P.O.S Canonical Form For Truth Table

Kalyan

September 7, 2022

h.png

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

2

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