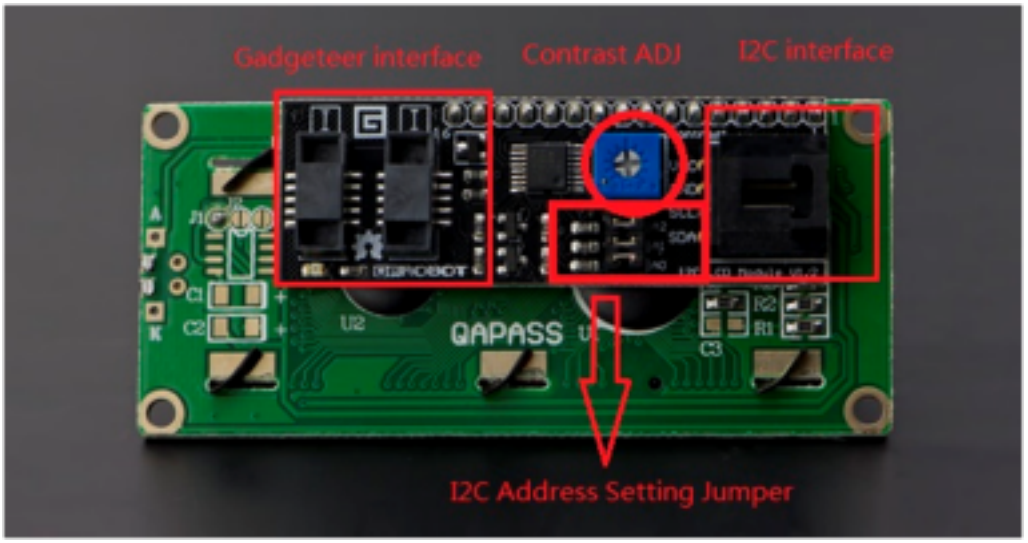
LCD

LCD (Liquid Crystal Display)

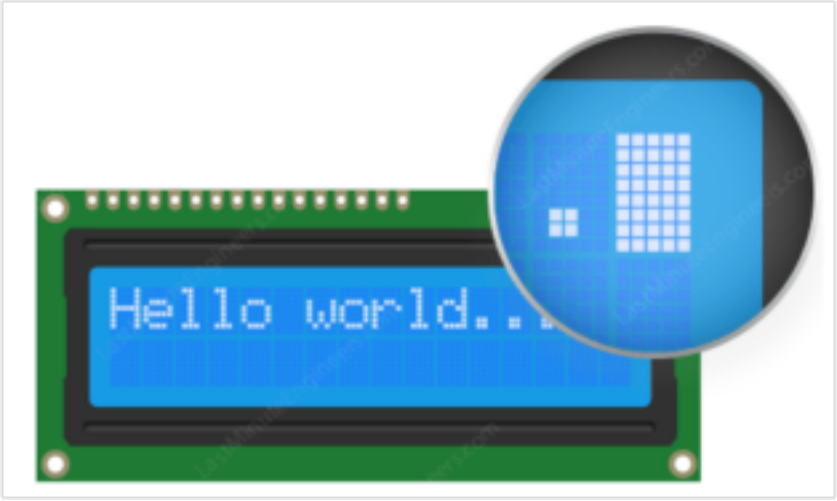
This is a 16x2 LCD display screen with I2C interface. It is able to display 16x2 characters on 2 lines, white characters on blue background.

Usually, Arduino LCD display projects will run out of pin resources easily, especially with EVOED board. And it is also very complicated with the wire soldering and connection. This I2C 16x2 Arduino LCD Screen is using an I2C communication interface. It means it only needs 4 pins for the LCD display: VCC, GND, SDA, SCL. It will save at least 4 digital/analog pins on Arduino. All connectors are standard XH2.54 (Breadboard type). You can connect with the jumper wire directly.



LCDs are ideal for displaying text/characters only. A 16×2 character LCD, for example, has an LED backlight and can display 32 ASCII characters in two rows with 16 characters on each row.

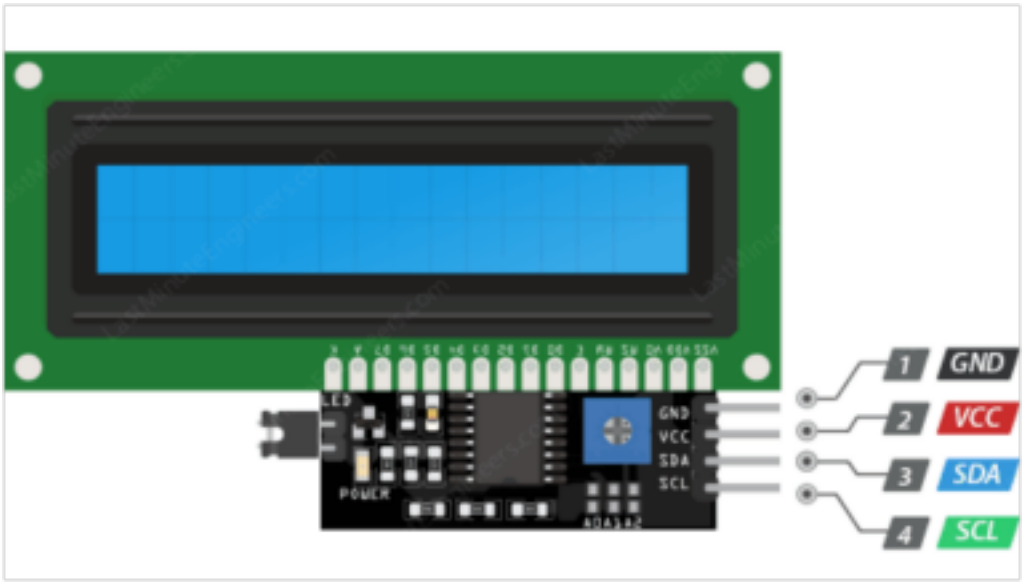
If you look closely, you can actually see the little rectangles for each character on the display and the pixels that make up a character. Each of these rectangles is a grid of 5×8 pixels.



I2C LCD display

Pinout

An I2C LCD has only 4 pins that interface it to the outside world.
The connections are as follows:



GND is a ground pin and should be connected to the ground of Arduino. VCC supplies power to the module and the LCD.

Connect it to the 5V output of the Arduino or a separate power supply. SDA is a Serial Data pin. This line is used for both transmit and receive. Connect to the SDA pin on the Arduino.

SCL is a Serial Clock pin. This is a timing signal supplied by the Bus Master device. Connect to the SCL pin on the Arduino.

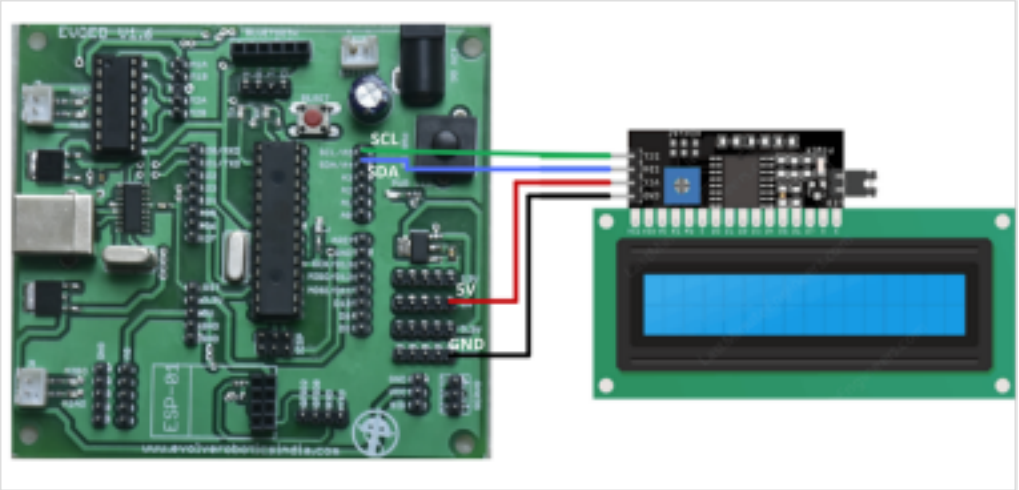
MINI PROJECT

AIM :

CONSTRUCT AN CIRCUIT FOR PRINTING HELLO WORLD ON LCD SCREEN.

COMPONENTS USED :
EVOED BOARD, LCD , JUMPER WIRES

CIRCUIT DIAGRAM:



PROGRAM :

```
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd(0x27,16,2);

void setup() {
  lcd.init(); //Init the LCD
  lcd.backlight(); //Activate backlight lcd.home(); // Make sure
  backlight is on lcd.clear();
}

void loop() {
  lcd.setCursor(0,0);
  lcd.print("HELLO WORLD");
}
```