#include <Servo.h>  
  
int dist = 0;  
  
long readUltrasonicDistance(int triggerPin, int echoPin)  
{  
  pinMode(triggerPin, OUTPUT);  
  digitalWrite(triggerPin, LOW);  
  delayMicroseconds(2);  
  
  digitalWrite(triggerPin, HIGH);  
  delayMicroseconds(10);  
  digitalWrite(triggerPin, LOW);  
  pinMode(echoPin, INPUT);  
  return pulseIn(echoPin, HIGH);  
}  
  
Servo servo\_8;  
  
void setup()  
{  
  servo\_8.attach(8, 500, 2500);  
  pinMode(2, INPUT);  
  pinMode(12, OUTPUT);  
  pinMode(A0, INPUT);  
  pinMode(9, OUTPUT);  
}  
  
void loop()  
{  
  dist = 0.01723 \* readUltrasonicDistance(7, 7);  
  if (dist <= 100) {  
    servo\_8.write(90);  
    delay(1000);  
  } else {  
    servo\_8.write(0);  
    delay(1000);  
  }  
  if (digitalRead(2) == 1) {  
    digitalWrite(12, HIGH);  
    delay(1000);  
  } else {  
    digitalWrite(12, LOW);  
    delay(1000);  
  }  
  if (analogRead(A0) > 200) {  
    digitalWrite(9, HIGH);  
    delay(1000);  
  } else {  
    digitalWrite(9, LOW);  
    delay(1000);  
  }  
}