

ASSIGNMENT-1

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IITH - Future Wireless Communication (FWC22089)

Contents

1 Abstract

The objective of this manual is to draw a logic circuit realization using only NOR gates for the output Y in terms of three inputs A,B and C are given in below truth table.

C	B	A	Y
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	0

Table 1

2 Components

Component	Value	Quantity
Arduino	UNO	1
Led	-	1
Breadboard	-	1
Jumper Wires	-	7

Table 1.0

2.1 Arduino

The Arduino UNO has some ground pins, analog input pins A0-A3 and digital pins D1-D13 that can be used for both input as well as output. It also has two power pins that can generate 3.3V and 5V. In the following exercises, only the GND, 5V and digital pins will be used.

3 Implementation

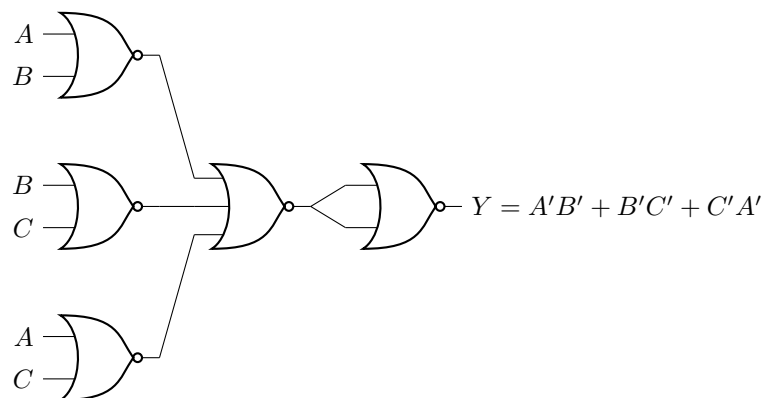
3.1 Karunugh Map

	BC			
	00	01	11	10
0	1	1	0	1
1	1	0	0	0

$$Y = A'B' + B'C' + C'A'$$

figure 2.1

4 Logic Circuit



5 Hardware

1. Connect the Arduino to the computer.
2. Download the following directory

https://github.com/sivaparvathi-tungala/fwc_module.1/blob/main/assign1_asm/codes/ass1.asm