Assignment 1
IOT(INTERNET OF THINGS)

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★ 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.

```
#include <DHT.h>

#define DHTPIN 3     // what pin we're connected to

#define DHTTYPE DHT11   // DHT 11

DHT dht(DHTPIN, DHTTYPE);
```

```
int pirPin = 2;     // PIR sensor pin

int ledPin = 7;     // LED pin

int buzzerPin = 8; // Buzzer pin

int pirState = LOW;   // current state of the PIR sensor

int lastPirState = LOW;  // previous state of the PIR sensor
```

```
void setup() {

  pinMode(pirPin, INPUT);

  pinMode(ledPin, OUTPUT);

  pinMode(buzzerPin, OUTPUT);
```

```
    Serial.begin(9600);
    dht.begin();
  }

void loop(){
```

```
// Read PIR sensor state
pirState = digitalRead(pirPin);


// If the PIR sensor state has changed
if (pirState != lastPirState) {
```

```
// If motion is detected
if (pirState == HIGH) {
   digitalWrite(ledPin, HIGH);
   digitalWrite(buzzerPin, HIGH);
   delay(500);
```

```
    digitalWrite(buzzerPin, LOW);
    Serial.println("Motion detected!");
  } else {
    digitalWrite(ledPin, LOW);
    digitalWrite(buzzerPin, LOW);
```

```
  }


      // Remember the PIR sensor state for next time

      lastPirState = pirState;

}
```

```
// Read temperature and humidity

float humidity = dht.readHumidity();

float temperature = dht.readTemperature();
```

```
// Print temperature and humidity to serial monitor

Serial.print("Humidity: ");

Serial.print(humidity);

Serial.print("%  Temperature: ");

Serial.print(temperature);
```

```
  Serial.println("°C");


  delay(1000);

}
```