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ESP32 Assignment

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I. ABSTRACT

The information bit sequence $\{111010101\}$ is to be transmitted by encoding with Cyclic Redundancy Check $4\,(CRC-4)$ code, for which the generator polynomial is $C(x) = x^4 + x + 1$. The encoded sequence of bits is to be displayed.

II. COMPONENTS

The required components list is given in Table: I. The pin diagram of LCD $16\,x\,2$ is shown in Fig.1.

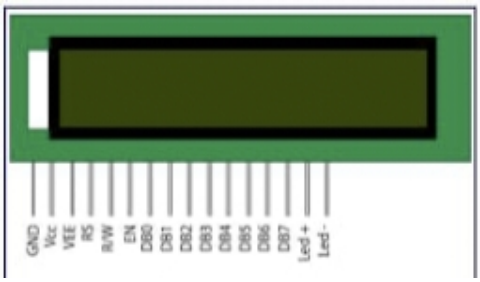

Fig. 1.

Components	Value	Quantity
Vaman		1
LCD		1
Jumper Wires		15
Cable	B	1
Breadboard		1

TABLE I

III. PROCEDURE

1) Make the connections between Vaman and LCD as per the Table: II.
2) Insert the code in the designated folder and the do the pio run
3) Now, change the credentials of the wifi given to the vaman.

Vaman	LCD
GPIO.19	4
GPIO.23	6
GPIO.18	DB4
GPIO.17	DB5
GPIO.16	DB6
GPIO.15	DB7
gnd	1,3,5,16
5V	2,15

TABLE II

4) Check the IP address of the Vaman and use the instruction as"pio run -t nobuild -t upload –upload-port 192.168.66.131" to upload the code using OTA via B-type cable connected to the phone and vaman board.
5) If connected properly, then the desired output is observed in the LCD. Otherwise, do the process again.

IV. RESULTS

Download the code given in the link below and execute them to see the output as shown in Fig.2 by the LCD.
https://github.com/Tabassum4930/FWC-1/blob/main/ESP_32/code.cpp

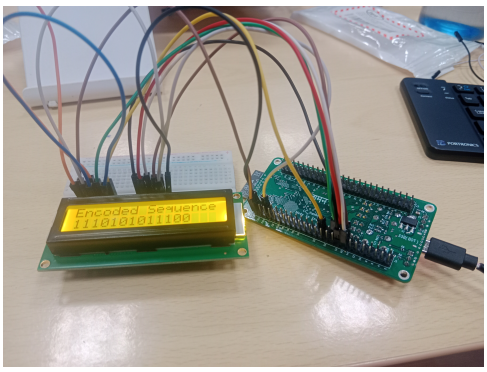

Fig. 2.

V. CONCLUSION

Therefore, the LCD has displayed the required output sequence using the Vaman board.