smart home -rajappa

assignment- https://wokwi.com/projects/363142398925863937

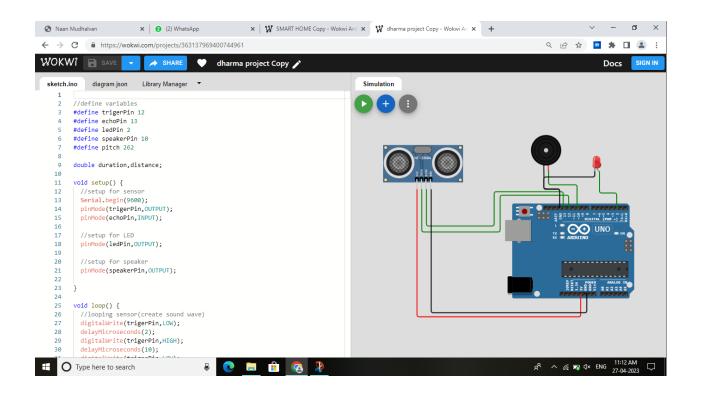
```
//define variables
#define trigerPin 12
#define echoPin 13
#define ledPin 2
#define speakerPin 10
#define pitch 262
double duration, distance;
void setup() {
 //setup for sensor
 Serial.begin(9600);
  pinMode(trigerPin,OUTPUT);
  pinMode(echoPin,INPUT);
  //setup for LED
  pinMode(ledPin,OUTPUT);
  //setup for speaker
  pinMode(speakerPin,OUTPUT);
}
void loop() {
 //looping sensor(create sound wave)
  digitalWrite(trigerPin,LOW);
  delayMicroseconds(2);
  digitalWrite(trigerPin,HIGH);
  delayMicroseconds(10);
  digitalWrite(trigerPin,LOW);
  delayMicroseconds(2);
//getduration
duration = pulseIn(echoPin,HIGH);
//caculate distance
```

```
distance = (duration/2) * 0.0343;

//consider maximum width of the door = 200 cm

if(distance<200){
    digitalWrite(ledPin, HIGH);
    tone(speakerPin, pitch);
    delay(300);

    digitalWrite(ledPin, LOW);
    noTone(speakerPin);
    delay(300);
}
else{
    digitalWrite(ledPin,LOW);
    noTone(speakerPin);
}
</pre>
```







```
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                                                                                                                                                                                Docs
               diagram.json Library Manager
                                                                                                    Simulation
                                                                                                     //define variables
               //define variables
#define trigerPin 12
#define echoPin 13
#define ledPin 2
#define speakerPin 10
#define pitch 262
      10
               double duration, distance;
               void setup() {
  //setup for sensor
  Serial.begin(9500);
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18
                 pinWode(trigerPin,OUTPUT);
pinWode(echoPin,INPUT);
                 //setup for LED
pinWode(ledPin,OUTPUT);
      19
20
                 //setup for speaker
pinWode(speakerPin,GUTPUT);
      21
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23
      24
              void loop() {
    //looping sensor(create sound wave)
    digitalWrite(trigerPin,LOW);
    delayWicroseconds(2);
    digitalWrite(trigerPin,HIGH);
    delayWicroseconds(10);
    digitalWrite(trigerPin,LOW);
    delayWicrosecond(2);
}
      25
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      29
      30
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      32
                 delayWicroseconds(2);
                  /getduration
      34
      35
36
37
               duration = pulseIn(echoPin,HIGH);
               //caculate distance
distance = (duration/2) * 0.0343;
      3.8
               7/consider maximum width of the door - 200 cm
      40
      41
               if(distance<200){
      42
                 digitalWrite(ledPin,HIGH);
tone(speakerPin, pitch);
      43
      44
                                                                                                               delay(300);
      46
47
                  digitalWrite(ledPin, LOW);
                  noTone(speakerPin);
delay(300);
      48
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               digitalWrite(ledPin,LOW);
noTone(speakerPin);
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```