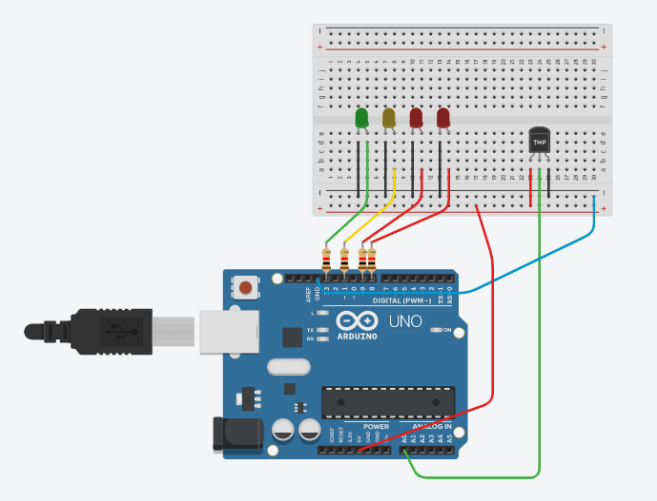
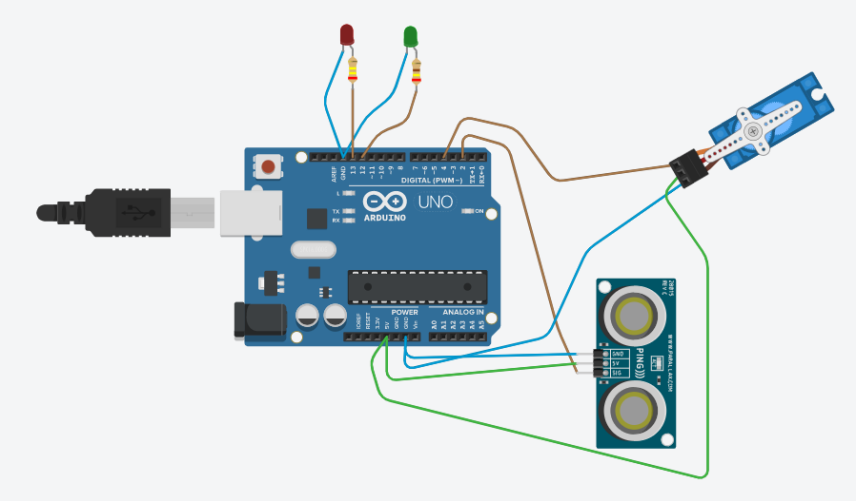
Ejercicio 1




```
int tem = 0;
int cels = 0;
void setup()
{
        pinMode(A0, INPUT);
        pinMode(13, OUTPUT);
        pinMode(11, OUTPUT);
        pinMode(9, OUTPUT);
   pinMode(8, OUTPUT);
   digitalWrite(13, LOW);
   digitalWrite(11, LOW);
   digitalWrite(9, LOW);
   digitalWrite(8, LOW);
}
void loop()
{
        tem = 40;
        cels = cels =  map(((analogRead(A0) - 20) * 3.04), 0, 1023, -40, 125);
```

```
        if (cels <= 24) {
  digitalWrite(13, HIGH);
  digitalWrite(11, LOW);
  digitalWrite(9, LOW);
  digitalWrite(8, LOW);
 }
        if (cels > 24 && cels <= 27) {
        digitalWrite(13, LOW);
  digitalWrite(11, HIGH);
  digitalWrite(9, LOW);
  digitalWrite(8, LOW);
 }
        if (cels >= 28 && cels <= 33) {
        digitalWrite(13, LOW);
  digitalWrite(11, LOW);
  digitalWrite(9, HIGH);
  digitalWrite(8, LOW);
 }
        if (cels >= 34) {
        digitalWrite(13, LOW);
  digitalWrite(11, LOW);
  digitalWrite(9, HIGH);
  digitalWrite(8, HIGH);
 }
}
```

Ejercicio 2




```
Servo servo1;
int inches = 0;
int dist = 0;
int position = 0;
long readUltrasonicDistance(int pin)
{
  pinMode(pin, OUTPUT);
  digitalWrite(pin, LOW);
  delayMicroseconds(2);
  digitalWrite(pin, HIGH);
  delayMicroseconds(10);
  digitalWrite(pin, LOW);
  pinMode(pin, INPUT);
  return pulseIn(pin, HIGH);
}
void setup()
{
  pinMode(4, OUTPUT);
  pinMode(13, OUTPUT);
```

```
  pinMode(12, OUTPUT);
  pinMode(2, INPUT);
  Serial.begin(9600);
  servo1.attach(2);
}
void loop()
{
  dist = 0.01723 * readUltrasonicDistance(2);
 { if (dist <=20)
  digitalWrite(13, HIGH);
  digitalWrite(12, LOW);
  delay(5000);
  digitalWrite(13, LOW);
  digitalWrite(12, HIGH);
  delay(5000);
  for (position = 0; position <= 180; position += 1) {
            Serial.println(position);
            servo1.write(position);
            delay(5000);
}
for (position = 180; position >= 0; position -= 1) {
Serial.println(position);
servo1.write(position);
delay(5000);
}
  digitalWrite(13, LOW);
  digitalWrite(12, LOW);
  delay(500);
} }
```