

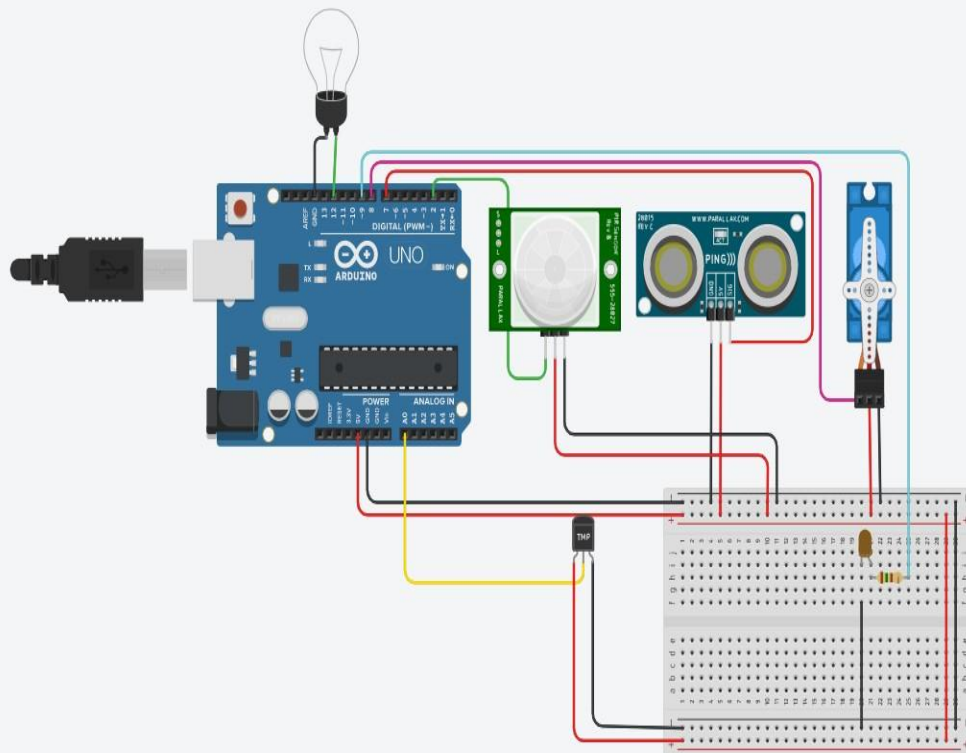
ASSIGNMENT - 1

HOME AUTOMATION

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CIRCUIT :



CODE :

```
#include <Servo.h>int
dist = 0;
long readUltrasonicDistance(int triggerPin, int echoPin)
{
    pinMode(triggerPin, OUTPUT); / Clear the trigger
    digitalWrite(triggerPin, LOW); delayMicroseconds(2);
    / Sets the trigger pin to HIGH state for 10 microsecondsdigitalWrite(triggerPin,
    HIGH);
    delayMicroseconds(10);
    digitalWrite(triggerPin, LOW);
    pinMode(echoPin, INPUT);
    / Reads the echo pin, and returns the sound wave travel time inmicroseconds
    return pulseIn(echoPin, HIGH);
}
```

```
Servo servo_8;void
setup()
{
  servo_8.attach(8, 500, 2500);
  pinMode(2, INPUT);
  pinMode(12, OUTPUT);
  pinMode(A0, INPUT);
  pinMode(9, OUTPUT);
}

void loop()
{
  dist = 0.01723 * readUltrasonicDistance(7, 7);if
  (dist <= 100) {
    servo_8.write(90);
    delay(1000); / Wait for 1000 millisecond(s)
  } else {
    servo_8.write(0);
    delay(1000); / Wait for 1000 millisecond(s)
  }
  if (digitalRead(2) == 1) {
    digitalWrite(12, HIGH);
    delay(1000); / Wait for 1000 millisecond(s)
  } else {
    digitalWrite(12, LOW);
    delay(1000); / Wait for 1000 millisecond(s)
  }
}
```

```
if (analogRead(A0) > 200) {  
  digitalWrite(9, HIGH);  
  delay(1000); / Wait for 1000 millisecond(s)  
} else {  
  digitalWrite(9, LOW);  
  delay(1000); / Wait for 1000 millisecond(s)  
}  
}
```

TINKERCAD LINK :

<https://www.tinkercad.com/things/7lV68hGUW5V-neat-tumelo-luulia/editel?sharecode=I8Q0lPz33Wtv2RUkavarscqH8ZiVImQJyo46hjCYMrQ>