P.O.S Canonical Form For Truth Table

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Contents

Abstract

This manual shows how to use Arduino with 7447 and sevensegment dispaly to represent pos canonical form for function 'F' in truth table.

X	Y	Z	F
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	1

1 Components

Components	Value	Quantity
Resistor	220Ohm	1
Arduino	UNO	1
Seven segment Display		1
7447	-	1
Jumper wires	M-M	20
Breadboard		1

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2 Hardware

Problem 2.1. Now make the connections as per Table 2.1,2.2 and 2.3

	X	Y	Z
Input	0	1	0

Table 2.1

sevensegment 7447	a a'	b b'	c c'	d d'	e e'	f f'	g g'

Table 2.2

7447	A	B	C	D
Arduino	2	-	-	-

table 2.3

3 Software

execute the following program after downloading.

```
https://github.com/anirudhkalyan/fwc.git
```

X,Y,Z are the inputs that we are assigning manually in bread board and by deriving canonical form for F,

$$F = (X+Y+!Z)*(X+!Y+Z)*(!X+Y+!Z)*(!X+!Y+Z) \quad (1)$$

4 conclusion

open in Geany by using github link provided above then compile and execute