Assignment 1:

IOT Enabled Smart Farming Application"

Batch NO: B9-3A5E

make smart home with atleast 2 sensors and led, buzzer. in tinkercad

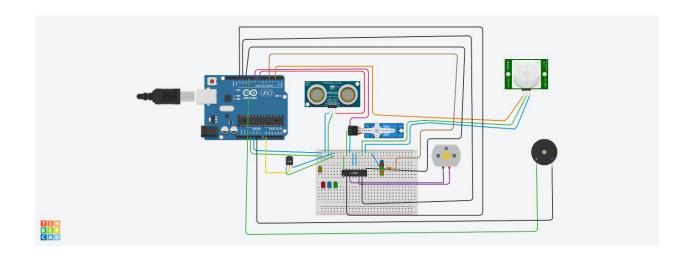
CODE:

```
#include<Servo.h>
const int pingPin = 7;
int servoPin = 8;
Servo servo1;
void setup() {
 // initialize serial communication:
 Serial.begin(9600);
 servo1.attach(servoPin);
 pinMode(2,INPUT);
 pinMode(4,OUTPUT);
 pinMode(10,OUTPUT);
 pinMode(11,OUTPUT);
 pinMode(12,OUTPUT);
 pinMode(13,OUTPUT);
 pinMode(A0,INPUT);
 digitalWrite(2,LOW);
 digitalWrite(11,HIGH);
void loop() {
 long duration, inches, cm;
```

```
pinMode(pingPin, OUTPUT);
digitalWrite(pingPin, LOW);
delayMicroseconds(2);
digitalWrite(pingPin, HIGH);
delayMicroseconds(5);
digitalWrite(pingPin, LOW);
// The same pin is used to read the signal from the PING))): a HIGH pulse
// whose duration is the time (in microseconds) from the sending of the ping
// to the reception of its echo off of an object.
pinMode(pingPin, INPUT);
duration = pulseIn(pingPin, HIGH);
// convert the time into a distance
inches = microsecondsToInches(duration);
cm = microsecondsToCentimeters(duration);
//Serial.print(inches);
//Serial.print("in, ");
//Serial.print(cm);
//Serial.print("cm");
//Serial.println();
//delay(100);
servo1.write(0);
if(cm < 50)
 servo1.write(90);
 delay(2000);
}
```

```
else
 servo1.write(0);
// PIR with LED starts
int pir = digitalRead(2);
if(pir == HIGH)
 digitalWrite(4,HIGH);
 delay(1000);
else if(pir == LOW)
 digitalWrite(4,LOW);
//temp with fan
float value=analogRead(A0);
float temperature=value*0.48;
Serial.println("temperature");
Serial.println(temperature);
if(temperature > 25)
 digitalWrite(12,HIGH);
 digitalWrite(13,LOW);
else
```

```
digitalWrite(12,LOW);
  digitalWrite(13,LOW);
 if(temperature>=35)
 for(int i=0; i<=30000; i=i+10)
 tone(10,i);
 delay(1000);
 noTone(10);
 delay(1000);
long microsecondsToInches(long microseconds) {
 return microseconds / 74 / 2;
}
long microsecondsToCentimeters(long microseconds) {
 return microseconds / 29 / 2;
```



MY TINKERCAD LINK https://www.tinkercad.com/things/jShnkoLFklP-copy-of-home-automation-system/editel?sharecode=I ImZ4sAZC52ROw8vn7XEcLfkiPOZsl3PaVdDyvloww

DONE BY

BATCH NO: B9-3A5E (917719D023, 917719D011, 917719D049, and 19D069)