I2C Communication Between ESP32 and Arduino

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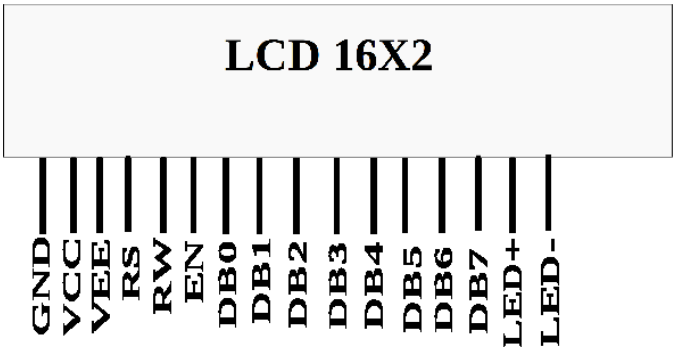

Fig. 2.0.1: lcd

***Abstract*—Through this manual, we will learn how to setting up the ESP32 as a Master and Arduino as a Slave using I2C protocol.**

1 Components

Component	Value	Quantity
ESP32	Devkit V1	1
Arduino	UNO	1
Connecting Wires		30
LCD	16 X 2	1

TABLE 1.1

2 Setting up the Master and Slave

2.1. Connect the ESP32 pins to Arduino pins as per Table **??**.

2.2. Connect the ESP32 pins to LCD pins as per Table **??**.

2.3. Configure Arduino Uno as a Slave using the following code.
https://github.com/Nagarajunaddi/esp32/blob/main/I2C/I2C/I2C_Sender_Arduino/src/main.cpp

I2C	ESP32	Arduino
SDA	GPIO 21	A4
SDC	GPIO 22	A5
	VCC	VCC
	GND	GND

TABLE 2.1.1

ESP32	LCD Pins	LCD Pin Label	LCD Pin Description
GND	1	GND	
5V	2	Vcc	
GND	3	Vee	Contrast
GPIO 19	4	RS	Register Select
GND	5	R/W	Read/Write
GPIO 23	6	EN	Enable
GPIO 18	11	DB4	Serial Connection
GPIO 17	12	DB5	Serial Connection
GPIO 16	13	DB6	Serial Connection
GPIO 15	14	DB7	Serial Connection
5V	15	LED+	Backlight
GND	16	LED-	Backlight

TABLE 2.2.1

2.4. Now configure ESP32 as a Master using the following code.
https://github.com/Nagarajunaddi/esp32/blob/main/I2C/I2C/I2C_Reciever_ESP32/src/main.cpp

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