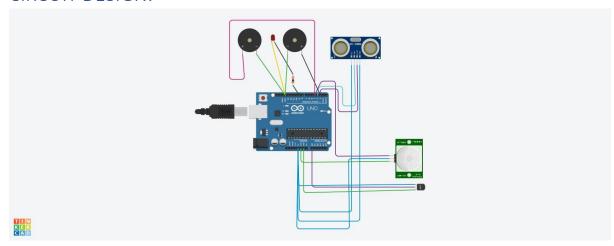
ASSIGNMENT 1

CIRCUIT DESIGN:



CODE:

```
#include <LiquidCrystal.h> //LCD library
 #define echo 2
#define trig 3
float duration; // time taken by the pulse to return back
 float distance;
int sensor Input;
float temp;// oneway distance travelled by the pulse
 LiquidCrystal lcd(13, 12, 11, 10, 9, 8);//lcd(RS,EN,D4,D5,D6,D7)
 void setup() {
  pinMode(trig, OUTPUT);
  pinMode(echo, INPUT);
  Serial.begin(9600);
  lcd.begin(16, 2);
}
void loop() {
  time_Measurement();
  distance = duration * (0.0343) / 2;// calculate the oneway distance travelled by the pulse
  display_distance();
  measure_Temp();
}
```

```
void time_Measurement()
 { //function to measure the time taken by the pulse to return back
  digitalWrite(trig, LOW);
  delayMicroseconds(2);
  digitalWrite(trig, HIGH);
  delayMicroseconds(10);
  digitalWrite(trig, LOW);
  duration = pulseIn(echo, HIGH);
void measure_Temp()
  sensor_Input = analogRead(A0);
  temp = (float)sensor_Input / 1024;
  temp = temp * 5;
  temp = temp - 0.5;
  temp = temp * 100;
        Serial.print("Temp in C: ");
  Serial.print(temp);
  Serial.println();
 void display_distance()
 { //function to display the distance on LCD/Serial Monitor
  Serial.print("Distance in Cm: ");
  Serial.print(distance);
  Serial.println();
  delay(1000);
 }
```