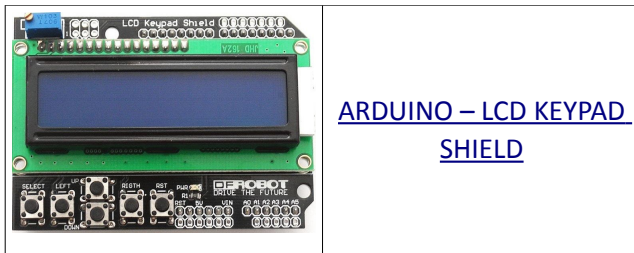


PROJECT 13

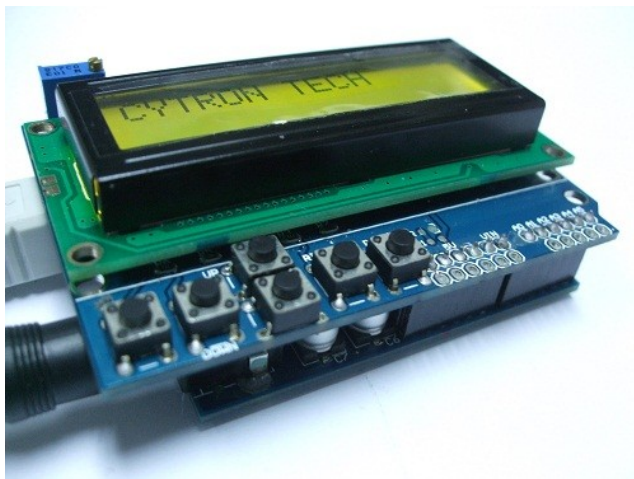
UART TO COMPUTER

To deal with computer keyboard, we have to know what kind of signal did keyboard giving when you press a key. For this project, we are going to interface the Arduino Duemilanove to computer through USB.

COMPONENT NEEDED



CONNECTION



For this project, you are only required to plug in the Arduino LCD-Keypad Shield to the Arduino Duemilanove and the also make sure the USB cable are connected to the computer.

ADDITIONAL INFORMATION

As many user may wondering what kind of the output from the keyboard are sending out to our microcontroller. For you information, the output are same as what we trying to send to LCD to display which is call ASCII where all the words and number are in Hex. Please check the ASCII table [here](#).

CODE OVERVIEW

```
void loop()
{
  for (int lcd_cursor=0; lcd_cursor<32; lcd_cursor++)
  {
    if (lcd_cursor == 15) lcd.setCursor(0,1);
    else if (lcd_cursor == 31) lcd.home();
    while (!Serial.available());
    serial_in = Serial.read();
    lcd.write(serial_in);
  }
}
```

for (int lcd_cursor; lcd_cursor<32; lcd_cursor++)

The lcd_cursor will continuously increasing from 0 to 31 1 step each.

if (lcd_cursor == 15) lcd.setCursor(0,1);

Check if the lcd_cursor is 15. If yes then jump the lcd cursor to next line which is 2nd row, 1st column.

else if (lcd_cursor ==31) lcd.home();

Check if the lcd_cursor is 31. If yes then jump cursor to home which is 1st row, 1st column.

lcd.write(serial_in);

Write a character to the LCD display.

References:

1. <http://arduino.cc/en/Reference/LiquidCrysta>
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