

IBM Project Assignment-1

Smart Home Automation

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CODE:

```
#include<Servo.h>
```

```
#include<stdio.h>
```

```
Servo s;
```

```
void setup()
```

```
{
```

```
    pinMode(3,INPUT);
```

```
s.attach(4);
```

```
    pinMode(5,INPUT);
```

```
    pinMode(6,OUTPUT);
```

```
    pinMode(7,INPUT);
```

```
    pinMode(8,OUTPUT);
```

```
    pinMode(9,OUTPUT);
```

```
    pinMode(10,OUTPUT);
```

```
    pinMode(11,OUTPUT);
```

```
    pinMode(12,OUTPUT);
```

```
    pinMode(13,OUTPUT);
```

```
    Serial.begin(9600);
```

```
}
```



```

void loop() { double a =
analogRead(A0); double t =
(((a/1024)*5)-0.5)*100; int b =
digitalRead(7); if(b ==
HIGH){  digitalWrite(13,HIGH);
    Serial.println("Motion
    Detected.");
}
else{
digitalWrite(13,LOW);
}
Serial.println(b);

digitalWrite(6,LOW);
digitalWrite(6,HIGH);
delayMicroseconds(10);
digitalWrite(6,LOW); float
dur = pulseIn(5,HIGH); float
dis = (dur*0.0343)/2; int d =
digitalRead(3);
Serial.print("what: ");
Serial.println(d);

if(dis<30 && b == HIGH ||
d==LOW){
Serial.println("INTRUDER!!!! ");
s.write(90);  delay(100);

}

```



```
else{  
    s.write(0);
```



```

delay(1000);

Serial.print("Temp Value: ");

Serial.println(t); int c = 0;

if(t<15){    digitalWrite(9,LOW);
              digitalWrite(10,LOW);
              digitalWrite(11,LOW);
              digitalWrite(12,HIGH);
              tone(8,131);
            }

    else if(t>15 &&
t<30){    digitalWrite(9,LOW);
            digitalWrite(10,LOW);
            digitalWrite(11,HIGH);
            digitalWrite(12,LOW);    noTone(8);
          }

    else if(t>30 &&
t<45){    digitalWrite(9,LOW);
            digitalWrite(10,HIGH);
            digitalWrite(11,LOW);
            digitalWrite(12,LOW);    noTone(8);
          }

    else{
        digitalWrite(9,HIGH);
        digitalWrite(10,LOW);
        digitalWrite(11,LOW);
        digitalWrite(12,LOW);
    }
}

```

tone(8,131);



```
} delay(100);
```

```
}
```

STIMULATION SCREENSHOT:

