wednesday:

1st / June / 2021

⊙ Arduino:

-> two types of Arduino
  -> Clone Arduino -> Arduino UNO.
-> 13 digit pins. (output) (Led, lcd, Relay, etc)
-> 6 Analog pins to connect inputs (sensors)
-> 4 pins (power supply for input and output).
-> power jack (for power supply)
-> USB port to Upload program.
-> Reset button.

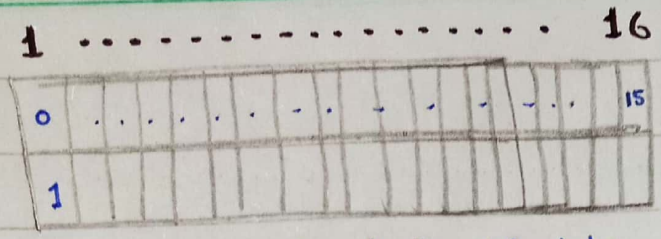
⊙ Software: (case sensitive)

#define -> define pins with variable

define led1 13 -> pin
↓ variable.

```
void setup()
{        -> define pin as output or INPUT
}        using pinmode(), (13, output)

void loop()
{        -> Main program
}        -> Commands and logic of what to do?
         digitalwrite (led1, HIGH);
```



lcd.setCursor(5,1)
lcd.print("a")

16 * 2 LCD Module.

→ 16 Columns.
→ 2 Rows.
→ total 32 Characters:

1 → V_{SS} (Ground) → GND
2 → V_{DD} (5V) → 5V
3 → VE (constrast) → Resistor (1k ohm)
4 → Rs (Register Select) → Digital pin of arduino.
5 → RW (Read/write) for write (low) for read (high).
6 → (Enable) → digital Pin of Arduino.
7 → D_0
8 → D_1
9 → D_2
10 → D_3
11 → D_4
12 → D_5
13 → D_6
14 → D_7
→ digital pin of Arduino.
15 → Back light Cathode → 5V
16 → Back light Anode → Gnd.

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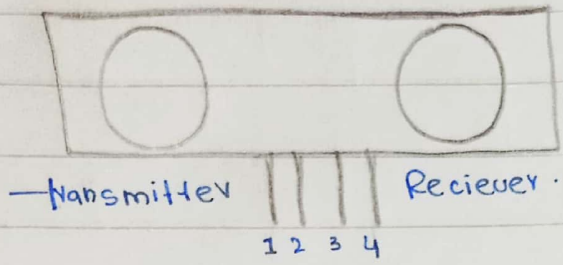
forwarded	H	L	H	L	→
Backward	L	H	L	H	
left	L	L	H	L	→ only right motor work
Right	H	L	L	L	→ only left motor work

⊙ What is an Ultrasonic Sensor ?



1 → 5V → Vcc

2 → Trig → Digital pin of arduino (output)

3 → Echo → " " " " (Input)

4 → Gnd.

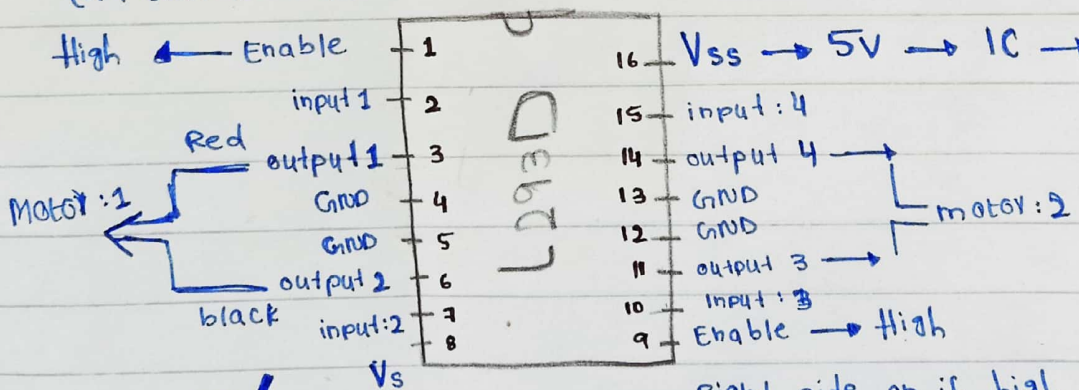
⊙ Why we use motor driver IC ?

In 3	In 4	motor2
low	High	~~forward~~ Back
High	low	forward

Arduino → output → 5V → motor working

no 9V to 12 that why we use motor driver IC.

left side on if high



9V/12V

Battery ka negative GND mea.

Right side on if high

Input 1	input 2	Motor 1
High	low	forward
low	High	Backword

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