ASSIGNMENT 1 - HOME AUTOMATION
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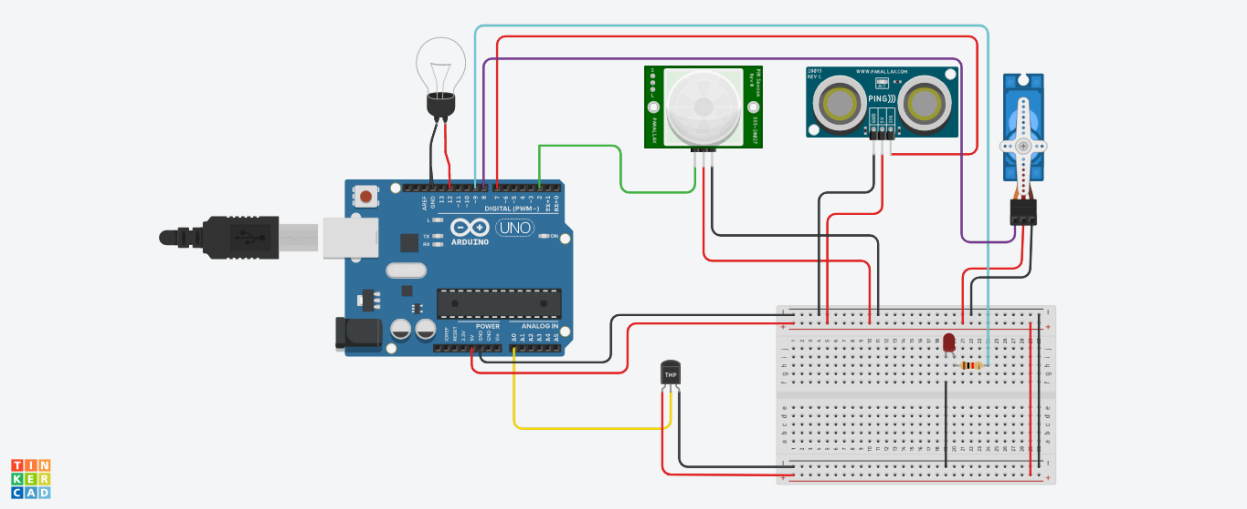
CIRCUIT :



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 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