भारतीय प्रौद्योगिकी संस्थान हैदराबाद
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Assembly Assignment

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I. ABSTRACT

This paper explains about the question asks for the 16-bit two's complement binary representation of the decimal number -28. The correct binary sequence must be identified. In two's complement, negative numbers are represented by inverting all bits of the absolute value of the number and adding 1 to the least significant bit. The question can be implemented using assembly code in arduino uno and the correct binary sequence must be displayed in LCD [Liquid Crystal Display] - JHD 162A.

II. COMPONENTS

The required components list is given in Table: I., pin diagram of LCD JHD 162A is shown in Fig.1.

Components	Value	Quantity
LCD	JHD 162A	1
Arduino	UNO	1
Jumper Wires		20
Breadboard		1

TABLE I

III. PROCEDURE

1) Pin Configuration of LCD JHD162A.

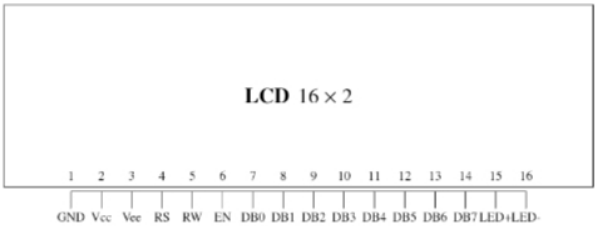

Fig. 1.

2) Make connections of arduino uno to LCD JHD 162A as per below fig-2.

Arduino Pins	**LCD Pins**	**LCD Pin Label**	**LCD Pin Description**
GND	1	GND	
5V	2	Vcc	
GND	3	Vee	Contrast
D8	4	RS	Register Select
GND	5	R/W	Read/Write
D9	6	EN	Enable
D10	11	DB4	Serial Connection
D11	12	DB5	Serial Connection
D12	13	DB6	Serial Connection
D13	14	DB7	Serial Connection
5V	15	LED+	Backlight
GND	16	LED-	Backlight

Fig. 2.

3) Execute the arduino code in nvim editor using avra filename.tex command.
4) After upload the code into hardware setup using arduino IDE platform.

IV. RESULTS

1) Download the codes given in the link below and execute them to see the output as shown in figure 3.
2) https://github.com/BynaboyinaAiswarya/Fwc-/blob/main/Assembly/main.asm

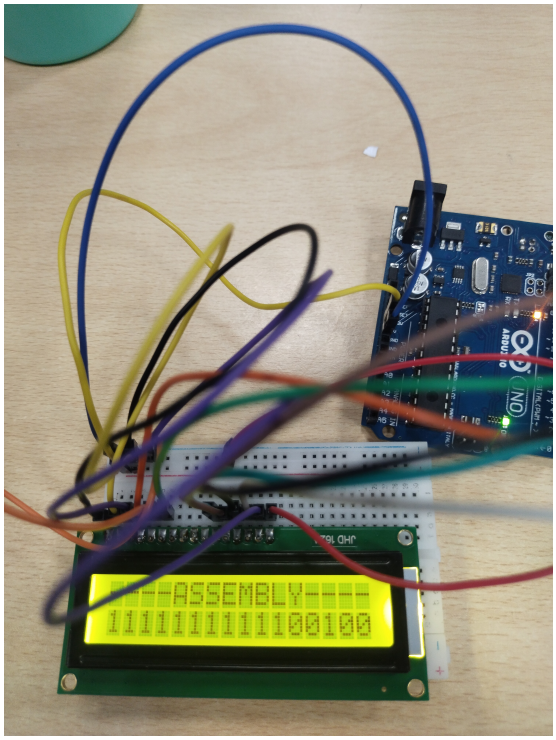

Fig. 3.

V. CONCLUSION

Hence implementation of assembly code in arduino uno and the correct binary sequence is displayed on LCD [Liquid Crystal Display] - JHD 162A is done .