

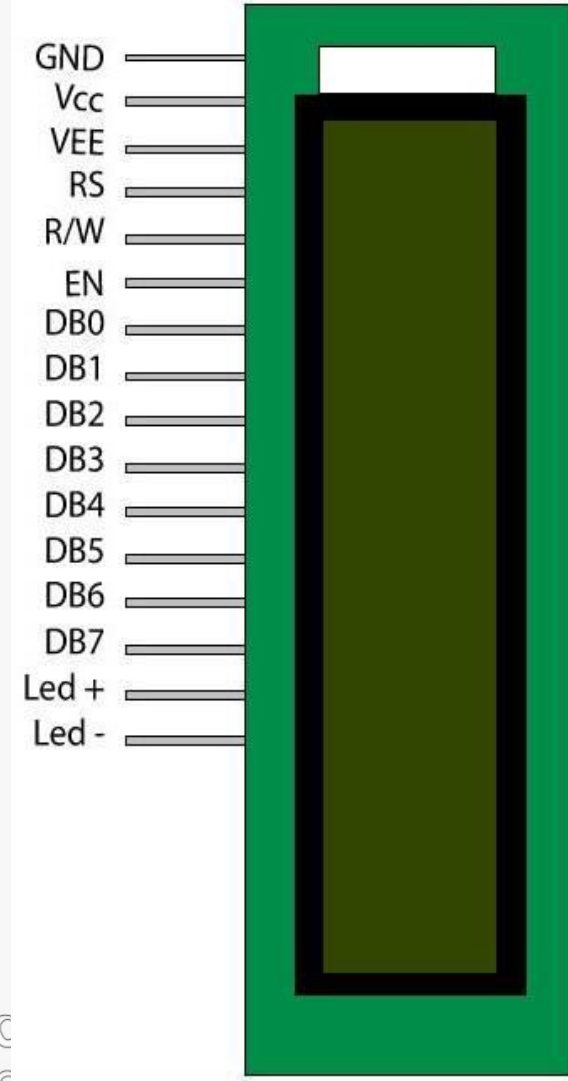
Interfacing of LCD



LCD (Liquid Crystal Display)

- Liquid crystal displays (LCDs) are a commonly used to display data in devices such as calculators, microwave ovens, and many other electronic devices.
- In this tutorial, you will learn how to use a 16x2 LCD with Arduino. As shown in the table below, eight of the pins are data lines (pins 7-14), two are for power and ground (pins 1 and 16), three are used to control the operation of LCD (pins 4-6), and one is used to adjust the LCD screen brightness (pin 3). The remaining two pins (15 and 16) power the backlight.

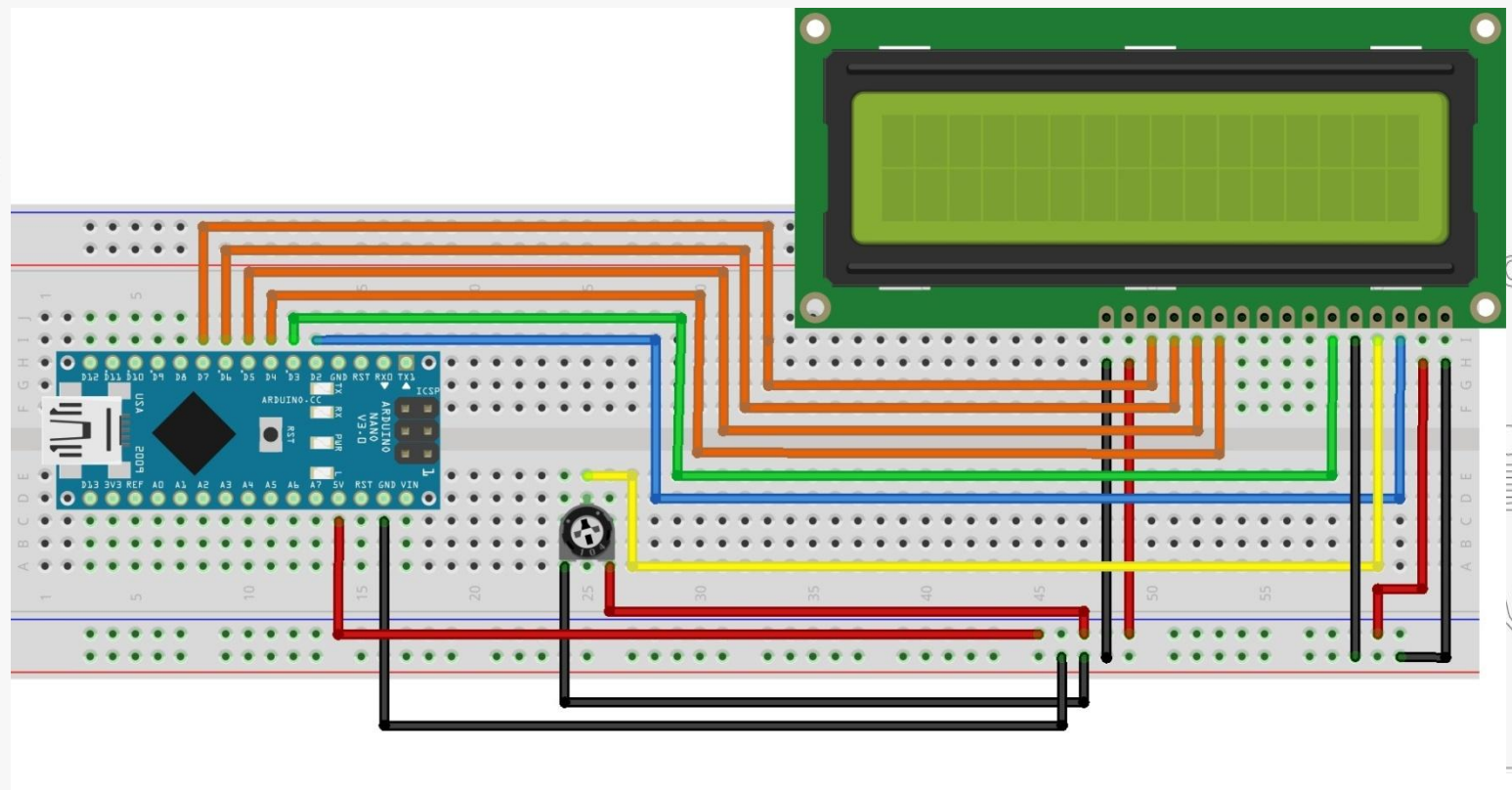
Terminal used	Connection
Terminal 1	GND
Terminal 2	+5V
Terminal 3	Mid terminal of potentiometer (for brightness control)
Terminal 4	Register Select (RS)
Terminal 5	Read/Write (RW)
Terminal 6	Enable (EN)
Terminal 7	DB0
Terminal 8	DB1
Terminal 9	DB2
Terminal 10	DB3
Terminal 11	DB4
Terminal 12	DB5
Terminal 13	DB6
Terminal 14	DB7
Terminal 15	+4.2-5V
Terminal 16	GND



Components Required

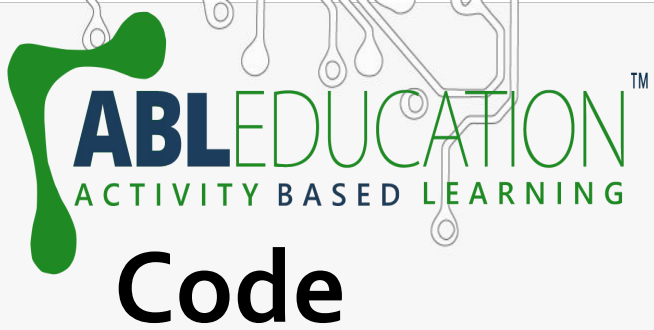
- Arduino Nano
- 16x2 LCD
- Potentiometer 10k
- Jumper wires
- Breadboard

Connection Diagram



Connections for LCD :

- PIN1 or Vss to ground
- PIN2 or Vdd or Vcc to +5V power
- PIN3 or Vee to potentiometer (gives maximum contrast best for a beginner)
- PIN4 or RS (Register Selection) to D2 of Arduino
- PIN5 or RW (Read/Write) to ground
- PIN6 or E (Enable) to D3 of Arduino
- PIN11 or D4 to D4 of Arduino
- PIN12 or D5 to D5 of Arduino
- PIN13 or D6 to D6 of Arduino
- PIN14 or D7 to D7 of Arduino
- PIN15 or A to +5V of Arduino
- PIN16 or K to GND of Arduino



Interfacing_of_LCD. | Arduino 1.8.19

File Edit Sketch Tools Help

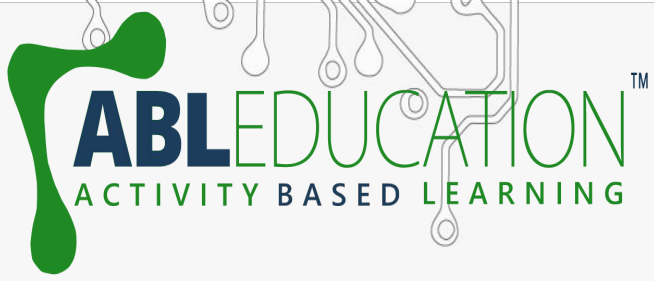


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```
#include <LiquidCrystal.h>
// initialize the library with the numbers of the interface pins
LiquidCrystal lcd(2, 3,4,5,6,7); /// REGISTER SELECT PIN,ENABLE PIN,D4 PIN,D5 PIN, D6 PIN, D7 PIN

void setup()
{
  // set up the LCD's number of columns and rows:
  lcd.begin(16, 2);
}

void loop()
{
  // set the cursor to column 0, line 1
  lcd.print("ABL EDUCATION");//print name
  lcd.setCursor(0, 1); // set the cursor to column 0, line 2
  lcd.print("ablkart.com");//print name
  delay(350);//delay of 0.75sec
  lcd.scrollDisplayLeft();//shifting data on LCD
  lcd.setCursor(0, 0);// set the cursor to column 0, line1
}
```



Project Link: <https://youtu.be/JCob-YHR-rQ>