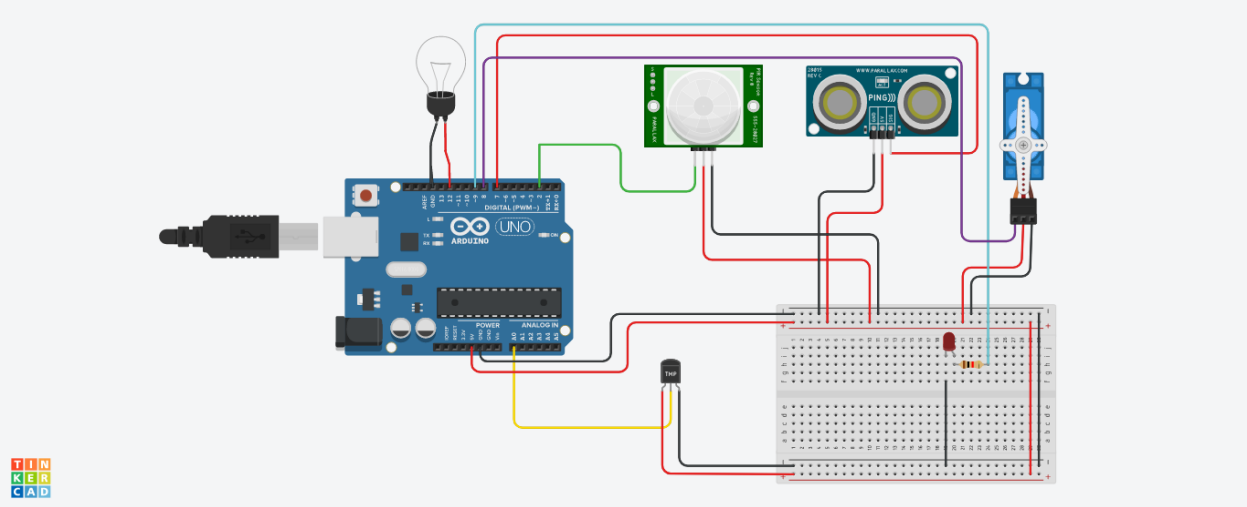
ASSIGNMENT 1 - HOME AUTOMATION

HEMANTH KUMAR R 113119UG03034

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 microseconds
  digitalWrite(triggerPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(triggerPin, LOW);
  pinMode(echoPin, INPUT);
```

```
  / Reads the echo pin, and returns the sound wave travel time in
  microseconds 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)
 }
```

TIMKERCAD LINK :

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