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: