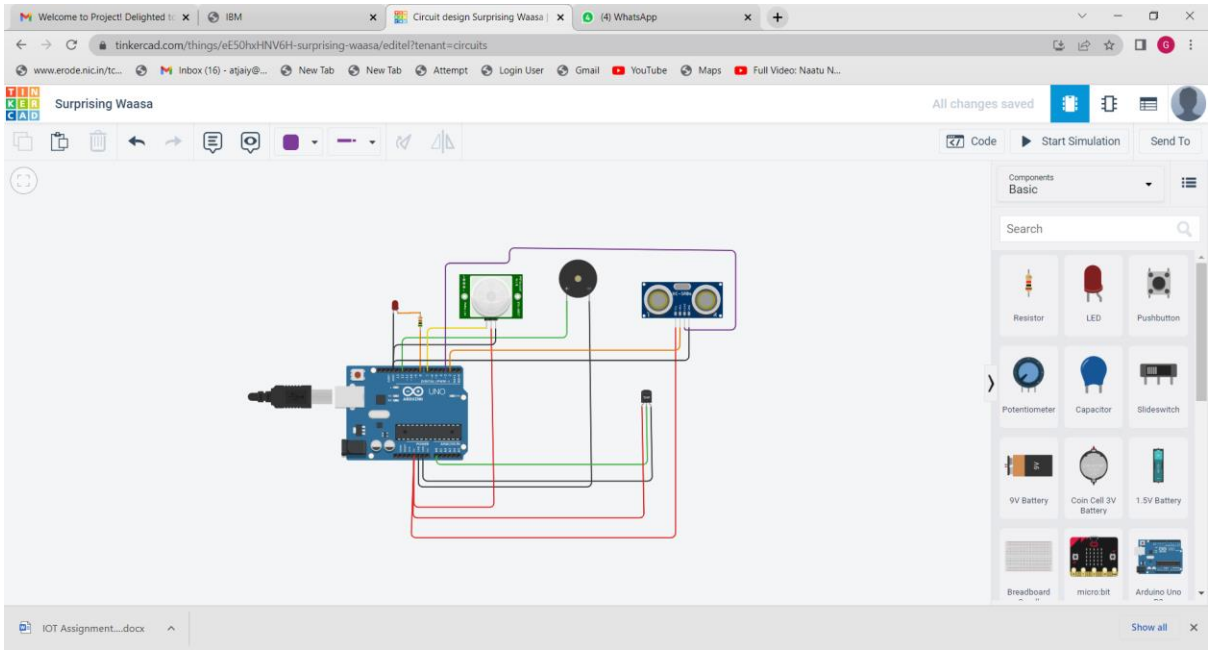
NALAIYATHIRAN

TEAM ID: PNT2022TMID19466

IoT Assignment 1: HOME AUTOMATION:

Circuit Diagram:



Code:

```
int t=2;
int e=3;
void setup(){
Serial.begin(9600);
pinMode(t,OUTPUT);
pinMode(e,INPUT);
pinMode(12,OUTPUT);
}

void loop(){
```

```
//ultrasonic sensor

digitalWrite(t,LOW);
 digitalWrite(t,HIGH);
delayMicroseconds(10);
digitalWrite(t,LOW);
 float dur=pulseIn(e,HIGH);
float dis=(dur*0.0343)/2;
Serial.print("Distance is: ");
Serial.println(dis);
//LED ON
if(dis>=100) {
digitalWrite(8,HIGH);
 digitalWrite(7,HIGH);
}

//Buzzer For ultrasonic Sensor

if(dis>=100) {
for(int i=0; i<=30000; i=i+10) {
tone(12,i);
delay(1000);
noTone(12);
delay(1000);
 }
}

//Temperate Sensor

double a= analogRead(A0);
double t=(((a/1024)*5)-0.5)*100;
```

```
 Serial.print("Temp Value: ");
Serial.println(t);
delay(1000);

//LED ON

if(t>=100) {
digitalWrite(8,HIGH);
 digitalWrite(7,HIGH);
 }

//Buzzer for Temperature Sensor
 if(t>=100) {
for(int i=0; i<=30000; i=i+10) {
tone(12,i);
delay(1000);
noTone(12);
delay(1000);
}
}
//LED OFF
if(t<100) {
digitalWrite(8,LOW);
digitalWrite(7,LOW);
}
  //Pir Sensor
  int motion=digitalRead(8);
  if(motion==1){
    Serial.println("Motion is detected");
    digitalWrite(12,HIGH);
    delay(5000);
  }
```

```
  else{
    Serial.println("No Motion");
    digitalWrite(12,LOW);
  }

//Buzzer For PIR sensor

if(motion==1) {
for(int i=0; i<=30000; i=i+10) {
tone(12,i);
delay(1000);
noTone(12);
delay(1000);
 }
}
}
```