**NAAN MUDHALVAN – PROFESSIONAL READINESS FOR INNOVATION, EMPLOYMENT AND ENTERPRENEURSHIP**

ASSIGNMENT – 1

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**QUESTIONS:**

Build a smart home in wokwi with minimum 2 sensors, Led, buzzer.

➔ Example: pir sensor for home security, servo motor for door lock

system.

➔ Hint: replicate tinkercad code and connections in wokwi and integrate

both codes to a single code.

LINK:-

https://wokwi.com/projects/364529075100480513

CODE:

#include <LiquidCrystal\_I2C.h>

#define LIGHT\_SENSOR\_PIN  33

#define LED\_PIN           13

#define buzzer           27

#define echoPin 4

#define trigPin 19

long duration;

int distance;

LiquidCrystal\_I2C LCD = LiquidCrystal\_I2C(0x27, 16, 2);

void setup() {

**Serial**.begin(115200);

  pinMode(LED\_PIN, OUTPUT);

  pinMode(trigPin, OUTPUT);

  pinMode(echoPin, INPUT);

   pinMode(buzzer, OUTPUT);

  LCD.init();

  LCD.backlight();

  LCD.setCursor(1, 0);

  LCD.print("IOT SMART HOME");

  LCD.setCursor(3, 1);

  LCD.print("…");

  delay(5000);

  LCD.clear();

}

void loop() {

  digitalWrite(trigPin, LOW);

  delayMicroseconds(2);

  digitalWrite(trigPin, HIGH);

  delayMicroseconds(10);

  digitalWrite(trigPin, LOW);

  duration = pulseIn(echoPin, HIGH);

  distance = duration \* 0.034 / 2;

  int LDRValue = analogRead(LIGHT\_SENSOR\_PIN);

  if (LDRValue < 600)

    digitalWrite(LED\_PIN, HIGH);

  else

    digitalWrite(LED\_PIN, LOW);

   if (distance< 200)

    digitalWrite(buzzer, HIGH);

  else

  digitalWrite(buzzer, LOW);

   LCD.setCursor(0,0);

   LCD.print("Distance: ");

   LCD.print(distance);

   LCD.println(" cm");

   LCD.setCursor(0,1);

   LCD.print("LDRValue: ");

   LCD.println(LDRValue);

**Serial**.print("Distance: ");

**Serial**.print(distance);

**Serial**.println(" cm");

**Serial**.print("LDRValue: ");

**Serial**.println(LDRValue);

}

CIRCUIT DIAGRAM:

