Mini Project

BCD to 7 Segment Display

SUBMITTED BY-

Name	Roll No.	Section
Sahil Verma	2001920310130	C
Rishabh Khugshal	2001920310121	C
Nishi Rai	2001920310100	C
Saumya Shrivastava	2001920310136	C

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We would like to thank our parents who have always been there whenever needed. Ones again, thanks to everyone for their support.
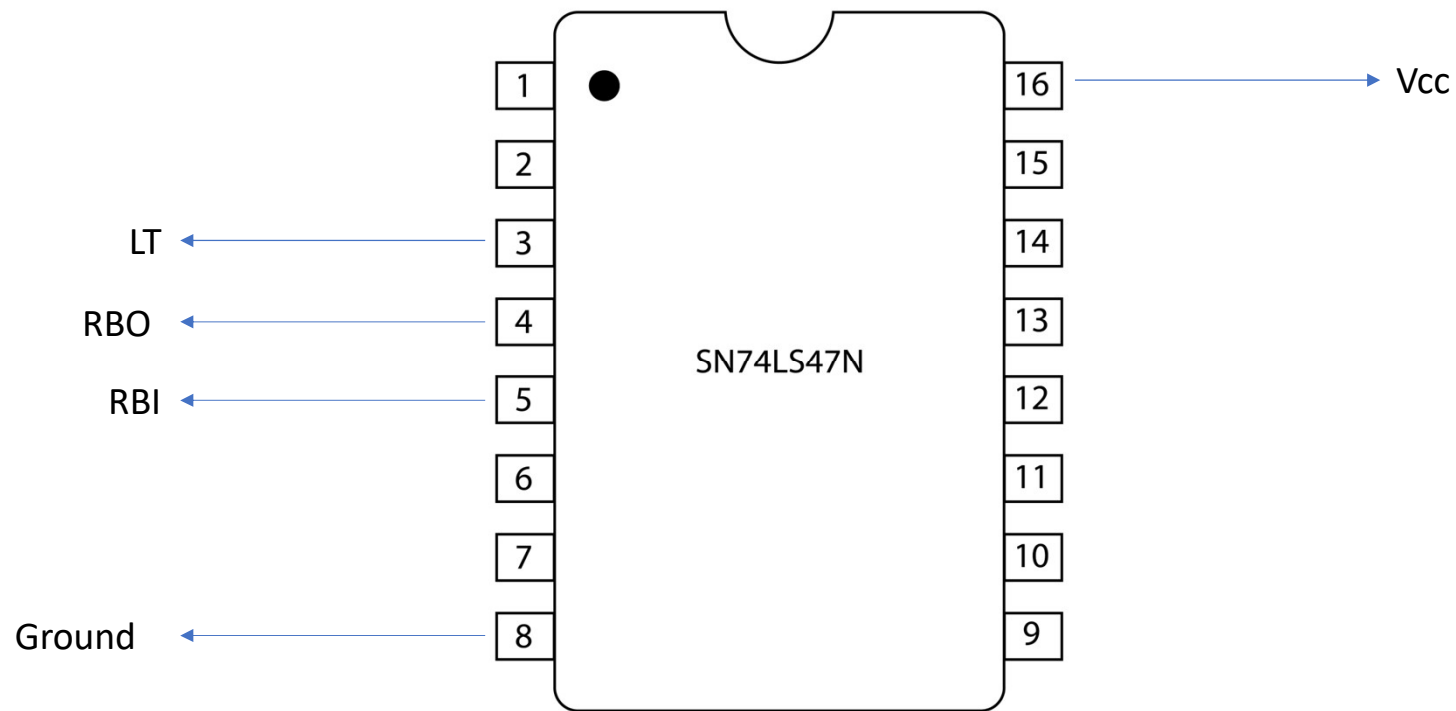
Object : To represent decimal numerals using IC7447 from 4 bit BCD inputs

Apparatus Required:

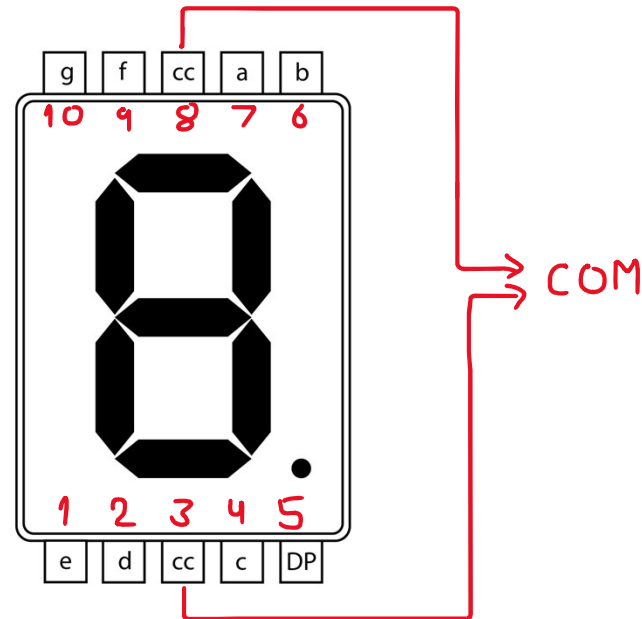| S. NO.	Name of Apparatus	Specifications
1.	IC7447	
2.	7 Segment Display	
3.	16 Pin IC Socket & 4 Bit Inputs Switches	
4.	Fixed Resistor	100 ohm 5 W
5.	Resistors	1 k ohm
6.	PCB	6'' x 4''
7.	D.C. Battery and Cap	

IC 7447

The IC7447 IC is **a BCD to seven segment decoder**. This IC7447 gets the binary coded decimal like the input as well as gives the outputs like the related seven-segment code.
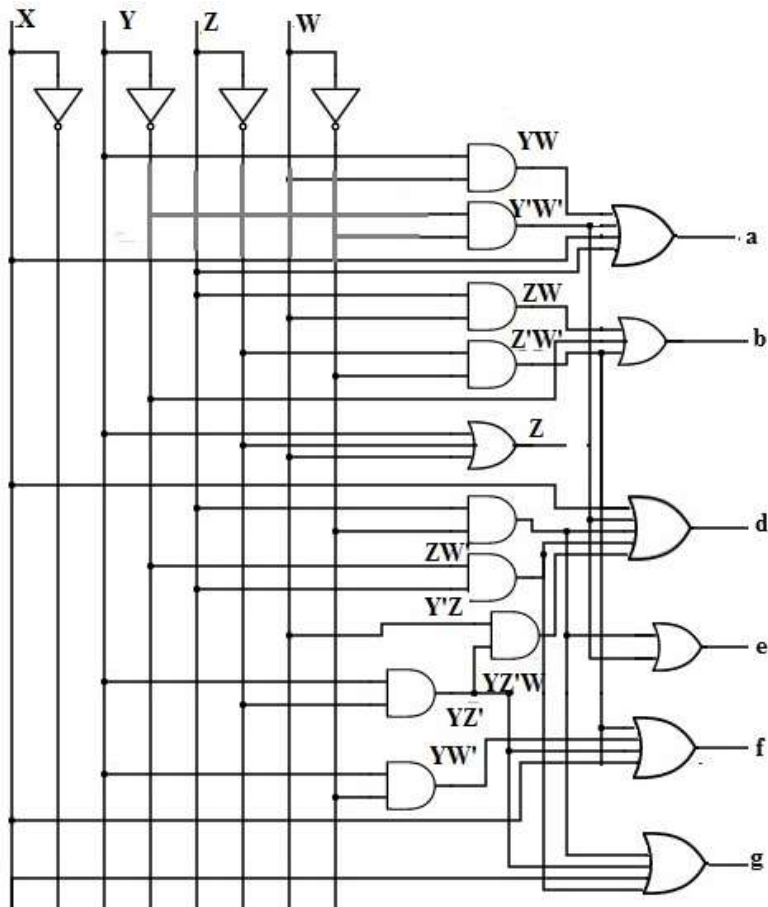
LT	3	14
RBO	4	13
RBI	5	12
	6	11
	7	10
Ground	8	9

1 •   16 → Vcc

2   15

SN74LS47N

7 Segment Display

OR Numitron

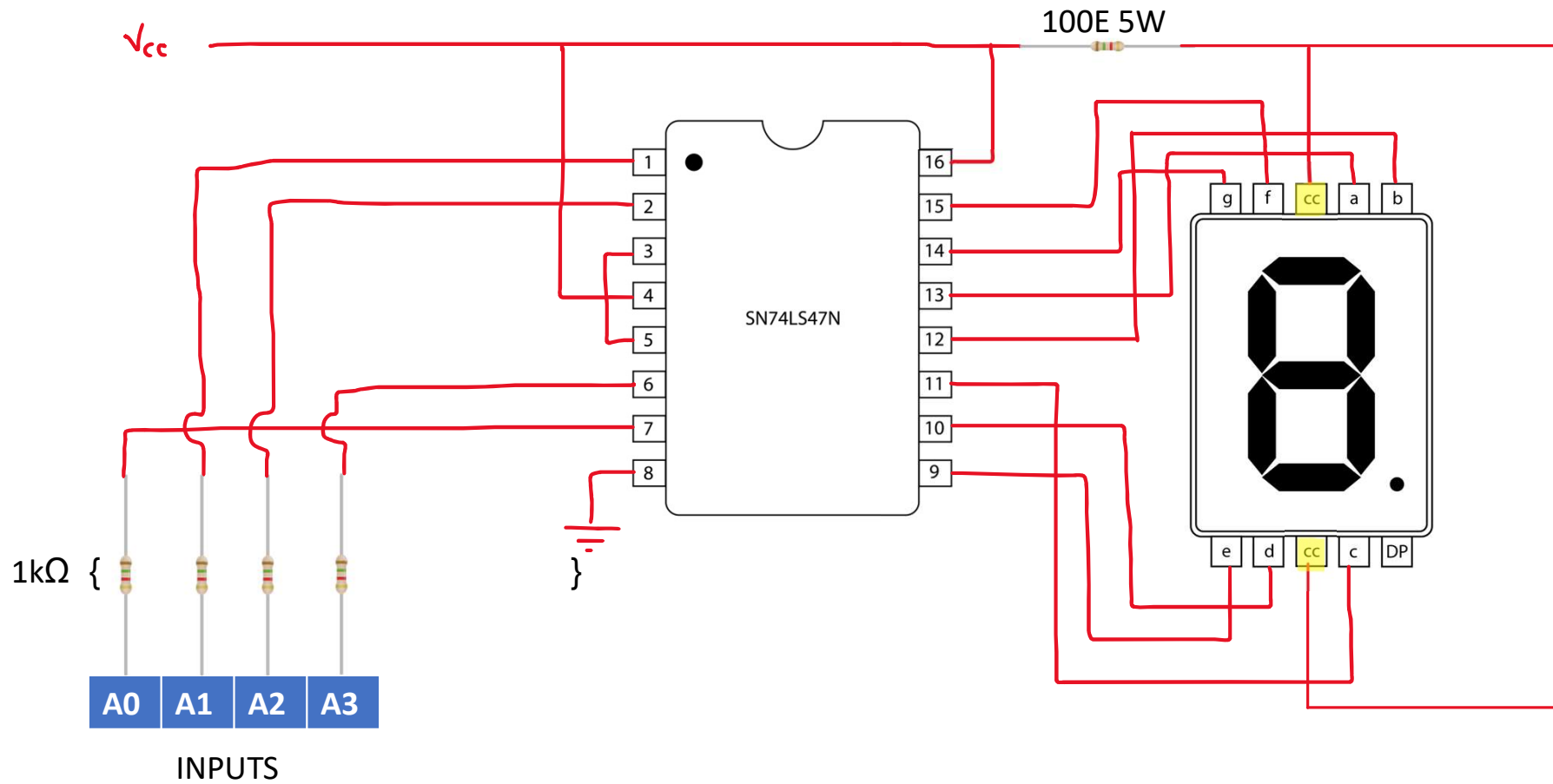A **Seven-Segment Display** or **Numitron** is a form of electronic display device for displaying Decimal Numerals.

Circuit Diagram (using AND, OR and NOT Gate)

Digit	X	Y	Z	W	a	b	c	d	e	f	g
0	0	0	0	0	0	0	0	0	0	0	1
1	0	0	0	1	1	0	0	1	1	1	1
2	0	0	1	0	0	0	1	0	0	1	0
3	0	0	1	1	0	0	0	0	1	1	0
4	0	1	0	0	1	0	0	1	1	0	0
5	0	1	0	1	0	1	0	0	1	0	0
6	0	1	1	0	0	1	0	0	0	0	0
7	0	1	1	1	0	0	0	1	1	1	1
8	1	0	0	0	0	0	0	0	0	0	0
9	1	0	0	1	0	0	0	0	1	0	0

PCB Circuit Design

Construction and Testing

On a DOT PCB, we have implemented the circuit design having 4 I/Ps following 4 resistors of 1K ohm

Then connecting all the resistors with the pins of the IC 7447,

Also connecting the 7 segment display to the IC 7447 (As shown in the figure previously).

Conclusion

In our Project, we have designed a circuit that can decode Binary Coded Decimals to another form (in our case into decimal 0 to 9) displaying on the 7 Segment Display or Numitron.

References

Google
Wikipedia
YouTube
Electronics Hub
Roboelements