ASSINGMENT NO:1

IBM(NALAIYA THIRAN)

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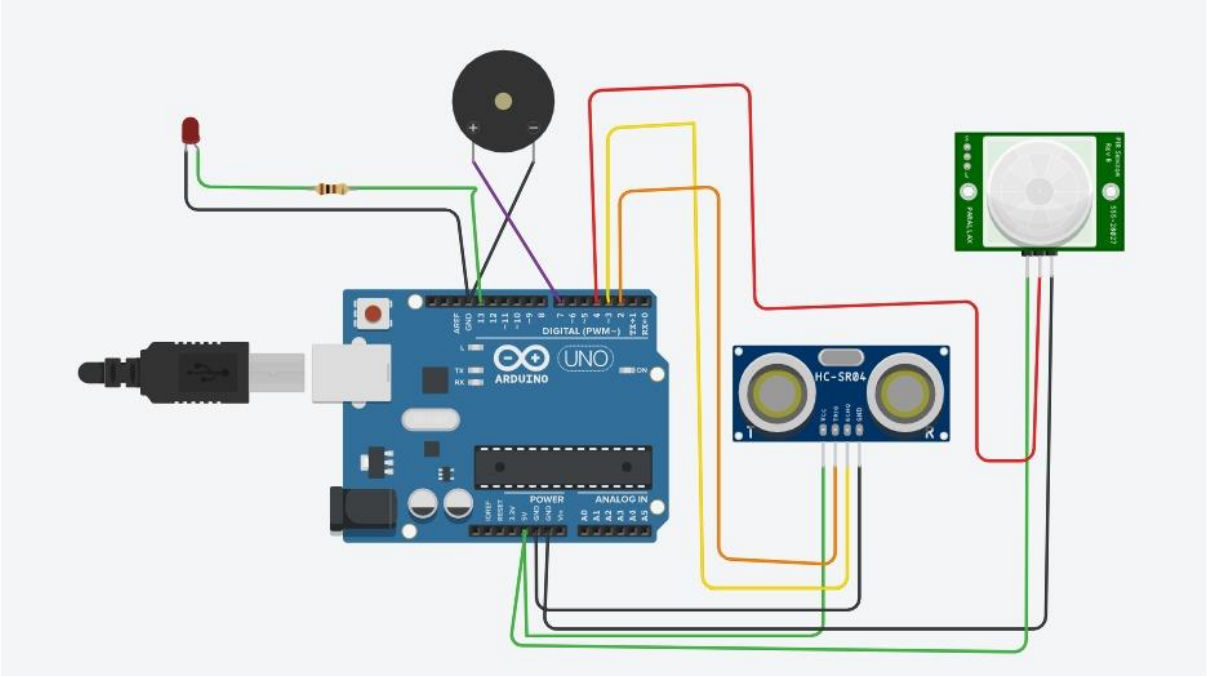
TOPIC : SMART HOME



TINKER CAD IMAGE

CODE:

```
// C++ code
//
int trigger_pin=2;
int echo_pin=3;
```

```
int buzzer_pin=7;
int time;
int distance;

void setup()
{
  Serial.begin(9600);
  pinMode(trigger_pin,OUTPUT);
  pinMode(echo_pin,INPUT);
  pinMode(4,INPUT);
  pinMode(13,OUTPUT);
  pinMode(buzzer_pin,OUTPUT);
// pinMode(2,INPUT);
  pinMode(7,OUTPUT);
}

void loop()
{
 digitalWrite(trigger_pin,HIGH);
 delayMicroseconds(10);
 digitalWrite(trigger_pin,LOW);
 time=pulseIn(echo_pin,HIGH);
 distance=(time*0.034)/2;

  if(distance<10){
```

```
  Serial.println("DOOR  OPEN");
  Serial.print("Distance:");
  Serial.println(distance);
  delay(10);
 }
 else{
  Serial.println("DOOR CLOSED");
  Serial.print("Distance:");
  Serial.println(distance);
   digitalWrite(7,LOW);
  delay(10);
 int p=digitalRead(4);
  if(p){
    digitalWrite(13,HIGH);
    digitalWrite(7,HIGH);
    Serial.println("MOTION DETECTED");

  }
  else{
    digitalWrite(13,LOW);
    digitalWrite(7,LOW);
    Serial.println("not dected");
  }
 }
 }
```