Using ultrasonic to measure the distance

float measure\_distance()

{

1.    gpio\_put(TRIG\_PIN, 1);

2.   sleep\_us(10);

3.    gpio\_put(TRIG\_PIN, 0);

    // Wait for the pulse measurement to complete

4.    while (pulse\_started)

    {

5.        tight\_loop\_contents();

    }

6.    sleep\_us(1);

7.    if (width > timeout)

8.       return 0;

9.    uint64\_t pulse\_length = absolute\_time\_diff\_us(startTime, endTime);

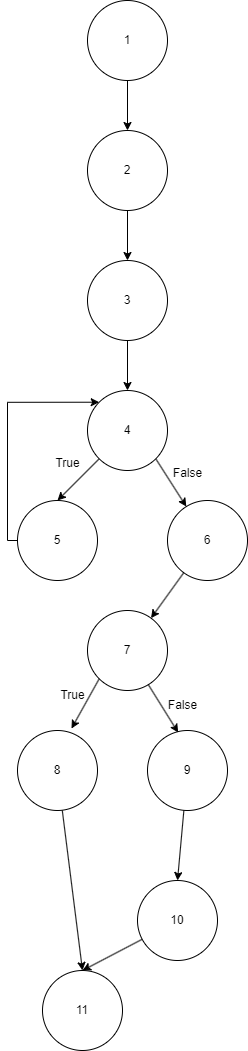
    // Speed of sound = 343 m/s

    // Distance = (Pulse \* Speed of sound) / 2

10.    return pulse\_length \* 0.0343 / 2;

11. }

Control Flow Graph:



**Cyclomatic Complexity**:

E-N+2(P) = M

12(Edge) - 11(Node)+2(1) = 3

**Basis path**:

1,2,3,4,6,**7**,8,11

1,2,3,4,6,**7**,9,10,11

1,2,3,**4**,5,4,6,7,8,11