TITLE: HOME AUTOMATION USING SENSORS.

TEAM MEMBER : H. RAMYA

CODE:

```cpp
// C++ code
//
#include <Servo.h>

Long readUltrasonicDistance(int triggerPin, int echoPin)
{
  pinMode(triggerPin, OUTPUT);  // Clear the trigger
  digitalWrite(triggerPin, LOW);
  delayMicroseconds(2);
  // Sets the trigger pin to HIGH state for 10 microseconds
  digitalWrite(triggerPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(triggerPin, LOW);
  pinMode(echoPin, INPUT);
  // Reads the echo pin, and returns the sound wave travel time in microseconds
  Return pulseIn(echoPin, HIGH);
}

Servo servo_3;

Void setup()
{
  pinMode(0, INPUT);
  pinMode(13, OUTPUT);
  pinMode(0, OUTPUT);
  servo_3.attach(3, 500, 2500);
```

```arduino
  pinMode(A5, INPUT);

  pinMode(12, OUTPUT);

  pinMode(A4, INPUT);

  pinMode(11, OUTPUT);

}


Void loop()

{

  If (digitalRead(0) == 1) {

    digitalWrite(13, HIGH);

  } else {

    digitalWrite(0, LOW);

  }

  If (0.01723 * readUltrasonicDistance(0, 0) >= 100) {

    Servo_3.write(90);

    Delay(1000); // Wait for 1000 millisecond(s)

  } else {

    Servo_3.write(0);

    Delay(1000); // Wait for 1000 millisecond(s)

  }

  If (analogRead(A5) <= 100) {

    digitalWrite(12, HIGH);

  } else {

    digitalWrite(12, LOW);

  }

  If ((-40 + 0.488155 * (analogRead(A4) – 20)) < 30) {

    digitalWrite(11, HIGH);

  } else {

    digitalWrite(11, LOW);
```

}

}

CIRCUIT DIAGRAM: