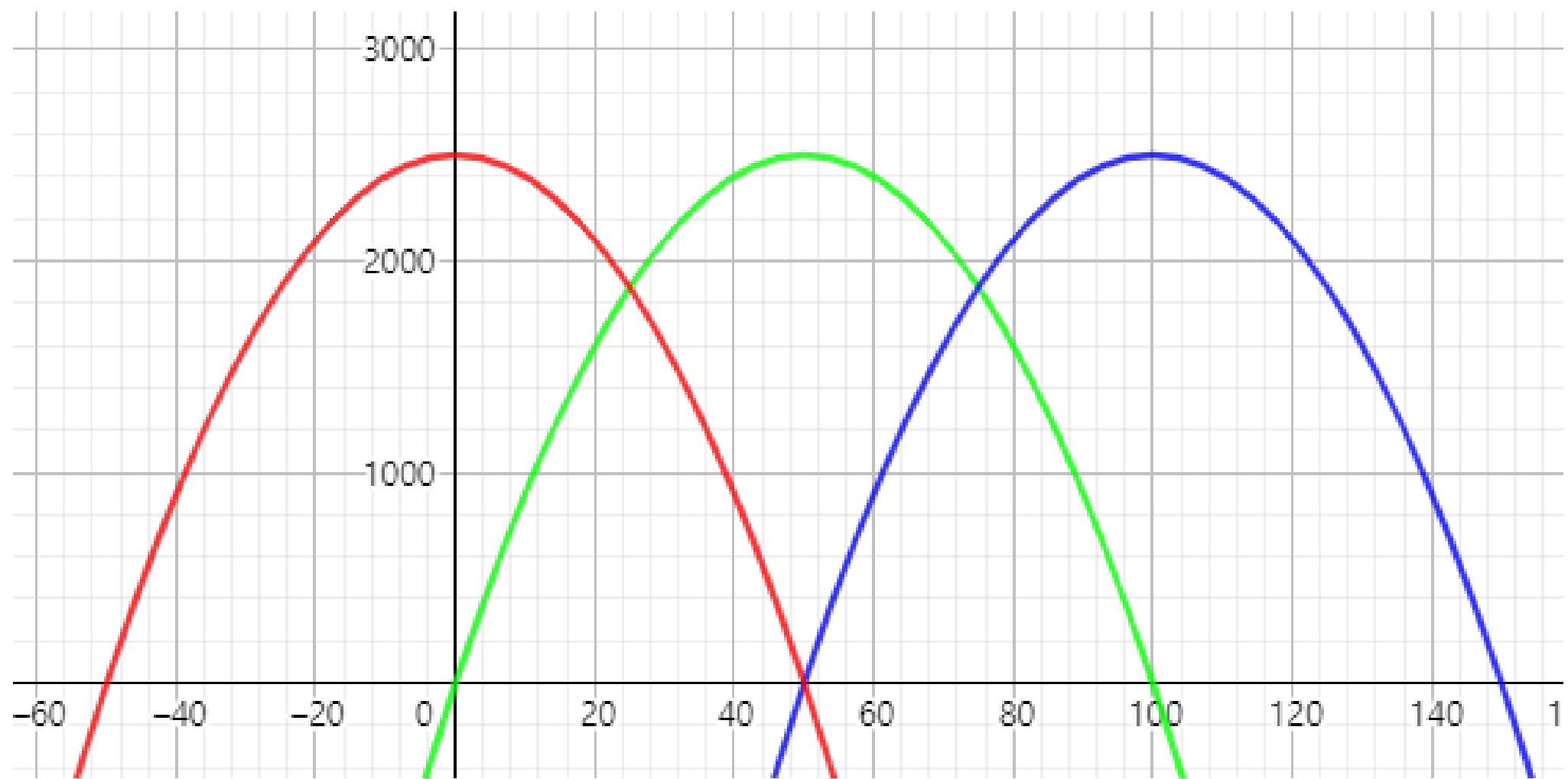
```
1 #include "DHT.h"
2 #define DHTTYPE DHT11
3 #define DHTPIN 9
4 #define photo_in A0
5 #define LED_R_out 3
6 #define LED_G_out 5
7 #define LED_B_out 6
~
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코드

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코드

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22 void loop() {  
23     photo = analogRead(photo_in);  
24     humid = dht.readHumidity();  
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28     if (red<0) red=0;  
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31     analogWrite(LED_R_out, map(photo*red/2500, 0, 1023, 255, 0));  
32     analogWrite(LED_G_out, map(photo*green/2500, 0, 1023, 255, 0));  
33     analogWrite(LED_B_out, map(photo*blue/2500, 0, 1023, 255, 0));  
34     delay(1000);  
35 }
```



```
#define LED_D_out 0  
  
DHT dht(DHTPIN, DHTTYPE); //습도센서 설정
```

```
int photo = 0;
```

```
int humid = 0;
```

```
int temp;
```

```
float red, green, blue;
```

```
void setup() {
```

```
    pinMode(photo_in,INPUT);
```

```
    pinMode(LED_out,OUTPUT);
```

```
    dht.begin();
```

```
}
```

```
void loop() {
```

```
    photo = analogRead(photo_in);
```

```
    humid = dht.readHumidity();
```

```
    red = 2500 - pow(humid);
```

```
    green = 2500 - pow(humid-50);
```

```
    blue = 2500 - pow(humid-100);
```

```
    if (red<0) red=0;
```

```
    if (green<0) green=0;
```

```
    if (blue<0) blue=0;
```

```
    analogWrite(LED_R_out, map(photo*red/2500, 0, 1023,  
255 0));
```

