

Assignment-01

Python Programming

Question-1:

Build a smart home in Thinkercad with 2 sensors, an Led, buzzer and submit it.

Solution:

```
#include<Servo.h>

Servo s;

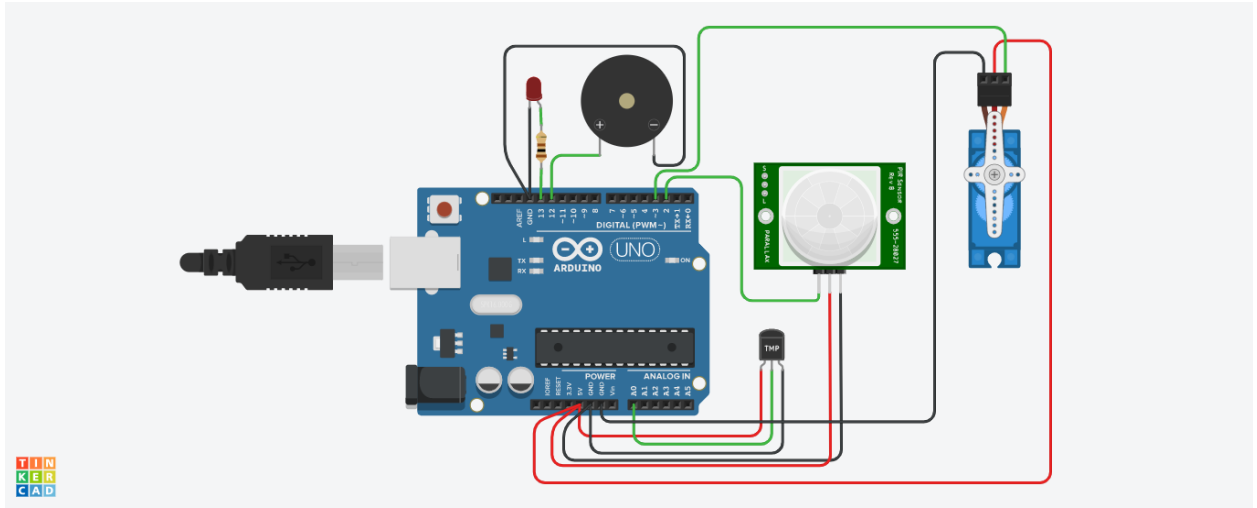
void setup()
{
    Serial.begin(9600);
    pinMode(12,OUTPUT);
    pinMode(13,OUTPUT);
    pinMode(2,INPUT);
    s.attach(3);
}

void loop()
{
    int a=digitalRead(2);
    double b=analogRead(A0);
    double c((((b/1024)*5)-0.5)*100);
    s.write(0);
    digitalWrite(13,LOW);
    if(a)
    {
        Serial.println("Human Arrived,door open ");
        tone(12,30);
        delay(200);
    }
}
```

```
noTone(12);
if(c>37)
{
    digitalWrite(13,HIGH);
    delay(1000);
    tone(12,1000);
    delay(50);
    noTone(12);
    Serial.print("The Body temperature is :");
    Serial.println(c);
    Serial.println("WARNING : Body temperature is higher than normal body temperature!");
    Serial.println("So, You are not allowed!!!");
    s.write(0);
}
else
{
    digitalWrite(13,LOW);
    Serial.print("The Body temperature is :");
    Serial.println(c);
    Serial.println("Normal body temperature .So, Door is opening");
    for(int i=0;i<180;i++)    //Door opening
    {
        s.write(i);
        delay(10);
    }
}
delay(1000);
```

}

}



TIN
KER
CAD