

UNIVERSITY OF SCIENCE - VNUHCM

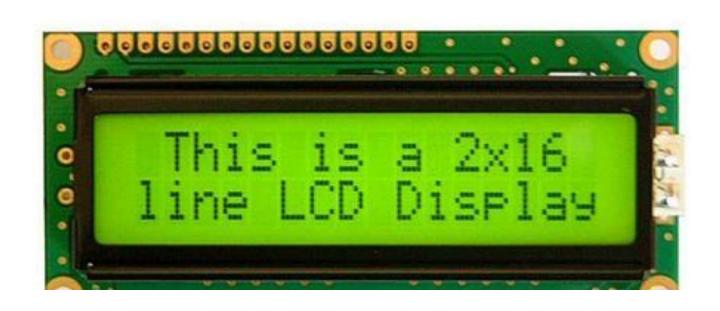
Faculty of Information Technology

INTERNET OF THINGS

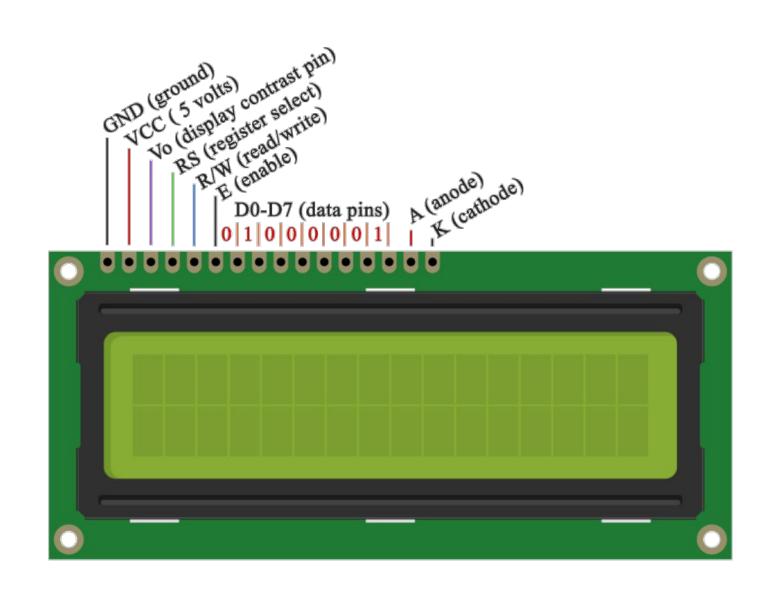
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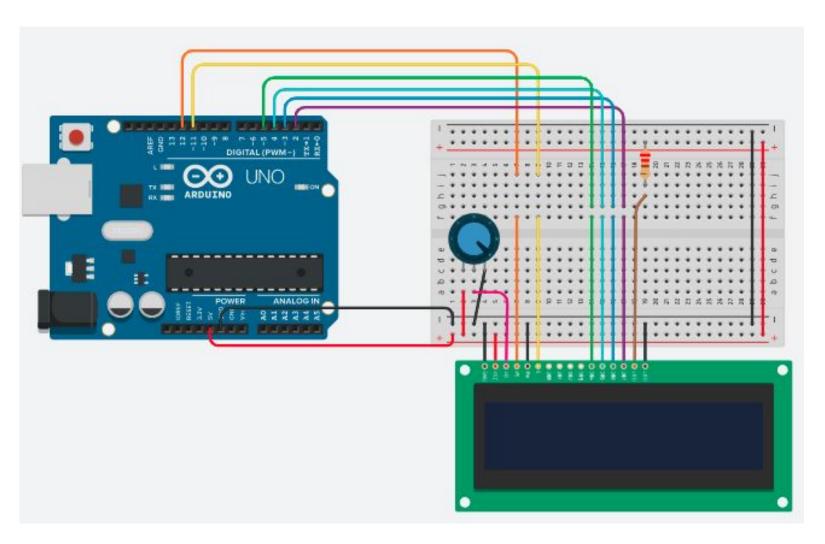
LCD





LCD Liquid Crystal Display





LCD Module	Arduino Pin	Potentiom eter				
VSS	GND	1				
VDD	5v	3				
V0		2				
RS	12					
RW	GND					
E	11					
D4	5					
D5	4					
D6	3					
D7	2					
А	5V					
K	GND					

Upper 4bit Lower 4bit	LLLL	LLLH	LLHL	LLHH	LHLL	LHLH	LHHL	ІННН	HLLL	HLLH	HLHL	нгнн	HHLL	ннгн	нннг	нннн
LLLL	CG RAM (1)															
LLLH	(2)															
LLHL	(3)															
LLHH	(4)															
LHLL	(5)															
LHLH	(6)															
LHHL	(7)				- 0000 - 0000 - 0000 - 0000											

```
// include the library code:
#include <LiquidCrystal.h>
// initialize the library with the numbers of the interface pins
LiquidCrystal lcd(12, 11, 5, 4, 3, 2);
void setup() {
  // set up the LCD's number of columns and rows:
  lcd.begin(16, 2);
 // Print a message to the LCD.
  lcd.print("hello, world!");
void loop() {
  // set the cursor to column 0, line 1
  // (note: line 1 is the second row, since counting begins with 0):
  lcd.setCursor(0, 1);
  // print the number of seconds since reset:
  lcd.print(millis() / 1000);
```

LiquidCrystal library

Reference:

https://www.arduino.cc/en/Reference/LiquidCrystal



Display Temperature + Humidity on LCD