void setup(){

Serial.begin(9600);

pinMode(2,OUTPUT);

pinMode(4,INPUT);

}

void loop(){

digitalWrite(2,LOW);

delayMicroseconds(2);

digitalWrite(2,HIGH);

delayMicroseconds(10);

float duration=pulseIn(4,HIGH);

duration=duration/2;

//speed equals distance/time

// thus, distance=speed\*time

//speed of sound=0.034 cm/s

float distance=duration\*0.034;

Serial.print("Distance value: ");

Serial.print(distance);

Serial.println("cm");

}

void setup\_1()

{

Serial.begin(9600);

pinMode(2,INPUT);

}

void loop\_1()

{

int motion=digitalRead(2);

if(motion==1){

Serial.println("Motion detected");

}

else{

Serial.println("No Motion");

}

}

void setup\_2()

{

Serial.begin(9600);

pinMode(A2,INPUT);

pinMode(12,OUTPUT);

}

void loop\_2()

{

double data=analogRead(A2);

double n=data/1024;

double volt=n\*5;

double off=volt-0.5;

double temperature=off\*100;

Serial.print("Temperature data: ");

Serial.println(temperature);

if(temperature >=60)

{

tone(12,6000);

delay(200);

}

else

{

noTone(12);

delay(200);

}

}

void setup\_3()

{

Serial.begin(9600);

pinMode(12,OUTPUT);

}

void loop\_3()

{

for(int freq=0;freq<=30000;freq+1000){

tone(12,freq);

delay(1000);

noTone(12);

delay(500);

}

}





