

IBM ASSIGNMENT -1

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Smart Home Automation System Using IoT:

Code:

```
#include<Servo.h>

const int pingPin = 2;
int servoPin = 3;

Servo servo;

void setup() {
  Serial.begin(9600);
  servo.attach(servoPin);
  pinMode(4,INPUT);
  pinMode(5,OUTPUT);
  pinMode(11,OUTPUT);
  pinMode(12,OUTPUT);
  pinMode(13,OUTPUT);
  pinMode(A0,INPUT);
  digitalWrite(12,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);
pinMode(pingPin, INPUT);
duration = pulseIn(pingPin, HIGH);
servo.write(0);
if(cm < 60)
{
    servo.write(45);
    delay(5000);
}
servo.write(0);
int pir = digitalRead(4);
if(pir == HIGH)
{
    digitalWrite(5,LOW);
    delay(1000);
}
else if(pir == LOW)
{
    digitalWrite(5,LOW);
}
float value=analogRead(A0);
float temperature=value*0.48;
Serial.println("temperature");
Serial.println(temperature);
if(temperature > 30)
{
    digitalWrite(12,LOW);
    digitalWrite(13,HIGH);
}
else
```

```
{  
    digitalWrite(12,LOW);  
    digitalWrite(13,LOW);  
}  
}
```