IBM Project Assignment-1
Smart Home Automation

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CODE:

```c
#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);

}
```

```arduino
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,L OW);
 }
 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,LO

W);    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: