CODE FOR SENSOR WORKING

```
#include<LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd(0x27,20,4)
float cm;
float inches;


#define ECHO_PIN 12
#define TRIG_PIN 13
float dist;


void setup()
{
Serial.begin(115200);
pinMode(LED_BUILTIN, OUTPUT);
pinMode(TRIG_PIN, OUTPUT);
pinMode(ECHO_PIN, INPUT);
//pir pin
pinMode(34, INPUT);


//ledpins
pinMode(23, OUTPUT);
pinMode(2, OUTPUT);
pinMode(4, OUTPUT);
pinMode(15, OUTPUT);



lcd.init();
lcd.backlight();
lcd.setCursor(1, 0);
lcd.print("");

}


float readcmCM()
{
digitalWrite(TRIG_PIN, LOW);
delayMicroseconds(2);
digitalWrite(TRIG_PIN, HIGH);
delayMicroseconds(10);
```

```
digitalWrite(TRIG_PIN, LOW);
int duration = pulseIn(ECHO_PIN, HIGH);
return duration * 0.034 / 2;
}


void loop()
{

if(digitalRead(34))                                  //pir motion detection

{
Serial.println("Motion Detected");
Serial.println("Lid Opened");
digitalWrite(15, HIGH);
delay(1000)
Serial.println("Lid Closed")

}
else
{
digitalWrite(10,LOW);
}

if(cm <= 100)                                                  //Bin level detection
{
digitalWrite(2, HIGH);
Serial.println("High Alert!!!,Trash bin is about to be full");
digitalWrite(4, LOW);
digitalWrite(23, LOW);
}
else if(cm > 150 && cm <=250)
{
digitalWrite(23, HIGH);
Serial.println("Bin is available");
digitalWrite(2,LOW);
digitalWrite(4, LOW);
}
else if(cm>250 && cm <=400)
{
digitalWrite(4,HIGH);
Serial.println("Bin is available");
digitalWrite(2,LOW);
digitalWrite(23,LOW);
}
```

```
float inches = (cm / 2.54);                                          //print on lcd
lcd.setCursor(0,0);
lcd.print("Inches");
lcd.setCursor(4,0);
lcd.setCursor(12,0);
lcd.print("cm");
lcd.setCursor(1,1);
lcd.print(inches, 1);
lcd.setCursor(11,1);
lcd.print(cm, 1);
lcd.setCursor(14,1);
delay(1000);
lcd.clear();

}
```