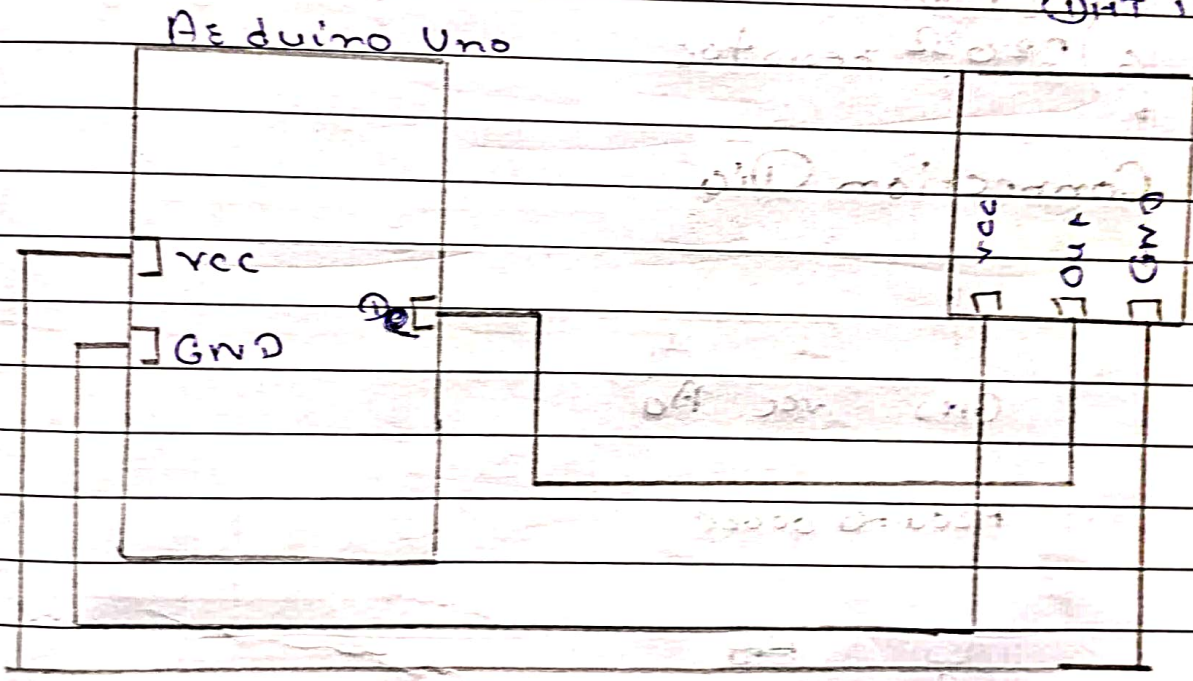
Practicle (13)

Aim :- Program an arduino to read data from a temperature sensor and display the output on the serieal monitor

material required :-
1) Arduino board
2) Temperature sensor
3) Jumper wire
4) Arduino IDE

Connection Dia.



Pin config :- operating voltage :- 3.5v to 5.5v
Ground is connect :- GND
Output is connect :- Serial data

Application :- 1) measure temp & humidity
2) Local weather station
3) Automatic climate control
4) environment monitoring

* Code ↔ * Theory * conclusion.

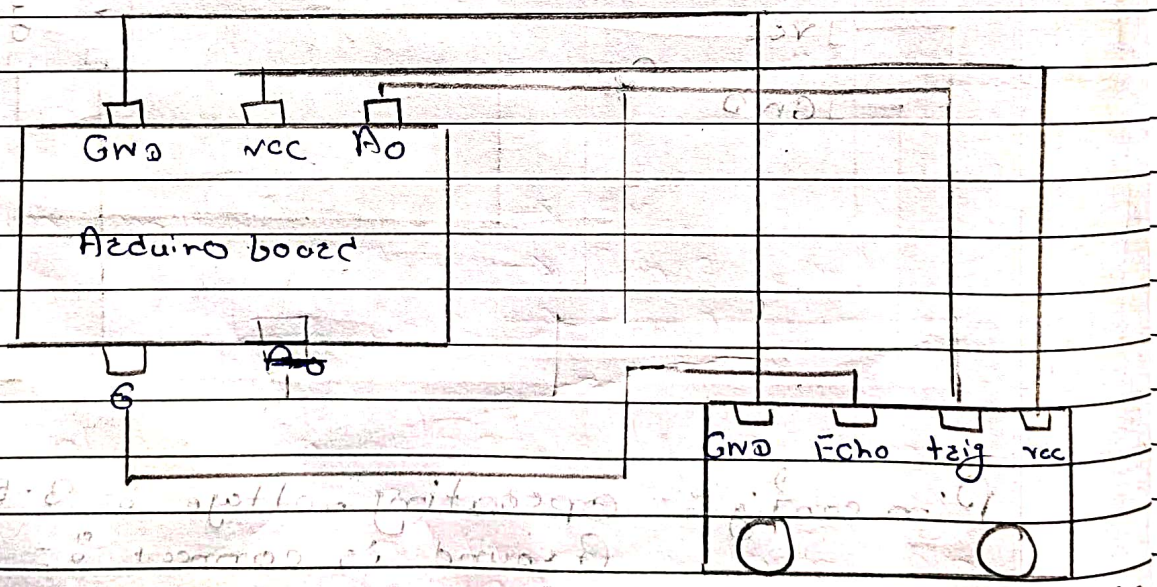
Practicle :- 4

Aim :- Design a simple IOT system that use at least two sensor (Ultrasonic sensor, IR sensor) to collect data, processes this data and perform an action based on a certain condition.

material Required :-

1) Arduino Uno
2) Ultrasonic Sensor
3) IR sensor
4) Buzzer
5) LED
6) 220Ω resistor
7) Jumper wires
8) USB cable
9) Arduino IDE

Connection Dia.



Pin Configuration

VCC -> 5V

Trig -> D6

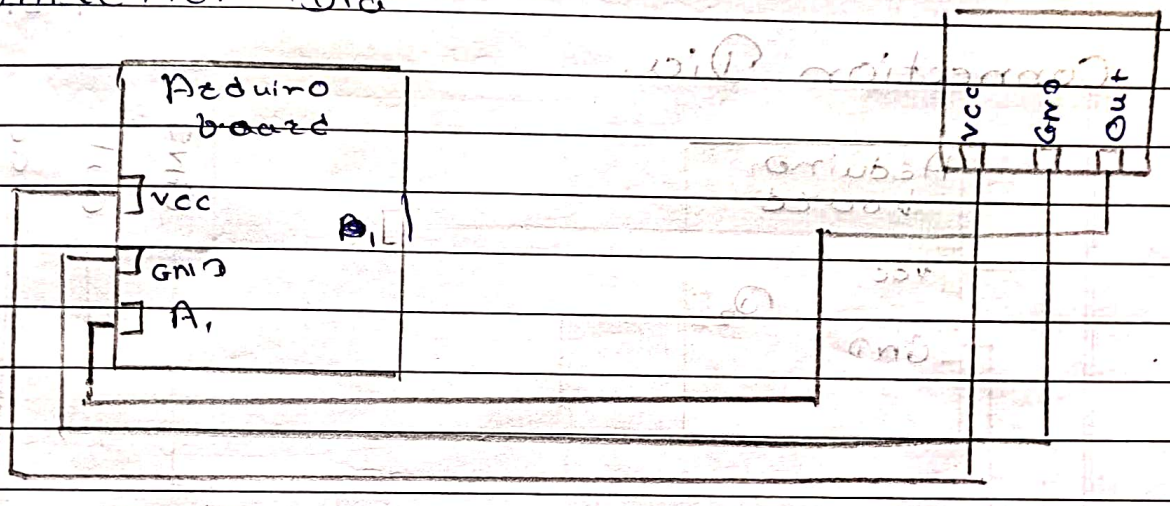
Echo -> A0

GND -> GND

Application :- 1) Object detection and proximate sensing
2) Liquid level measurement
3) Distance measurement
4) Smart home system

* Theory

Connection Dia



Pin config :-
Vcc → 5V
GND → GND
Output → A1

Application :- 1) motion Detection
2) Night vision
3) Fire Detection

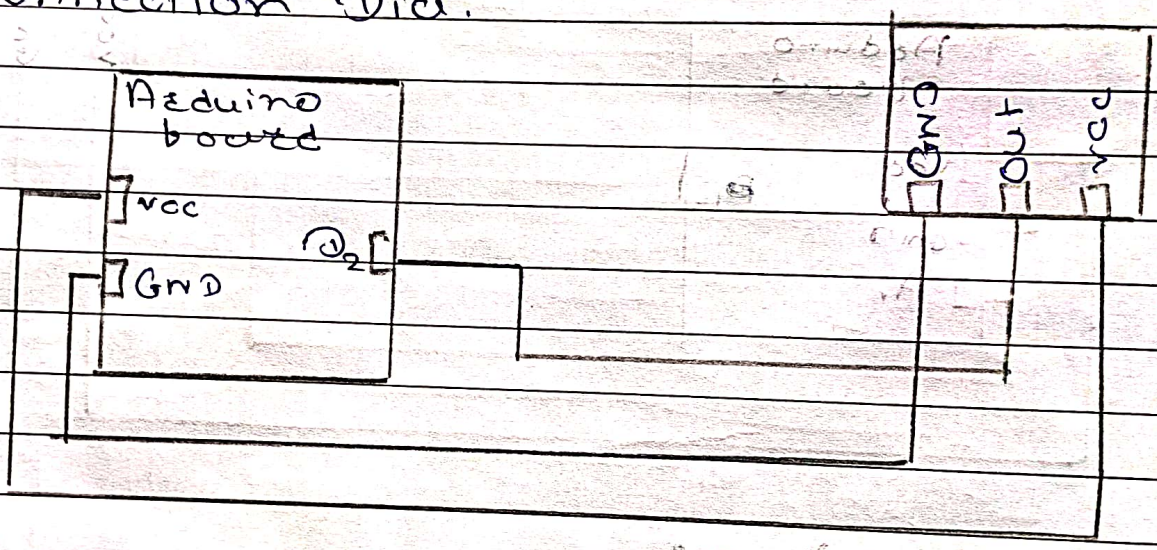
* Theory
* Code
* Conclusion

Practicle (5)

Aim :- Write an Arduino program for interfacing PIR Sensor

Material required :-
1) Arduino Uno
2) PIR Sensor
3) Use Cable
3) LED
4) Jumper wire

Connection Dia.



Pin configu^n :- Vcc → 5v
Out → Pin 2 (D_2)
GND → GND

Application :- 1) Security System
2) Automatic lighting
3) Home automation
4) Automatic doors

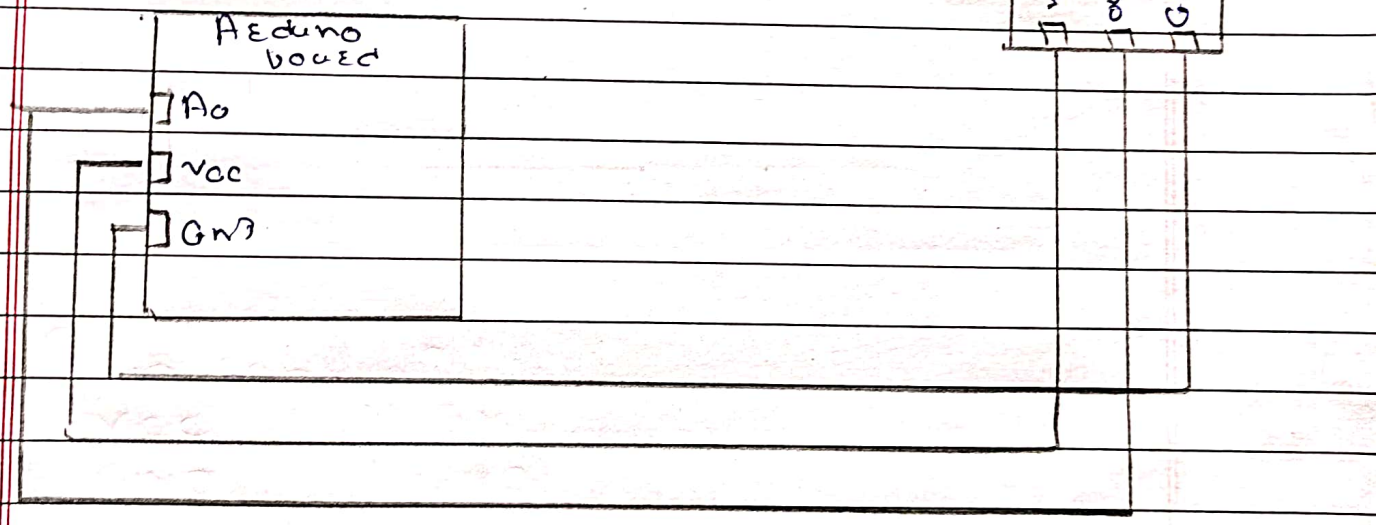
* Code * Theory * Conclusion

Practicle (6)

Date
Page

Aim :- Connect a microcontroller to an IOT cloud platform and send sensor data.

Material requirement :-
1) ESP32 development board
2) LM35 temp. sensor
3) Jumper wire
4) USB cable
5) wi-fi network
6) Arduino IDE



Pin config :- Vcc -> 5v
GND -> GND
Out -> A0 (Analog pin)

Application :- 1) Smart homeautomation
2) Wearable device
3) Wireless sensor
4) Webservers.

*Code * Theory *Conclusion.