```
const int trigPin = 8;  //D6 of nodemcu
const int echoPin = 9;  //D5 of nodemcu
long duration;
int distance=0, temp=0;

//const int trigPin1 = D3;  //D2 of nodemcu
//const int echoPin1 = D2;  //D3 of nodemcu
//long duration1;
//int distance1=0, temp1=0;

int alarm = 7;  //D7
int l1 = 13;  //13-LED 1 Yellow
int f = 10; //D0-LED 2 Green
int r = 11; //D0-LED 2 Green

void setup() {
  pinMode(trigPin, OUTPUT);  // Sets the trigPin as an Output
  pinMode(echoPin, INPUT);   // Sets the echoPin as an Input

//  pinMode(trigPin1, OUTPUT);  // Sets the trigPin as an Output
//  pinMode(echoPin1, INPUT);   // Sets the echoPin as an Input

  Serial.begin(9600);      // Open serial channel at 9600 baud rate

  Serial.println("Ultrasonic Door Lock!!!");
  delay(1000);

  pinMode(l1, OUTPUT);
  pinMode(f, OUTPUT);
  pinMode(r, OUTPUT);
  pinMode(alarm, OUTPUT);
```

```arduino
    delay(1000);
    digitalWrite(l1, HIGH);
    digitalWrite(f, HIGH);
    digitalWrite(r, HIGH);

    delay(3000);

}

// defines variables

int count = 0, mean=0;
void loop() {
l:
  for(int i=0;i<=2;i++)
  {
    // Clears the trigPin
    digitalWrite(trigPin, LOW);
    delayMicroseconds(2);

    // Sets the trigPin on HIGH state for 10 micro seconds
    digitalWrite(trigPin, HIGH);
    delayMicroseconds(10);
    digitalWrite(trigPin, LOW);

    // Reads the echoPin, returns the sound wave travel time in microseconds
    duration = pulseIn(echoPin, HIGH);

    // Calculating the distance
    distance= duration*0.034/2;

    // Prints the distance on the Serial Monitor

  }

  int p1 = analogRead(A0);
  delay(500);
  int p2 = analogRead(A3);
  delay(500);

  Serial.print("Distance S1: ");
  Serial.println(distance);
  Serial.println(" ");
  delay(100);
  Serial.print("Proximity P1: ");
  Serial.println(p1);
  Serial.println(" ");
```

```arduino
    delay(100);
    Serial.print("Proximity P2: ");
    Serial.println(p2);
    Serial.println(" ");
    delay(100);

    if(distance>40)
    {
      //digitalWrite(l1, LOW);
      //digitalWrite(l2, HIGH);
      digitalWrite(alarm, LOW);
      temp = 0;
      delay(200);
    }
    else if((distance<40) && (distance>0))
    {
      //digitalWrite(l1, HIGH);
      //digitalWrite(l2, LOW);
      //digitalWrite(alarm, HIGH);
      temp = 1;
      delay(200);
    }

    if((p1 < 400)&&(p2 < 400)&&(temp == 1))  //if ultrasonic sensed and s1 detected, s2 free -->
the door closed, so open door
    {
      //count = 1;  // motor on fwd
      while(1)
      {
        digitalWrite(l1, HIGH);   //door open
        digitalWrite(f, LOW);
        digitalWrite(r, HIGH);
        p2 = analogRead(A3);
        p1 = analogRead(A0);
        Serial.print("Proximity P2: ");
        Serial.println(p2);
        Serial.println(" ");
        delay(50);

        if((p2 > 400)&&(p1 > 400))
        {
          digitalWrite(l1, LOW);  //door stop as s2 reached
          digitalWrite(f, HIGH);
          digitalWrite(r, HIGH);

          delay(10000); //wait for passenger to go

          while(1)
```

```cpp
      {
        digitalWrite(l1, HIGH); //door reverse
        digitalWrite(f, HIGH);
        digitalWrite(r, LOW);
        delay(10);
        p1 = analogRead(A0);
        p2 = analogRead(A3);
        Serial.print("Proximity P1: ");
        Serial.println(p1);
        Serial.println(" ");
        delay(50);

        if((p2 < 400)&&(p1 < 400))
        {
          digitalWrite(l1, LOW);  //stop as reached s1
          digitalWrite(f, HIGH);
          digitalWrite(r, HIGH);

          temp = 0;
          delay(2000);

          goto l;
        }
      }
    }
  }
 }
//  else if((p1 > 100)&&(p2 > 100)) //if ultrasonic sensed and s1 free, s2 detected --> the door
already open, so no operation
//  {
//    count = 2; // motor on rev
//    delay(10);
//  }
//  else if((p1 > 100)&&(p2 < 100)) //if ultrasonic sensed and s1 free, s2 free --> the door is fault,
so no operation
//  {
//    count = 3;
//    delay(10);
//  }
}
```