```
void main ( void )
{       // IR Flame sensor demo. using squarebot.  Does 360 degree scan of environment to find lowest sensor value.  Scans back to find candle and goes to it.

SensorMinVal = 1023 ;                                   // Initialize variable to highest value.

PrintToScreen ( "Scanning environment\n" ) ;

SetMotor ( 1 , 170 ) ;                                  // Rotate squarebot slowly until timer1 meets the "while" condition below.

SetMotor ( 2 , 170 ) ;

StartTimer ( 1 ) ;

Timer1 = GetTimer ( 1 ) ;

    while ( Timer1 < 8000 )                             // Adjust for 360 degree scan.
    {

    Sensor = GetAnalogInput ( 4 ) ;                                         // Read IR flame sensor

    PrintToScreen ( "scanning Sensor =%d\n" , (int)Sensor ) ;

        if ( Sensor < SensorMinVal )                                        // Save the lowest sensor value.
        {

        SensorMinVal = Sensor ;

        PrintToScreen ( "MinVal set to %d\n" , (int)SensorMinVal ) ;

        }

    Wait ( 10 ) ;

    Timer1 = GetTimer ( 1 ) ;

    }

StopTimer ( 1 ) ;

PrintToScreen ( "Lowest value = %d\n" , (int)SensorMinVal ) ;

SensorMinVal = SensorMinVal + 10 ;                                          // Allow detection if value is close to minimum.

SetMotor ( 1 , 127 ) ;                                  // Stop scan motion.

SetMotor ( 2 , 127 ) ;

Wait ( 1000 ) ;

PrintToScreen ( "Looking for candle\n" ) ;

SetMotor ( 1 , 90 ) ;                                   // Scan the other direction

SetMotor ( 2 , 90 ) ;

PresetTimer ( 1 , 0 ) ;                                 // Initialize timer.

StartTimer ( 1 ) ;

Timer1 = GetTimer ( 1 ) ;

    while ( Timer1 < 8000 )                             // Adjust for 360 degree scan.
    {

    Sensor = GetAnalogInput ( 4 ) ;

    PrintToScreen ( "Testing Sensor value %d\n" , (int)Sensor ) ;

        if ( Sensor < SensorMinVal )                                        // Assume cangle gives lowest sensor value.  Look for it.
        {

        PrintToScreen ( "Candle found\n" ) ;

        SetMotor ( 2 , 255 ) ;                                  // Go to candle.

        Wait ( 200 ) ;                                  // Compensate for overshoot in rotation.

        SetMotor ( 1 , 0 ) ;

        Wait ( 600 ) ;                                  // Stop before you hit the candle.

        SetMotor ( 1 , 127 ) ;

        SetMotor ( 2 , 127 ) ;

        Wait ( 8000 ) ;

        }

    Timer1 = GetTimer ( 1 ) ;

    }

SetMotor ( 1 , 127 ) ;                                  // Stop scanning if you don't find the candle.

SetMotor ( 2 , 127 ) ;

PrintToScreen ( "Program end\n" ) ;

}
```