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7447 BCD - Seven segment Display Decoder Assignment

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I. ABSTRACT

This paper shows how to use the 7447 BCD-Seven segment Display Decoder to learn Boolean logic using arduino uno.

II. COMPONENTS

The required components list is given in Table: I. and seven segment display is shown in Fig.2 and IC 7447 diagram is shown in Fig.1.

Components	Value	Quantity
IC	7447	1
seven segment display		1
Arduino	UNO	1
Jumper Wires		10
Breadboard		1

TABLE I
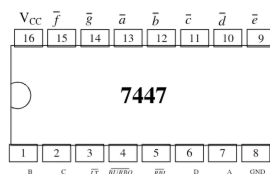
Fig. 1.
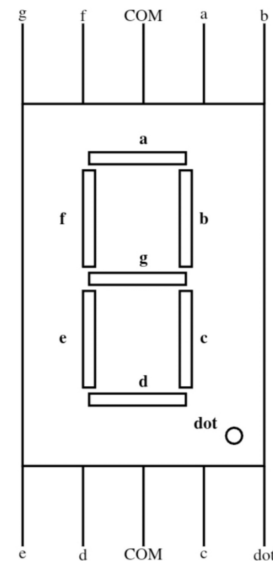
Fig. 2.

7447	$\bar{a}$	$\bar{b}$	$\bar{c}$	$\bar{d}$	$\bar{e}$	$\bar{f}$	$\bar{g}$
Display	a	b	c	d	e	f	g

Fig. 3.

III. PROCEDURE

1) Make the connections of 7447 IC and seven segment display as per below Fig.3.
2) Make the connections of 7447 IC and arduino uno as per below Fig.4.
3) Truth Table for incrementing from 0 to 9 in seven segment display

4) Execute the arduino code without any errors.
5) After upload the code into hardware setup using arduino IDE platform with hex file.

IV. RESULTS

1) Download the code given in the link below and execute them to see the output as shown in Fig.5.

7447	D	C	B	A
Arduino	5	4	3	2

Fig. 4.

Z	Y	X	W	D	C	B	A
0	0	0	0	0	0	0	1
0	0	0	1	0	0	1	0
0	0	1	0	0	0	1	1
0	0	1	1	0	1	0	0
0	1	0	0	0	1	0	1
0	1	0	1	0	1	1	0
0	1	1	0	0	1	1	1
0	1	1	1	1	0	0	0
1	0	0	0	1	0	0	1
1	0	0	1	0	0	0	0

TABLE II

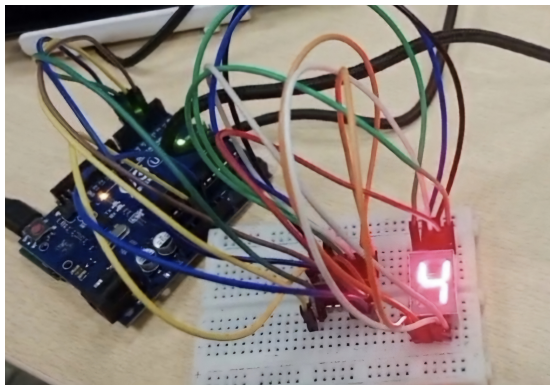2) https://github.com/rajib05ra/FWC-Assignments/tree/main/Assignment

Fig. 5.

V. CONCLUSION

Hence implementation of 7447 IC, Seven segment dispaly using arduino UNO is done.